

**ECONOMIC ASSESSMENT OF SOUTH WEST
REGIONAL AIRPORTS**

South West of England Regional Development Agency
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Final Paper

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EXECUTIVE SUMMARY

This paper undertakes an analysis of the economic role of the airports within the South West. It is intended to provide the 'evidence base' from which the South West Regional Development Agency (the 'Agency') can formulate its policy regarding potential future airport development within the region.

The analysis shows that air travel services have been an important area of economic growth for the region in the last decade or more and, on the basis of reasonable assumptions about relative prices, incomes, tastes and sector structural developments, this trend is expected to continue.

Air travel services are likely to be an important but not sufficient ingredient (in themselves) in any attempt to raise the contribution of productivity-led growth to the region's economic performance. SW businesses invariably cite fast, reliable and cost effective transport links as a key missing ingredient in developing their access to markets outside the region.

In view of government's instruction that we raise the region's "sustainable trend rate of growth in terms of GVA per head", it is important that the South West's main airports, along with other transport modes, provide good access to/from existing and growing markets outside the region. This will help secure more productive, competitive and sustainable businesses in line with the Regional Economic Strategy.

We welcome current activity, at a national level, to promote technical innovation in the aviation sector, changes to international/UK policy and to customer behaviour. This may help alter the pattern of future sector development and will help ensure that expected future growth is increasingly sustainable.

Historical Passenger Growth and Future Projections

The regional air travel market has changed dramatically in the past number of years. The growth in regional air services can be linked to the liberalisation of European air services from 1993. This allowed new and existing airlines to exploit new opportunities and gave rise to the rapid expansion of No-Frills Carriers (NFCs). The NFCs have changed the nature of the short-haul airline business in Europe, both in terms of the price and the product offering.

This has unlocked latent demand from passengers who were keen to travel from their local airport, rather than via London or some other connecting point. As a consequence, growth at UK regional airports has mostly exceeded growth at a national scale, primarily by growing faster than the large South East airports.

- 1. Total passenger movements in the region have grown at three times the rate of national passenger growth since 1997.**

Passenger numbers at South West airports, 1999-2006

	1999	2002	2004	2006
Bournemouth	273,000	392,000	493,000	961,000
Bristol	1,965,000	3,415,000	4,603,000	5,710,000
Exeter	288,000	336,000	614,000	971,000
Newquay	75,000	185,000	253,000	343,000
Plymouth	109,000	76,000	106,000	77,000
Total	2,711,000	4,406,000	6,070,000	8,063,000

Most airports appear to be in a relatively robust position, with an increase in commercial focus. The exception appears to be Plymouth which has suffered contracting passenger numbers in strong market conditions.

Overall, demand has been driven by:

- The decreasing relative real price of air travel
- The increasing real income of consumers
- Changes in consumer taste; in terms of leisure time and expenditure
- Increased product offering from the airlines and airports

When coupled with capacity constraints at the larger South East airports, passenger growth at regional airports could continue to outpace overall national projections. The airports' own collective projections exceed the national profile, but only marginally so. Importantly, the latest passenger demand projections produced by the Department for Transport (DfT) in November 2007 continue to project strong growth at all regional airports, particularly at Bristol, Bournemouth and Exeter.

2. The collective growth plans of the airports do not represent significant deviation from the growth outlined in the national projections.

This paper argues that we are not in an appropriate position to question the growth projections of either the individual airports or the DfT projections. The National Air Passenger Demand Model applied by the DfT is an econometric model that estimates the effect upon future demand of key driving variables. Thus, the effects of higher oil prices, lower economic growth, additional carbon surcharge etc. have been factored into projections.

3. In terms of certainty, it is likely that the airports will have a greater degree of confidence in their projections for the period to 2015.

In particular, regulatory changes (particularly any carbon surcharge and its effect on prices) will be understood more clearly and can be factored into business planning. The growth plans of the individual airports broadly show that much of the projected growth will be 'front loaded' into the period to 2015. This represents collective confidence in the near term growth prospects for the market.

In addition, we have run a number of regional scenarios that have reflected the exercise undertaken by the DfT.

4. This estimates that economic and real income growth of individuals will remain the fundamental driver of long term trends in passenger demand.

Those scenarios which work through the price of air travel have relatively muted impacts. The 2007 DfT projections are based on the leisure market being somewhat responsive to changes in price whilst there are no indications that price has a major influencing factor on business travel.

The consequence of any potential rise in the relative real price of air travel – driven by 'internalising' the cost of emissions – may not be affected significantly if the economy remains strong in the long term. Indeed, the DfT have modelled decreases in real non-fuel costs for airlines. This suggests that the impact of the Air Passenger Duty and carbon surcharge on the consumer may be partially negated by continuing competition led pressure on costs.

5. Projections at a national, regional and airport level all imply that a proportion of any growth will be driven by an increase in the propensity to fly.

It is likely that there will need to be a higher 'density' of air travel from regional residents for our airports to achieve their growth plans.

Leakage

6. Leakage from the region remains an issue. It is estimated that around 8.2 mppa are made from the South West to/from airports outside of the region.

This remains marginally larger than collective passenger movements through the regions airports. Whilst the route portfolio of regional airports has increased markedly, they still do not satisfy a large part of the 'market demand' in the region, particularly for 'long haul' routes. Leakage has decreased but will probably remain 'sticky' with regards to the long haul market.

Estimates of Economic Importance

Our commentary on the economic impact of airports is based on four primary areas:

- Employment – both direct and indirect (implicitly including the supply chain impacts)
- Tourism expenditure
- Effects on the competitiveness of businesses
- Clustering of businesses around airport activities

7. Airports are important economic actors in their own right, with significant direct and indirect employment via a range of support businesses.

Gross economic impact based on employment effects

	Gross Employment	Gross Value Added (mn)	Gross Output (mn)
Bournemouth	843	45.0	94.7
Bristol	4,353	218.5	493.0
Exeter	2,721	121.7	367.8
Newquay	408	18.6	31.4
Plymouth	312	19.5	45.0
Total	8,637	423.3¹	1,031.9

Employment at both Exeter and Plymouth are positively influenced by the associated presence of regional airlines. Bournemouth and Newquay could see strong near term employment growth, given their respective growth profiles.

8. It could be argued that Bristol is a regionally significant direct and indirect employer.

Employment is not necessarily commensurate with passenger throughput. As with most businesses, as they grow larger they tend to generate economies of scale. We would expect that as the competitive environment continues and intensifies, that this trend would continue. We have factored some sensitivity analysis into our estimates of future employment growth, based on increased efficiency at airport businesses.

¹ A broad estimate is that this equates to 4-5 per cent of regional GVA.

We estimate that, if the airports individually and collectively achieve their growth targets, then direct and indirect employment will similarly grow – although we estimate at a slower rate. Any confidence in these employment estimates will be greater in the near future, along with the airports themselves.

9. **Commentary on long term employment estimates should be treated with caution. It is likely that many factors will change in the medium to long term; ranging from business models, supply chains, employment types etc.**

Estimates of future economic impact of regional airports

	2015			2030		
	On site employment	Gross employment (FTEs)	GVA (£mn)	On site employment	Gross employment (FTEs)	GVA (£mn)
Bristol	2450-3231	4267-5628	190-251	2052-4294	3574-7479	159-334
Bournemouth	1064-1403	1834-2419	87-114	865-1810	1491-3120	70-147
Exeter	976-1287	1983-2616	106-140	889-1860	1807-3781	97-202
Plymouth	473-624	953-1258	51-67	422-882	850-1778	45-95
Newquay	411-542	609-803	36-48	655-1372	596-1248	36-74
TOTALS	5374-7087	9646-12,724	470-620	4883-10,218	8318-17,406	407-852

Tourism Effects

In terms of tourism, clearly airports are an important facility for both inbound and outbound travel.

10. **Importantly, our estimate of the tourism effects do not take into account the flow of expenditure out of the region because of consistency of data issues.**

Airports' contribution to gross tourism expenditure

	Gross Expenditure (£mn)	Gross Employment (FTEs)	Gross Value Added (£mn)
Bournemouth	20.13	425	13.5
Bristol	155.2	3279	103.9
Exeter	13.3	281	8.9
Newquay	21.39	452	14.3
Plymouth	1.59	34	1.1
Total	211.61	4471	141.7

We do show, however, that a significant amount of route development at regional airports has been connected to leisure destinations. The latest available data from the CAA suggests that there remains a large net outflow of UK passengers to leisure destinations.

Our estimates of the inflow of tourism expenditure do use, where appropriate, the latest Civil Aviation Authority data. We recognise that the airports may have access to additional data – particularly with regards to the level of business travel and the inbound/outbound split on their connections – but because this is a multi airport exercise we have attempted to use a consistent data set. For Plymouth and Newquay, we have made some assumptions based on the CAA data used for the other airports.

Again importantly, our estimates do not take into account 'additionality'; the proportion of passengers travelling through the regional airports who would not have made that journey – inbound or outbound – without the air connection in place. Again, this was data not consistently available across regional airports.

11. As a consequence, commentary on airports role in facilitating additional movements into and out of the region is constrained.

Competitiveness and Clustering

We recognise that transport infrastructure plays a fundamental role in business development. Importantly, it plays a key role in improving the perception of connectivity for more rural areas. Air connectivity is important in helping to retain high value added activities in the face of competitive pressures.

We expect that many routes offer significant benefits to South West businesses. There is evidence of increased business travel using air services and we argue that the improved connectivity that airports provide is an absolute prerequisite for the regions' economy to fully integrate into global markets. Whilst evidence of the importance of air travel to businesses always tends to be 'loose', what exists does suggest that it leads to improved competitiveness and boosts regional output.

We argue that the withdrawal of air services from the region would inhibit future economic growth potential. In particular, it would place regional businesses at a competitive disadvantage to others elsewhere.

12. Access to markets has been shown as a key reason for the persistent productivity gap between South West businesses and UK averages.

The relationship between transport and growth of sectors has been tested in a number of studies. All have adopted different approaches, all generate different results and all have some methodological issues. Not least, attempting to determine the true relationship – cause or consequence? Does high growth raise demand for air travel; or do high levels of air travel increase growth in those sectors? In reality, it's probably both.

In our paper we comment that there is mixed evidence between the growth sectors in the region over the last few years and their levels of air travel.

13. The relationship between high growth sectors in the region and air travel appears to be weak. Air travel may not necessarily be a pre requisite for economic growth.

It will be the case that air travel will play a variable role amongst sectors, or industries. Connectivity via airports will be a more important factor for some industries than for others. The importance of air travel will often be business specific.

However, previous work undertaken suggests that an increase in passenger travel, particularly business travel, would shift up long term national and regional economic growth and productivity.

In terms of 'clustering' of aviation related employment around airports, we argue that this is only displayed at Bournemouth. There are a number of key aviation occupiers at Bournemouth. Newquay and Exeter have plans for nearby employment land development but it is less clear how much of an aviation related focus there are in these plans.

INTRODUCTION

PURPOSE OF THE STUDY

This paper has been produced to inform the South West Regional Development Agency (the 'Agency') of the key issues that need to be considered when assessing its approach to the primary commercial airports within the region.

For the purposes of this paper, these are Bristol International Airport, Bournemouth Airport, Exeter International Airport, Plymouth City Airport and Newquay Cornwall International Airport.

The Agency wishes to gain a better understanding of the relationship between an airport and the regional economy, the employment opportunities which flow from airport activities, and the wider economic benefits that arise.

The paper has been prepared in line with the Government's strategic framework for the development of airport capacity, in line with the White Paper 'The Future of Air Transport', published on 16 December 2003.

One of the requirements of the White Paper was for significant airports to prepare Master Plans regarding their development plans for the period to 2030. To date, Bristol and Bournemouth have completed their Master Plans and have, or are, going through the public consultation process. Exeter, Newquay and Plymouth are at varying stages.

Where appropriate, our approach builds upon previous work that has been undertaken in the region and elsewhere. Almost all previous airport-related work acknowledges the methodological difficulties in the assessment of direct and, particularly, the indirect economic impacts that airports produce. Wherever possible, quantifiable approaches have been used; but we have also had to rely on secondary sources and more qualitative approaches in other instances.

DATA SOURCES

We have drawn on a number of data sources. These are fully referenced throughout the report (usually as footnotes), the main sources include:

- Master Plans from the relevant airports and ancillary support papers from the remaining airports
- The Government White Paper on Future Air Transport (2003)
- Department for Transport (DfT) national air passenger projections
- CAA Passenger numbers, CAA Flight numbers, CAA Passenger surveys and International Passenger Survey
- South West Regional Accounts

REPORT STRUCTURE

Following this introduction, the report is presented in two chapters:

- 'Past and Future Drivers of Air Travel'
- 'The Present and Future Economic Impact of South West Airports'

We recognise that the primary focus is estimating the economic impact of our regional airports. Therefore, we present much of the information of the first chapter in a series of appendices. However, to ensure appropriate context, each section will have a brief summary of the main points contained in its corresponding appendix:

Chapter 1 - 'Past and Future Drivers of Air Travel'

Section One, Policy Context; provides an overview of the overall policy context, taking into account current national strategies and priorities. This includes consideration of emerging policy positions (and their potential impact upon future market growth) regarding the link between air travel and productivity (Eddington) and the environment (Stern).

Section Two, The Changing Regional Market Place; a brief overview of the main drivers that have altered the market place within the past few years.

Section Three, Previous Airport Performance; an overview of the recent historical growth experienced in each of the five regional airports. Including an analysis of financial performance, route expansion and passenger growth.

Section Four, Individual Airport Growth Plans and National Growth Projections; detailing the growth plans for each of the regional airports; set in context of national growth projections.

Section Five, Scenario Testing; implementing different scenarios at a regional level to estimate the impact upon potential airport growth in the South West

Chapter 2 – 'The Present and Future Economic Impact of SW Airports'

Section Six, Economic Impact Methodology; sets out the methodology used in calculating the direct and indirect economic impacts of each of the airports and assesses the growth plans of each of the airports as presented in their master plan documents.

Section Seven, Current Economic Impact; an estimate of the current direct and indirect economic impacts of each of the airports.

Section Eight, Economic Impacts to 2015 and 2030; applies the same methodology to the airports' growth plans, as articulated in their master plans (or alternative supporting documentation), for the period to 2015 and then to 2030 as a way of providing a range of employment and economic impact estimates.

Section Nine, The Competitiveness Agenda, uses secondary literature and previous research to outline the role that airports have in facilitating growth in a modern and flexible economy.

Conclusions, provides a brief summary of the report's main findings.

Appendices

CHAPTER 1: PAST AND FUTURE DRIVERS OF AIR TRAVEL

This section sets out the overall policy context. There are three main aspects to this context setting – UK aviation policy, UK and EU environmental policy and general economic and transport economic policy. Full commentary is contained in Appendix 1. Here, we briefly outline the main relevant policy pointers.

1. POLICY CONTEXT

The *White Paper 'The Future of Air Transport'* sets out the framework for the development of airport capacity in the UK over the next 30 years. It sets out a policy framework which will help to inform decisions on future planning applications as well as setting out the case for future expansion at airports across the country. The White Paper concludes that there is significant potential for growth at South West airports, with the main potential at Bristol.

The *White Paper Progress Report* published in 2006 looked at the changes in the market since 2003. It reaffirms the commitment to a proper balance being struck between economic, environmental and social considerations. The report states that aviation should meet its full external costs and responsible growth should predominantly make best use of existing capacity and supporting targeted capacity increases.

We feel that the proposed inclusion of aviation in the EU Emissions Trading Scheme, from the period 2010/2011, could result in additional cost implications for airlines. We expect that part of this additional cost burden could be passed on to consumers and could dampen future growth.

Nevertheless, passenger forecasts at a national level remain extremely robust. The Department for Transport (DfT) projects that passenger numbers will grow from current levels of approximately 230 million passengers per year (mppa) to 465 mppa in 2030 if capacity is constrained. Even by factoring in the effects of higher environmental costs onto consumers, growth remains strong.

'*The Stern Review of the Economics of Climate Change*' projects that between 2005 and 2050, emissions are expected to grow fastest from aviation (tripling over the period, compared to a doubling from road transport). It estimates that aviation's share of total emissions will increase to 2.5 per cent by 2050, or 5 per cent if taking account of warming effects. Whilst the Stern Review does not have a direct impact upon aviation, it provides a framework for the Government's position on addressing external environmental costs.

'*The Eddington Transport Study*' essentially advocates the increasing importance of transport in an evolving and increasingly inter-connected global economy. It specifically argues that transport has a key role in improving productivity and, importantly, that limits to transport capacity can present a constraint when an economy matures. However, it highlights that there is little evidence on the precise contribution of transport to productivity.

It argues, however, that the role of transport will increase as global trade continues to increase. It could be argued that the Study's overall position is that adequate capacity will be necessary, even with the full environmental costs reflected in prices, to support the growth that is likely in trade. As globalisation accelerates, aviation has a crucial part to play in maintaining the UK's strengths in import and export, trade and service industries.

This section outlines how the regional air travel market place has altered significantly over the past decade. It outlines what have been the main drivers for growth. Full commentary is contained in Appendix 2.

2. THE CHANGING REGIONAL MARKETPLACE

The structure of the regional air travel market place has changed dramatically in the past few years. The growth in regional air services can fundamentally be attributed to the liberalisation of European air services from 1993. This allowed new and existing airlines to exploit new opportunities and gave rise to the rapid expansion of No-Frills Carriers (NFCs). The NFCs have changed the nature of the short-haul airline business in Europe, both in terms of the price and the product offering.

This has unlocked latent demand from passengers who were keen to travel from their local airport, rather than via London or some other connecting point. In response, regional airports began to change the way they viewed their operations, sometimes spurred by a move from public to private sector, but even where still in public ownership, taking a more commercial approach, pricing competitively and more actively seeking out new air services – thus creating a “virtuous circle” which facilitates continued growth.

We argue that the change has largely been driven without the need for large scale injections of public money. Whilst there have been examples of strategic investments by the public sector, the change in the market has been predominantly driven by commercially focused airlines, supported by airports. This has largely been private sector led market growth.

We feel that future growth in regional air services will continue to be driven through the market operating effectively in an increasingly liberalised and competitive environment.

We expect that there may be further consolidation (or possibly exit) among the NFCs, particularly if they continue to compete intensely. We also expect that competition will continue to increase between airports. There will be ‘losers’ in this increased competitive environment. There is no reason to expect that both the airport and airline markets are different from any other product market. Whether this will result in the closure of regional airports is unclear.

Therefore we take the view that the competitive environment between both airlines and airports will, at least, remain as strong as it stands today. This will continue to lead to benefits to the overall consumer, although there may be some localised ‘losers’.

This section outlines a wide range of factors covering the historical performance of South West airports. This includes passenger growth, route development, freight levels and commercial performance. Full commentary is included in Appendix 3.

3. PREVIOUS AIRPORT PERFORMANCE

Growth at UK regional airports has mostly exceeded growth at a national scale, primarily by growing faster than the large South East airports. New routes offered out of regional airports have reduced the cost and time through lower surface travel costs and easier access.

Total passenger movements in the South West have grown at three times the rate of national passenger growth since 1997. Despite this, the regional airports still have a relatively small share of the national market – approximately 3.5 per cent. The airports remain regionally or sub regionally important.

	1999	2002	2004	2006
Bournemouth	273,000	392,000	493,000	961,000
Bristol	1,965,000	3,415,000	4,603,000	5,710,000
Exeter	288,000	336,000	614,000	971,000
Newquay	75,000	185,000	253,000	343,000
Plymouth	109,000	76,000	106,000	77,000
Total	2,711,000	4,406,000	6,070,000	8,063,000

We argue that regional airports could be moving into a maturity phase of market development. It will be difficult to continue to generate sustained double digit growth, given increasing costs and limits to demand, at least without extensive new investment in capacity.

Analysis at an individual airport level shows that growth rates have differed:

The growth at Bristol can be broken down into two distinct phases. From 1992 to 2000, growth was consistent whilst since 2000 the rate of growth has increased markedly – far surpassing growth at a national level. Whilst we recognise that growth rates may be slowing it has, in many senses, strengthened its position as the primary regional airport.

Growth at Bournemouth since 1992 has been variable but what is clear is that, in the most recent period, growth has been extremely strong. In the years 2002 and 2005, annual passenger growth exceeded 45 per cent. On this growth profile, projections seem to suggest that it will surpass Exeter as the region's second largest airport in the near future.

Growth at Bournemouth appears to have been driven by strong route development. If the overall market slows, and this translates through to a lower rate of route additions, this may impact upon airports such as Bournemouth first. However, as exhibited in its Master Plan, the airport owners expect it to be one of the main drivers of regional passenger growth in the short to medium term. This may be based on its ability to offer a competitive alternative to South East passengers.

In a similar vein to Bournemouth, the growth at Exeter can be viewed in two distinct phases. In the period up to 2003, growth was robust and broadly matched the national growth profile. However, since 2003 growth has strengthened further.

This could be explained by the fact that airports such as Bournemouth and Exeter act as 'secondary markets' for carriers and route expansion occurred after demand had been proven by the larger regional airports. We therefore argue that these airports could follow a similar growth profile, but lagged; experiencing a flattening of growth rates.

Plymouth has experienced the most variable performance over both the medium and short term. It has recently suffered a contraction of passengers and it is clear that it has been losing its competitive position in a growing market. Relatively weak performance in a robust market becomes noticeable. There could a question of how Plymouth will perform if the general market conditions worsen.

Newquay has experienced strong growth in last few years – albeit from a relatively low starting level. It is clearly an airport that is in its early stages of development. We feel that it has a high dependency upon the health of the wider Cornish tourist economy. The establishment of NFC routes has meant that flying for a leisure break has been a viable option for many travellers. We raise the risk that leisure destinations could be particularly susceptible to significant changes in ticket price – there is a greater rate of price elasticity.

As would be expected, Bristol offers the most extensive route portfolio; including domestic, short haul and some long haul connections. Bournemouth has been able to quickly develop a relatively diverse route portfolio. Most of the product offering tends to be for short haul international markets and many of these are to leisure destinations. The same can be applied to Exeter, although there is slightly more emphasis upon domestic connections.

There is a problem that, without route specific data, it is difficult to determine the overall split of leisure and business travel on specific routes. Therefore, we understand that we make inferences about the business and leisure split across the route portfolio.

Plymouth offers a relatively limited number of scheduled routes, entirely oriented towards the domestic market. Newquay offers a relatively limited range of routes to domestic, and recently international, destinations.

Analysis shows that freight is not a significant part of any of the South West airports business, with the possible exception of Bournemouth.

As would be expected, some limited analysis of the fundamental commercial performance of the airports shows that, broadly, financial performance is commensurate with passenger volume. Bristol is the largest business. It has been able to sustain a profit margin on its operations. In comparison, the next largest airports – Exeter and Bournemouth - appear to have had their profitability squeezed at a time when passenger numbers and turnover have risen. Nevertheless, both airports have been recently acquired and investment plans reflect confidence in future commercial performance. Commercially, both Plymouth and Newquay are weaker with financial sustainability currently difficult to achieve.

This section outlines the growth plans of the airports, represented by their plans. Full commentary is provided in Appendix 4.

4. AIRPORT GROWTH PLANS

All of the airports expect further passenger growth in the period up to 2030, exceeding national growth rates. Projections at a regional level have been produced by DfT and compared to the individual growth plans of the airports these projections marginally exceed their collective plans. DfT projections are for growth to 21 mppa whilst collectively the airports project to 20.5 mppa by 2030. Overall, this is significant growth – representing average annual growth of 6.5 per cent. When compared to historical performance, however, this signals a relative maturing of the market.

When coupled with continuing capacity constraints at the larger South East airports, we feel that regional airports will continue to outpace overall national projections.

It is likely that the airports will have a greater degree of confidence in their projections for the period to 2015. In particular, regulatory changes (and the effect on prices) will be understood more clearly and can be factored into business planning.

The projections appear to imply that a proportion of the growth will be driven by an increase in the propensity to fly. Given the projections of population growth within the region, it is likely that there will need to be a higher 'density' of air travel. Whilst a proportion of the demand can come from other factors such as increasing inbound travel and reducing leakage to other regions, we argue that airports will largely remain dependent upon continuing demand from South West residents.

Leakage from the region remains an issue. It is estimated that around 8.2 mppa are trips by South West passengers from airports outside of the region. This remains marginally larger than collective passenger movements through the regions airports. Therefore, whilst the route portfolio of regional airports has improved markedly, they still do not satisfy a large part of the 'market demand' in the region. We expect that a large part of this unmet demand will be associated with long-haul routes.

The growth plans of the individual airports are set out in Appendix 4. Broadly they show that much of the growth will be 'front loaded' into the period to 2015. Notably, Bournemouth has ambitious plans for the most immediate period.

A key point for the Agency to consider is whether all growth plans can be accommodated (and met) or whether they collectively represent competition driven displacement. Will there be enough indigenous demand to allow the growth plans of all to be realised?

The purpose of this section is to present a number of different scenarios of regional passenger growth based on the approach adopted at a national level by DfT. Full commentary is provided in Appendix 5.

5. SCENARIO TESTING

The scenarios that we present are based on the same forecast effects of carbon pricing, economic growth and oil prices. Importantly, we undertake an additional scenario which attempts to estimate the implications of different growth rates (positive and negative) for the South West when compared to national forecasts. These scenarios utilise estimated income 'elasticities' informed by the DfT scenario analysis and by analysis from the Civil Aviation Authority². We attempt to construct 'best case' and 'worst case' scenarios for both the UK and the South West, built up from the individual scenarios.

The estimates show that the strongest impacts are from faster South West and UK economic growth, reflecting the sensitivity of air travel to income growth. Those scenarios which work through the price of air travel have relatively muted impacts. This reflects the low price elasticity of air travel underlying the DfT forecasts, as informed, for example, by the CAA report (which finds the air travel is 'price inelastic' – i.e. a rise in prices results in a less than proportional reduction in passenger numbers). In some senses, these estimates question the assertion that we make throughout - that potential price increases will dampen the rate of passenger growth.

For example, a 0.5 percentage point increase in the South West economic growth rate is projected to induce an addition 2.6 mppa through the region's airports. These scenarios present the argument that real wealth is the fundamental driver of demand for air travel.

Bringing together the various scenarios; we estimate a 'best case' scenario for South West passenger numbers of around 26.3 mppa by 2030. The 'worst case' scenario projects passenger numbers to rise to 'only' around 16.7 mppa by 2030, although this represents an annual average growth rate of around 3.3 per cent – above the national growth rate under its central case.

Of course, we recognise that scenario testing is always an inexact science and the figures that we present can be debated. However, the fundamental point is that if growth is to be realised then the key determining factor will be the state of the national and regional economy. A strong economy creates both business and personal wealth, fuelling demand for air travel.

² 'Demand for Outbound Leisure Air Travel and its Key Drivers' - Civil Aviation Authority - 2005.

CHAPTER 2: THE PRESENT AND FUTURE ECONOMIC IMPACT OF SW AIRPORTS

The purpose of this chapter is to describe the measurable economic impacts of current airport activities as well as estimating potential impacts based on the growth plans.

6. ECONOMIC IMPACT METHODOLOGY

This section reviews general evidence that already exists, discusses definitions and multiplier assumptions used to estimate employment effects. We feel that we have adopted sufficiently pragmatic assumptions and have followed methodologies adopted in previous studies.

6.1. Spatial Scale

Clear definition of the study area is important in the estimation of indirect and induced impacts. The larger the study area, in terms of output, income and employment, the greater its capacity to supply goods and services required by airport-related companies. Indirect economic benefits tend to be larger.

This paper is devised to inform the policy position of the Agency. Therefore, the area of analysis is South West England. Whilst our primary focus is not concerned with sub regional impacts, we do recognise that some airports play a key sub regional role that may fall outside of administrative boundaries. Nevertheless, our estimations of economic impact are primarily based on regional impact.

6.2. Airports and Employment – General Context

The number of people employed in or around an airport varies depending on several factors; including the size of the airport, the extent and diversity of the services offered by the airport, the type of carriers it attracts, and the physical capacity to accommodate jobs.

York Aviation produced a study for the Airports Council International³ that suggested that airports fall into four broad classifications on the basis of employment densities (on-site direct employees):

- Low density employer airports typically have low/medium passenger throughput and typically directly employ between 350-600 people per mppa.
- Medium density employer airports typically have medium/high numbers of passengers and accommodate international traffic. They directly employ between 600-900 people per mppa.
- High density employer airports generally have high levels of passengers every year, and also handle high volumes of freight. They employ between 900 and 1200 employees per mppa.
- Very high density employer airports have relatively lower freight and passenger levels. They tend to accommodate airline headquarters and maintenance facilities, which increase the employment density significantly.

Evidence of employment levels at each of the regional airports suggests that they are typically lower density employers. The exceptions to this are Exeter and Plymouth – both of which accommodate airline headquarters, with the former also accommodating maintenance

³ *The Social and Economic Impact of Airports in Europe* (2004), by York Aviation study for Airports Council International

facilities. As a consequence, those airports have employment levels that are much higher than might be expected.

6.3. Employment Multipliers

Employment associated with airport activity can be classified in three categories:

- *Direct employees* are those employed on site. They can include airlines, retail and other concessions, catering, ground engineering and handling, air traffic control and car parking facilities, and several other business activities.
- *Indirect employees* are those employed in businesses off-site supplying goods and services to the airport – providing goods and services that airport-based companies need to purchase in order to carry out their work.
- *Induced employment* refers to employment generated by the spending of wages and salaries earned by employees in the direct and indirect activities.

Whilst the levels of direct employment can be relatively easy to ascertain – normally through information provided by on-site employers - the numbers of indirect and induced employment need to be estimated. These are normally estimated by using employment multipliers. In most previous studies, employment multipliers that have been estimated previously have been used.

However, for the purposes of this paper, we use the South West Regional Accounts. This is a state of the art, unique in England, regional input-model that allows the user to generate scenarios that estimate the knock-on effects of generating additional output or employment. Therefore, the multipliers are implicit in the results. We do reference the results against multipliers that have been used in previous studies.

Indirect Employment

The wide variety of previous studies on the economic impact of airports suggests there is no single or definitive multiplier that can be used to calculate indirect employment. A number of studies tend to suggest a range of 0.2 to 0.45, with a norm of 0.3 often used.

However, it should be stressed that many previous studies have presented a very wide range of potential employment multipliers. There are many examples where the multiplier tends to be much higher. For example, previous work undertaken at Heathrow and Manchester suggests that the indirect multiplier could be in a higher range of 0.57 to 1.35⁴. The range for potential multiplier values is significant and erodes the confidence that we can hold in using those previously applied.

Induced Employment

Similarly, there is also a wide range of multipliers used to estimate induced employment. The multiplier used depends on the amount of spending absorbed in the local and regional economy, and how much "leaks" to other regions. Previous studies show a range from 0.25 to 0.7. The norm does seem to focus upon 0.3 but, again, the range is extensive.

⁴ *The Economic Contribution of the Aviation Industry in the UK – Oxford Economic Forecasting – October 2006*

As a consequence, we have low confidence in the use of existing literature as a source for agreed multipliers (be it employment or output) for airport operations. Also, these studies did not have the relative advantage of a regional input-output model. Using the Regional Accounts, and in the absence of empirical studies, we are more confident that the results represent a more realistic profile of impact at a regional level.

6.4. Employment Estimates

Our estimate of the economic impact of each of the airports is based on the effects of employment – this is an employment led approach. Our approach is not output led. We recognise that airports normally involve a large number of businesses. It would be difficult to ascertain the output of each of those businesses, whereas employment figures are relatively more readily available.

However, the Regional Accounts allows us to use employment data and estimate the knock-on output effects.

Associated employment at airports tends to be far larger than the direct employment by the airport operator itself. For each of the airports we have taken the latest employment data that is available. Total employment at an airport, given the multitude of on-site employers - often needs to be assessed by an on-site survey. Where available, we have used those previously undertaken.

On-site surveys can be a considerable undertaking and they have not been repeated for this paper. We recognise, therefore, that the following impact assessments could represent a lagged picture of current employment, particularly if that airport has experienced significant passenger growth since the date of the latest employment estimates.

Therefore, we have needed a means to update the latest employment figures provided. Whilst we feel sufficiently confident that we have employment information that is relatively up-to-date, it is important that the effects of subsequent passenger growth are taken into account. Where appropriate, we have updated the latest employment information – particularly where significant passenger growth has occurred since that date.

We broadly update employment figures by taking the airports' employment densities and applying them to current passenger load, recognising that some efficiency gains may have been created.

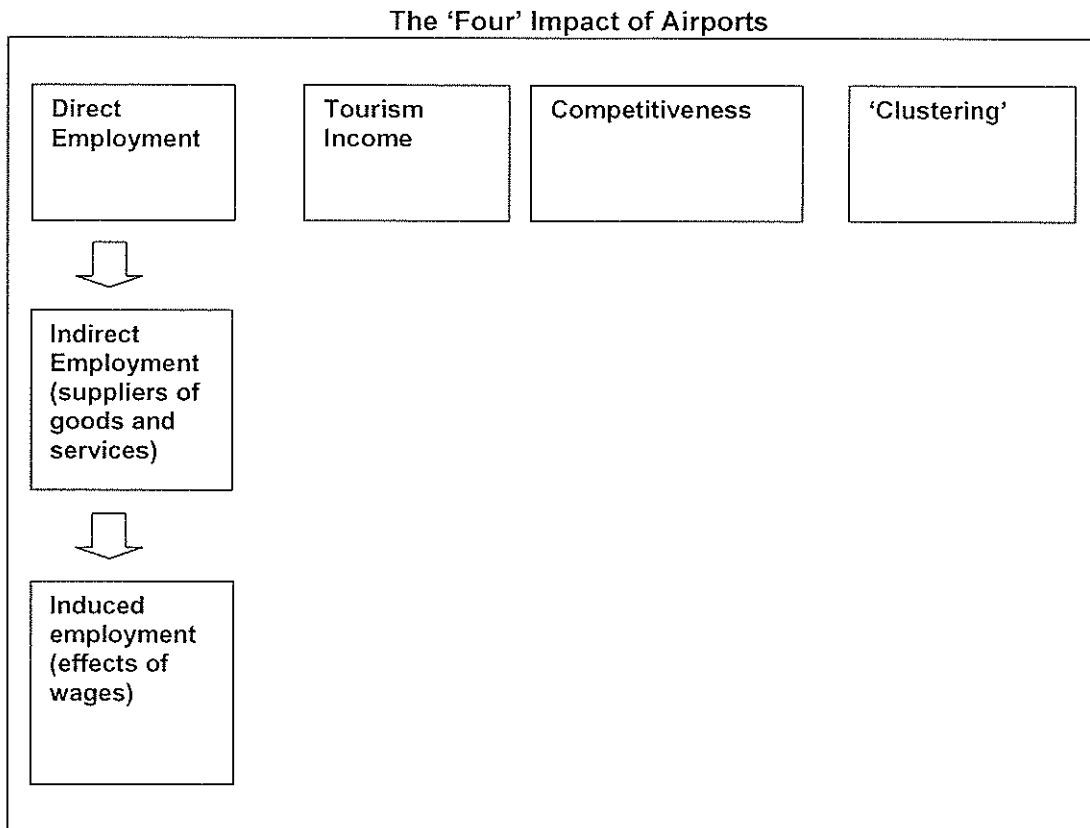
Example – latest employment data available (2005):

Passenger Levels (2005)/On Site Employment (2005) = Employment Density (2005)

*Employment Density (2005) - 2.5 per cent efficiency saving per annum*Latest Passenger Levels (2007) = Latest Employment Estimate (2007)*

7. CURRENT ECONOMIC IMPACT

Airports impact upon the wider economy in a number of ways. We have looked at the impact of four main areas, diagrammatically shown below.



In many senses, employment and tourism impacts are more tangible and measurable. Airports have an impact through their role as employers and significant purchasers of goods and services. They also bring visitors into an area, therefore acting as a conduit for tourism expenditure. For each of the airports we estimate these gross impacts.

The effects of clustering and how airports improve the competitiveness of an economy are less tangible and more difficult to measure. Nevertheless, we do present some evidence and commentary.

7.1. Employment Effects

7.1. 1. Bristol Airport

Employment at Bristol has grown significantly over the past few years. This is commensurate with the passenger growth during this period.

Data provided by the airport shows that 1,513 people were employed at the airport in 2000⁵. By July 2006 this had risen to 2,806, or as expressed Full Time Equivalents 2,595. However, latest figures from Bristol show that employment tends to be seasonal. Total employment had fallen to 2,612 in February 07. If expressed as FTEs this equates to 2,398. Therefore, we have estimated average employment at 2,500 FTEs.

Details of on-site employment at Bristol shows that the operator only employed 9 per cent of total on-site employees. The airlines and handling agents employed a considerable 33 per cent of on-site employees.

Employer Type	2006 Levels
Airport Operator	210
Airlines/Handling Agents	760
Retail	67
Car Services	207
Security	70
Other Support Services	976
Total	2290

Source: Bristol International Airport and South West Regional Development Agency

By using the South West Regional Accounts we can estimate the knock-on effects of employment at each of the airports. The Regional Accounts is built around a 'transactions' matrix, which records the values of purchases and sales between industry groups taking place within the economy – in essence, a map of the supply chains linking local industries.

The Regional Accounts presents the information as a series of impacts, each representing the 'transmission effects' that employment generates through the economy. This can be grouped into three associated phases:

First Round Effects – the impact upon the direct suppliers of the industries where the employment occurs. In essence, the first tier of the supply chain.

Indirect Effects – the effect upon the suppliers of the direct suppliers. Essentially, these are second tier suppliers.

Induced Effects – impacts arising from increased spending by households arising from additional income created by the impact. The Regional Accounts take account of the money that flows to households in the form of income. This income is assumed to be spent by households and induces further increases in demand for domestic firms' products.

The sum of these effects gives total impact.

The potential wider impact of an airports activity (as with any business) will be dependent upon the types of activities, or industries that take place. Some industries have stronger transmission effects than others.

⁵ Bristol International Airport Economic Impact Study – Roger Tym & Partners – October 2005

Industries that tend to have a higher labour density also tend to have higher knock on employment effects in the wider economy, whereas those industries with relatively high capital density will have a greater knock on in terms of output. As a result, different industries will have different multipliers effects.

The Regional Accounts have a number of industrial classifications. We have classified airport activities in the following ways:

Employer Type	Industrial Classification
Airport Operator	Business Services
Airlines/Handling Agents	Air Transport
Retail	Retail Distribution
Car Services	Ancillary Transport Services
Security	Public Administration and Defence
Other Support Services	Other Services

(i) Internal Economy

The Economic Impact Study previously undertaken⁶ at Bristol identified that airport operations have different supply chain elements, which prevail across the different businesses:

- *Internal Economy* – Some airport businesses rely on other on-site businesses for an element of their goods and services. Examples of this include airlines sourcing their check-in and handling services from an on-site handler, transport for cabin crew from on-site taxi operators etc.
- *Centralised Purchasing* - A number of businesses which rely on corporate procurement, sourced centrally by national head offices – often at or near the UK's major international airports. In some cases, although centralised purchasing patterns would appear to preclude local, sub-regional or regional indirect employment resulting from an airport, this is not strictly the case.
- *Local Sourcing* – There is also a degree of local leakage from the airport's internal economy. This could include procuring engineering maintenance services, food, transport etc.

In terms of the effect upon estimates of further indirect employment, we are concerned by the internal economy. There is the possibility that some of our calculations of indirect employment could correspond to jobs that we have already 'counted' as on-site employment.

Roger Tym & Partners undertook an empirical analysis of the potential value of the internal economy at Bristol. This estimated that approximately 30 per cent of supply chain activity at the airport was connected to the internal economy. This is one of very few such exercises that have been undertaken and we feel that it is appropriate to use the findings.

Therefore, we need to exclude from our calculations of indirect employment the effects of supply chain expenditure that corresponds to jobs within the internal economy. These will already have been counted as direct on-site employment.

⁶ Bristol International Airport Economic Impact Study – Roger Tym & Partners – October 2005

As a consequence, using the Regional Accounts, we have deflated the estimates of indirect employment by 30 per cent. However, we recognise that for the purpose of this paper we have not undertaken any on-site business surveys at the airports. Therefore we are aware that the 'strength' of the internal economy may differ at each of the airports. For this reason, we have presented a range of estimates based around different 'discounts' for the internal economy (20, 30 and 40 per cent). The range of estimates is presented in Appendix 6.

Generally though, we feel that this is an appropriate approach to make, given previous empirical findings. This helps us to avoid double counting of direct and indirect employment at the airport.

(ii) Employment Estimates

Using the Regional Accounts we can estimate that the overall wider effect based on the on-site employment at Bristol. With current on-site employment level estimated at 2,500 FTEs; and based on the type of activities highlighted above, we estimate that a total of 4,353 FTEs jobs are supported in the wider economy by Bristol's activities.

Bristol Airport – Gross Wider Economic Impact

Type of Impact	Gross Impact (2007 prices)
Employment	4,353
Gross Value Added (GVA)	£218.5 mn
Gross Output	£493.0 mn

Source: South West Regional Accounts

A survey of principal employers undertaken at the airport in 2005 showed that the majority of employees at the airport live within the South West – leakage is minimal. Less than 3 per cent lived in the South Wales, Swindon and Wiltshire area. This was the only category that included an area outside of the South West. Given the inclusion of Swindon and Wiltshire, the figure is probably lower than 3 per cent. However, we recognise that this only relates to direct employees, we would expect leakage on an indirect and induced basis.

It should be noted that these estimates of impact marginally differ from estimates previously made. They differ when compared to studies that have used the generic multipliers, outlined previously.

The Roger Tym & Partners assessment⁷ estimated that a further 1,576 jobs would be created through indirect and induced effects at a regional level. This was based on a marginally lower direct employment figure of 2,284 FTEs. We have estimated that a further 1,853 jobs are supported beyond the airport. As stated, Roger Tyms used an indirect multiplier of 0.3 (Type I multiplier) and an induced multiplier of 0.3 (a combined Type II employment multiplier of 0.6).

The figures that we have derived, estimate that the indirect employment multiplier is 0.42, whilst the induced employment multiplier is lower at 0.22. Therefore, we have a combined multiplier of 0.64 – reassuringly close to the generic multipliers previously used.

The Roger Tyms study also undertook some empirical analysis based on the typical wage levels of employees of sampled companies. They were then able to estimate the disposable income that would be generated by these companies and aggregated this to an estimated total disposable income from all airport employees. They also took the typical wage levels of those in the indirect supply chain and undertook a similar aggregating exercise.

⁷ *Bristol International Airport Economic Impact Study – Roger Tym & Partners – October 2005*

The result was that Roger Tyms estimated a combined overall multiplier of 0.47. Therefore the empirical income-based multiplier of 0.47 was lower than the 0.60 based on the generic multipliers taken from previous studies.

This income based approach has been used in other studies. It could be argued that it focuses more upon the induced expenditure effects that occur within the economy. However, we feel that it does not reflect the supply chain mechanism fully and it is an approach that we do not favour.

The output multipliers that the Regional Accounts generate are marginally lower than the employment multipliers – suggesting that the transmissions effects on an output basis are weaker than employment effects.

7.1. 2. Bournemouth Airport

Bournemouth has also experienced considerable employment growth over the past few years. In 2000, on-site employment was 200 whilst latest estimates contained in the recent report by Arup⁸ shows that by 2006 employment had grown to 490 FTEs. Again, this is commensurate with passenger growth during this period.

The table below (based on 2005 employment data) shows that the composition of employment is different when compared to Bristol. Primarily, the airport operator constitutes a much greater share of total on-site employment – 36 per cent. This seems realistic – we would expect that a larger airport has a much greater level of support services, such as retail, due to higher passenger throughput. Employment by the airport operator will not necessarily be correlated to passenger numbers; we would expect that airport operator employment would fall as a proportion of total employment as throughput increases.

The share of employment by airlines/handling agents is similar to that at Bristol – constituting one-third of total on-site employment. As we have stated previously, the structure of employment at the airport – indeed at any business - is an important factor in estimating its wider impact.

Employer Type	2005 data
Airport Operator	155
Airlines/Handling Agents	95
Freight/cargo	39
Concessions	22
Control Agencies	17
Other Support Services	102
Total	430

Source: *Bournemouth Airport Economic Impact Assessment – Arup – May 2007*

Therefore, because the constitution of employment at each of the airports differs, we would expect to see differences in the strength of transmission effects into the wider economy. Whilst we would expect these differences to be relatively small – after all, each airport essentially undertakes the same activity – we would expect it will result in subtle differences in overall figures.

⁸ *Economic Impact Assessment: Bournemouth International Airport – Arup – May 2007*

Employment Estimates

We have used the same methodology as that applied for Bristol. We have estimated the employment effects according to latest available data. Again, we use the Regional Accounts to estimate the information as a series of impacts, each representing the 'transmission effects' that employment at Bournemouth generates through the economy.

We make the assumption that Bournemouth will have similar supply chain mechanisms to those found at Bristol. Again, we present estimates in Appendix 6 based around the range of potential 'strengths' of the internal economy.

By using the Regional Accounts, we estimate the overall wider effect based on the employment levels at Bournemouth. With a current estimated on-site employment level of 490 FTEs, and based on the type of activities highlighted above, we estimate that a total of 843 direct and indirect FTE jobs are supported in the economy.

Bournemouth Airport – Gross Wider Economic Impact

Type of Impact	Gross Impact (2007 Prices)
Employment	843
Gross Value Added (GVA)	£45.0 mn
Gross Output	£94.7 mn

Source: South West Regional Accounts

However, these represent gross jobs and we would expect some leakage, principally to the South East.

Again, our estimates using the Regional Accounts are consistent with previous work done at Bournemouth. The work undertaken by Arup⁹ estimated that a total of 866 FTEs are supported in the wider economy. We feel confident that our estimate of 843 FTEs supported represents a fair reflection. The Regional Accounts estimates that there is an indirect employment multiplier of 0.42 and an induced multiplier of 0.22. Again, this is broadly consistent with the findings at Bristol.

We also estimate that the GVA and output effects of Bournemouth are significant. We estimate that GVA of £45mn per annum is generated with an associated output value of £94.7mn per annum in 2007 prices.

As with the employment estimates (and latterly the tourism effects), we would expect that a relatively higher proportion of these value added and output effects may leak out (into the neighbouring South East) than for other South West airports. However, without detailed supply chain expenditure information, we cannot accurately estimate how much remains in the South West.

Nevertheless, given the proximity of the Bournemouth/Poole conurbation, it is likely to still be quite high. Overall, the sub regional element – encompassing both regions – is significant. The previous studies undertaken by Arup and York Aviation¹⁰ at Bournemouth have estimated that a significant proportion of the employment and income generated would incur in the immediate Dorset sub-region. Both studies estimate that 80 per cent of the employment and income benefits would be incurred in Dorset.

⁹ *Bournemouth Airport Economic Impact Assessment – Arup – May 2007*

¹⁰ *The Economic and Social Impact of Bournemouth Airport – York Aviation - 2006*

It is our view that this may represent an over estimation of the immediate sub regional effects but not significantly so. The two previous studies have used standard sub regional multipliers that do not reflect the proximity that the airport has to the regional border.

7.1. 3. Exeter Airport

Employment levels at Exeter are significantly higher than those at Bournemouth, given the fact that they are currently both of a similar size in terms of passenger numbers.

It is estimated that FTE on-site employment is 1,169¹¹. This equates to an employment density of 1,184 FTEs per million passengers. This is considerably higher than the employment densities at either Bristol or Bournemouth. In the main, this reflects the fact that the airline FlyBe is headquartered at the airport and is a significant on-site employer. The latest information¹² shows that FlyBe employed 1,017 people in Exeter in October 2007. We have estimated that this is equivalent to 860 FTEs.

It is our view that the employment at FlyBe needs to be included in our consideration of Exeter airport. The activities of the airline are, obviously, closely dependent upon the operation of the airport and the scale of FlyBe operations would not be maintained at current levels if the airport did not exist. We have included airline employment in the analysis of other airports. Therefore, we feel that it is appropriate to include FlyBe employment at Exeter.

Employment Estimates

Again, we use the same methodology – using the Regional Accounts and taking into account the potential workings of the internal economy.

With a current estimated employment level of 1,169¹³ FTEs based on airport activities, and based on the type of activities highlighted above, we estimate that a total of 2,721 FTE jobs are supported by airport activities in the wider economy.

It should be noted that the overall figures derived for Exeter reflect the employment composition at the airport. Primarily, this relates to the type of employment at FlyBe – much of which is high value head office functions and technical engineering. This has two primary effects.

First, the induced effects of expenditure filtering through the rest of the economy tend to be greater. As a consequence, we have a marginally higher induced multiplier of 0.34 for Exeter.

However, the major effect is for indirect employment. Exeter has a greater proportion of employment in the air transport sector – this is a high value added sector and we would expect the transmission effects to be relatively strong through the rest of the economy. High end engineering tends to have strong capital requirements through its supply chain linkages.

¹¹ We have employee information for Exeter Airport for 2006 but have needed to convert this to FTEs. We have used the employee/full time split at Bristol as an operator as well as for a major airline - Easyjet. This has been used to calculate the FTE ratio for both the Exeter airport and FlyBe.

¹² FlyBe information

¹³ We received updated information from Exeter Airport after this paper was submitted. This updated information showed that combined on-site employment levels at the airport and FlyBe could be slightly higher, within the range of 1,180-1,210. However, we have chosen not to re-estimate the wider impact because we feel that this is within an expected range of variation in our calculations.

We would expect that the engineering work at FlyBe is a highly beneficial activity for dependent parts of the sub-regional economy.

This is reflected in a relatively high indirect multiplier of 0.74 at Exeter. Obviously this differs from that contained in the previous airports studies although it is broadly consistent with those airports that have a significant headquartered airline presence.

Exeter Airport – Gross Wider Economic Impact

Type of Impact	Gross Impact
Employment	2,721
Gross Value Added (GVA)	£121.7 mn
Gross Output	£367.8 mn

Source: South West Regional Accounts

However, we need to make clear that the impact of these jobs does not necessarily all occur within the South West region. As stated in the tourism section below, we expect that the further south and west we travel into the region than the lower the levels of leakage. Nevertheless, Exeter will link into the same national procurement patterns as the other airports and we know that there are a range of contract workers who commute from out of region for work periods and then return home and, therefore, spend money elsewhere.

We also estimate that the GVA and Gross Output effects of Exeter are significant. We estimate that GVA of £121.7 mn per annum is generated with an associated output value of £367.8 mn per annum. This is based on 2007 prices.

7.1. 4. Plymouth Airport

Employment at Plymouth broadly follows that of Exeter. Employment relative to passenger numbers is high. Indeed, it is the highest of any airport in the South West by some margin.

This is explained by the fact that a further regional carrier – Air SouthWest – is headquartered at the airport. Whilst Air SouthWest is not as large a commercial operation as FlyBe, in terms of its size relative to other employment at the airport, it is a significant employer.

Again, it is our view that the on-site employment at Air SouthWest needs to be included in our consideration of Plymouth. The activities of the airline are, obviously, closely dependent upon the existence of the airport. It is highly unlikely that Air SouthWest would be located at Plymouth if the operations of the airport did not continue.

Therefore, we feel that it is appropriate to include Air SouthWest employment at Plymouth airport. As a consequence, employment density at Plymouth equated to over 1,400 per million passengers.

Latest information from the operator of both the airport and Air SouthWest¹⁴ states that there are currently 167 employees at Plymouth¹⁵. This excludes the café/shop which has been contracted out – which we have estimated employs a further 4 employees. Expressed as FTEs, we equate this to 155 FTEs¹⁶

¹⁴ Sutton Harbour Holdings

¹⁵ This excludes Air SouthWest employment at Newquay and Bristol

¹⁶ Following Core Outputs Technical Note – 2 part time jobs equals 1 FTE.

To be consistent we continue to use the assumptions relating to the internal economy. By using the Regional Accounts, we can estimate that a total of 312 FTE jobs are supported by airport activities.

As with the case of Exeter, the overall figures derived for Plymouth reflect the employment composition at the airport. This will again, reflect the type of employment at Air SouthWest – much of which will also be high value head office functions.

Plymouth Airport – Gross Wider Economic Impact

Type of Impact	Gross Impact
Employment	312
Gross Value Added (GVA)	£19.5 mn
Gross Output	£45.0 mn

Source: South West Regional Accounts

We estimate that, based on 2007 prices, GVA of £19.5 mn per annum is generated with an associated output value of £45.0 mn per annum.

A realistic assumption would be that there would be minimal leakage from the region. Nevertheless, Plymouth airport will link to some of the same national procurement patterns as other airports as well as requiring supply chain support from outside of the region.

7.1. 5. Newquay Airport

Newquay has experienced employment growth over the past few years as a consequence of sustained passenger growth. In 2004, direct employment was 220¹⁷ whilst we estimate that by 2007 employment had grown to 275 FTEs¹⁸.

The airport has a relatively high employment density of over 850 FTEs per million passengers. This employment density is typical for a relatively small airport in the early stages of development. We would expect that the increasing commercial focus of the airport will result in more efficient operations as the airport grows. We would expect that the capital intensity at the airport i.e. new check-in procedures will increase. As a result, employment will not grow linearly with passenger growth. It does, however, have a lower employment density than either Exeter or Plymouth which reflects that it does not act as either a hub or headquarters for a major regional airline.

We recognise that the effects of the internal supply chain mechanism may be weaker for smaller airports. Due to the lower throughput at the airport, it has not yet been able to build up a critical mass which would induce other supply chain companies to enter the market. For example, the relatively low level of passenger numbers means that the major on-flight caterers decide not to establish an on-site operation but instead serve the airport remotely. This could also be applied to Plymouth.

The counter argument is that as an airport becomes more peripheral there is the possibility that the importance of the internal economy increases – there are fewer companies in the wider economy that can offer the specific services required. Therefore, for consistency and

¹⁷ *Economic Impact Assessment – Newquay Airport – York Aviation - 2005*

¹⁸ Given the fact that these estimates were in 2004 and significant passenger growth has occurred since that date, we have estimated an increase in employment at the airport. These were the latest estimates held by Cornwall Airport Limited. Cornwall Airport Limited have less detail regarding the types of employment on-site – therefore our employment breakdowns for Newquay are less detailed than for other airports. The employment breakdowns at Newquay have no ‘air transport’ element – therefore explaining the relatively lower multiplier effect when compared to Exeter and Plymouth.

clarity purposes, we have adopted the same approach for all airports. Again, a range of estimates is presented in Appendix 6.

By using the Regional Accounts, we estimate that a total of 408 FTE jobs are supported by airport activities in the wider economy.

Newquay Airport – Gross Wider Economic Impact

Type of Impact	Gross Impact
Employment	408
Gross Value Added (GVA)	£18.6 mn
Gross Output	£31.4 mn

Source: South West Regional Accounts

We estimate that the GVA and Gross Output effects of Newquay are significant: GVA of £18.6mn per annum is generated with an associated output value of £31.4mn per annum. Again, we assume that, given its location, leakage from the region may be lower although evidence suggests that it is still linked into national supply chains.

7.1. 6. Summary

In many respects, the results of our analysis are to be expected. The wider economic benefits are generated by the larger airports with greater employment base; there is a correlation between passenger numbers and economic impact.

Gross Economic Impact based on Employment Effects

	Gross Employment	Gross Value Added (mn)	Gross Output (mn)
Bournemouth	843	45.0	94.7
Bristol	4,353	218.5	493.0
Exeter	2,721	121.7	367.8
Newquay	408	18.6	31.4
Plymouth	312	19.5	45.0
Total	8,637	423.3¹⁹	1,031.9

However, there are some variations that mean that the impacts are not 'linear'. This mainly relates to the differing levels of employment densities and types that exist at each of the airports. In particular, we estimate that the impact of both Exeter and Plymouth is larger than the size of their respective passenger throughput. Both airports have relatively higher employment due to the existence of regional airline headquarters.

By comparing with previous studies undertaken at some of our airports, we feel confident that our estimates are within the range of those previously undertaken. The estimates of the indirect impact of airports are broadly consistent with recent studies undertaken at most of the airports.

The estimates show that airports are significant economic actors in their own right. Significant knock-on employment, output and gross value added benefits are generated within the wider regional economy. It could be argued that the impact of Bristol makes it almost a regionally significant employer.

¹⁹ A broad estimate is that this equates to 4-5 per cent of regional GVA.

7.2 Tourism Impacts

One of the major roles that air travel has is to aid the tourism market. Tourism is, of course, a major part of any economy and the South West has a relatively large tourism sector.

Therefore, airports are one of the key facilities to connect the South West tourism product with other parts of the UK and overseas. This will generate economic benefits via tourism expenditure.

Therefore, as well as the direct and indirect employment benefits that we outline above, airports are important for their ability to increase the flow of tourism expenditure into the region – either for business or leisure purposes.

Of course, we need to recognise that it will also cause an outflow of expenditure from the region by allowing South West residents to spend their money abroad. The perception is often held that more expenditure flows out of a region, through South West residents spending their income elsewhere, than into the region. As we have argued previously, given the large addition of connections to leisure destinations, it is likely that there will be a flow of expenditure out of the region for those routes. We briefly comment on this later.

Approach and Information Sources

One of the problems with estimating the tourism benefits of airports is the relative dearth of data that profiles passengers accurately. The main source of data tends to be passenger surveys that are undertaken by the Civil Aviation Authority (CAA). However, for South West airports these are not extensive and can be infrequent.

In terms of South West airports, CAA passenger surveys have been undertaken for Bristol, Exeter and Bournemouth. No CAA passenger survey (that is publicly available) has been undertaken for either Plymouth or Newquay. We have used CAA data where appropriate but some assumptions have had to be made, as highlighted below.

In addition to the information that is used to profile passengers, estimates of tourism expenditure tend to use typical spending patterns of visitors. For the purposes of this paper, we have used two relatively up-to-date sources of information. For estimating the expenditure of international visitors, we have used data from the International Passenger Survey 2005²⁰. For the expenditure patterns for domestic visitors, we have used UK Tourism Statistics data 2006.

Both datasets give specific figures for the South West and we have consistently used length of typical stay and average expenditure for each of the airports. Whilst we recognise that there is some data available for each sub region, we feel that the wider regional figures represent a more robust dataset in terms of sample frame. Finally, we assume that the profile of a 'typical' domestic or international visitor will remain broadly the same whichever airport is discussed.

For each airport, we have calculated the gross expenditure that has taken place for a given year. Therefore, this is the gross injection of expenditure within the region connected with passenger throughput for each of the airports. We have used relevant information, where available, to calculate leakage rates from the region. Unsurprisingly, leakage was higher for those airports – Bristol and Bournemouth – that are geographically on the edge of the region.

²⁰ It should be noted that the IPS represents only 0.2 per cent international travellers entering the UK. However, it is the most comprehensive survey of this kind.

In particular, the CAA passenger survey information for Bournemouth tends to suggest that leakage from the South West (mostly to Hampshire) is significant.

We have then taken the gross expenditure figures associated with each airport and estimated the levels of employment that this expenditure could sustain in the economy. Again, we have used the Regional Accounts to make this estimate. Tourism expenditure in the Accounts is derived from official tourism statistics. The distribution of expenditure is derived from UK input-output accounts and official tourism figures.

For each of the airports, we have taken what we consider to be a consistent and sensible approach to determine the overall passenger profile for inbound traffic and apply it to the latest passenger volumes to generate an estimate of current gross tourism expenditure.

7.2.1. Bristol Airport

International Passenger Effects

According to the CAA Passenger Survey in 2003, 2.5 per cent of total passenger volumes using Bristol were foreign business travellers via international connections whilst a further 5.5 per cent of total passenger volume was associated with foreign leisure visitors. Without more up-to-date survey information, we are not in the position to determine whether this reflects the passenger profile as it stands.

Given the latest passenger throughput of Bristol airport of 5.71 mppa²¹, this would equate to 142,700 business and 314,000 leisure passenger journeys respectively.

Further data from the CAA Passenger Survey indicated that 13 per cent of international business travellers' final destination was outside of the South West, whilst 12 per cent of international leisure passengers also arrived at Bristol but travelled outside of the region. We have assumed that each of the passengers immediately travelled to their destination and did not spend in the South West. This represents leakage from the region and should not be accounted for in our assessment of regional economic impact. Given 2007 passenger throughput, this represented approximately 48,000 of foreign passenger movements outside the region.

Therefore, we estimate that Bristol currently generates around 399,000 passenger movements associated with international travellers, or 199,000 incoming overseas visitors to the South West per annum.

According to the latest data from the International Passenger Survey (2005) for the South West a typical foreign business traveller will stay for an average of 4.2 days. In comparison, a typical foreign traveller visiting for leisure purposes stayed for an average of 9.3 nights.

As would be expected, a typical business traveller will spend more on a per night basis than a typical leisure traveller given costs of hotels, travel connections etc. On average, a typical international business traveller spends £110.62 per night whilst a leisure traveller will typically spend £42.36 at 2005 prices²².

²¹ CAA Passenger Statistics – March 07

²² These expenditure figures have been uplifted to 2007 prices on the basis of inflation rate of 3 per cent per annum

Therefore, we estimate that in 2007, international passengers using Bristol will have generated an associated gross expenditure figure of approximately £88 million per annum. This can be broken further down into £30.9 million for foreign business travellers and £57.1 million for foreign leisure travellers.

It should be noted, or reiterated, that these are gross expenditure figures and do not take account of the expenditure that would have happened anyway: the deadweight effects.

Domestic Passenger Effects

As well as the expenditure effects that airports facilitate through their international connections, we also need to consider the expenditure that is associated with passengers on domestic routes. For South West airports, this represents a large part (and for some the whole) of passenger movements. Therefore, as to be expected, the expenditure effects attached to domestic travellers are considerable.

According to the CAA Passenger Survey 2003, 11.5 per cent of total passenger throughput through Bristol was associated with UK business travellers whilst 16.2 per cent of total passenger movements were associated with UK passengers travelling for leisure purposes.

Given the latest passenger throughput of Bristol airport of 5.71 mppa²³, this would equate to 656,800 business and 925,000 leisure passenger journeys respectively. Obviously, this represents passenger movements for both passengers outbound and inbound. We are interested in the expenditure effects of the inbound passengers only.

Therefore, we need to determine a typical proportion of inbound and outbound passengers on a domestic route²⁴. This is no easy task, given the different passenger profiles that will be associated with each route. As a consequence, we need to make an assumption that covers all domestic route travel. Evidence from Bristol suggests that one of its primary domestic routes has a 50:50 split between the Bristol region as the origin (outbound) and the Bristol region as the destination (inbound). We feel that this 50:50 split is appropriate for the domestic travel for most of the South West airports²⁵ (unless there is specific evidence available) although, as stated, we recognise that there will be variance between routes.

As a consequence, given 2007 throughput, there were approximately 328,000 and 463,000 'inbound' passenger movements respectively, related to UK domestic business and leisure travelling into Bristol²⁶.

Again, some of the final destinations for these passenger journeys would not be in the South West. Data from the CAA Passenger Survey suggests that leakage rates for domestic business travel were 11 per cent whilst they were 11.5 per cent for leisure travellers. Approximately 90,000 of the 'inbound' passenger movements had a final destination outside of the region.

²³ CAA Passenger Statistics – March 07

²⁴ This exercise has not been undertaken for the international travel estimates because the CAA statistics detail foreign travellers specifically on international routes, therefore we feel that this represents inbound travel.

²⁵ The exception to this is Newquay, which is addressed later in the paper. We feel that there is sufficient evidence to suggest that the proportion of inbound travel is higher given Cornwall's role as a tourism destination.

²⁶ It is important to note that these figures do not include intra regional passenger movements. CAA data from 2006 suggests that 16,500 passenger movements were associated with travel from Plymouth and Newquay. This equates to 2-3 per cent of domestic passenger movements at Bristol. However, due to the size we have not discounted these movements from our analysis

Therefore, we estimate that there were 702,000 domestic passenger movements associated with travelling into Bristol as the destination airport. Alternatively, this can be viewed as 351,000 passenger visits.

Data from UK Tourism Statistics 2006, shows that a typical length of stay for a domestic UK business traveller in the South West was 2.4 nights. In comparison, the average length of stay for a leisure traveller was 4 nights.

In terms of typical expenditure, this was estimated at £80.70 per night for a UK business traveller whilst it was lower at £45.10 for a leisure traveller. The figure represents a lower spend for a UK business person when compared to an international business traveller, whilst it is marginally higher for a domestic leisure traveller when compared to an international leisure traveller.

Therefore, we estimate that in 2007, domestic passengers at Bristol had an associated gross expenditure figure of approximately £67.2 million per annum. This can be broken down further into £29.2 million for domestic business travellers and £38 million for domestic leisure travellers.

It should be noted, or reiterated, that these are gross expenditure figures and does not take account of the expenditure that would have happened anyway: the deadweight effects.

Combined Effects

The combined gross expenditure effects of inbound international and business travellers into Bristol airport are considerable. We estimate that the combined effects could equate to £155.2 million per annum – based on current passenger levels. As stated, these are gross impacts and do not take account of those journeys that may have taken place via different modes of transport: deadweight.

By using the Regional Accounts we estimate that this level of gross tourism expenditure could support a further 3279 gross FTEs in the wider economy. This equates to £47,300 of tourism expenditure supporting one FTE. This figure is broadly consistent with the latest estimate from South West Tourism²⁷, which estimates that £45,300 supports one FTE.

	Expenditure (£mn)	Gross Employment (FTEs)	Gross Value Added (£mn)
Gross International Tourism Expenditure	£88 mn	3279	103.9
Gross Domestic Tourism Expenditure	£67.2 mn		
Total	£155.2 mn		

²⁷ '2005 Value of Tourism' – South West Tourism

7. 2. 2. Bournemouth Airport

International Passenger Effects

According to the CAA Passenger Survey in 2005, 0.8 per cent of total passenger volume using Bournemouth were foreign business travellers via international connections whilst a further 9.8 per cent of total passenger volume was associated with foreign leisure visitors²⁸. Given the latest passenger throughput of Bournemouth of 986,000 ppa²⁹, this would equate to 8,000 business and 96,700 leisure passenger journeys respectively.

Further data from the CAA Passenger Survey indicated that 32 per cent of international business travellers' final destination was outside of the South West, whilst 46 per cent of international leisure passengers also arrived at Bournemouth but travelled outside of the region. Again, we assume that each of the passengers immediately travelled to their destination and did not spend in the South West. This leakage from the region should not be accounted for in our assessment of regional economic impact. Given 2007 passenger throughput, this represents approximately 57,000 of passenger movements outside the region.

As stated, the level of passenger leakage from the South West region is much greater at Bournemouth than any of the other airports. Given its proximity to the South East region, it could be argued that this is not surprising. The South East is the most important business location in the United Kingdom and, for foreign travellers, it also represents a leisure destination. Bournemouth represents a relatively 'congestion free' alternative to accessing the South East when compared to the larger South East markets.

Therefore, we estimate that Bournemouth currently generates around 70,000 passenger movements associated with international travellers, or 35,000 incoming overseas visitors to the South West per annum.

We use the typical length of stay and expenditure data taken from the International Passenger Survey (2005), as outlined previously in the Bristol analysis.

We estimate that in 2007, international passengers at Bournemouth generated an associated gross expenditure figure of approximately £14.8 million per annum. This can be broken further down into £1.5 million for foreign business travellers and £13.3 million for foreign leisure travellers. Again, this does not take account of any deadweight effects.

Domestic Passenger Effects

According to the CAA Passenger Survey 2005, 2.3 per cent of total passenger throughput at Bournemouth was associated with UK business travellers whilst 15.9 per cent of total passenger movements were associated with UK passengers travelling for leisure purposes.

Given the latest passenger throughput of Bournemouth airport of 986,000 ppa³⁰, this would equate to 2,500 business and 30,800 leisure passenger journeys respectively. Again, we are interested in the expenditure effects of the inbound passengers only.

²⁸ Data provided by Bournemouth Airport itself tends to suggest that 19 per cent of passengers were inbound international visitors. However, for consistency purposes, we have used CAA statistics, given their relatively recent date.

²⁹ CAA Passenger Statistics – March 07

³⁰ CAA Passenger Statistics – March 07

Therefore, we need to determine a typical proportion of inbound and outbound passengers on a domestic route³¹. As stated for Bristol, this is no easy task, given the different passenger profiles that will be associated with each route. As a consequence, we need to make an assumption that covers all domestic route travel. We will continue to use the 50:50 split between the South West region as the origin (outbound) and the South West region as the destination (inbound). As stated, we feel that this 50:50 split is appropriate for the domestic travel for most of the South West airports³². Analysis on a separate route-by-route basis would no doubt offer a variety of different origin versus destination breakdowns.

As a consequence, given 2007 throughput, there were approximately 11,000 and 78,000 'inbound' passenger movements respectively, related to UK domestic business and leisure travelling into Bournemouth.

Again, some of the final destinations for these passenger journeys would not be in the South West. Data from the CAA Passenger Survey suggests that leakage rates for domestic business are, again, relatively high for Bournemouth airport. 22 per cent of business travellers and 39 per cent of leisure travellers have a final destination outside of the region. Approximately 33,000 of the 'inbound' passenger movements had a final destination outside of the region.

Therefore, we estimate that there were 56,700 domestic passenger movements associated with travelling into Bournemouth as the destination airport. Alternatively, this can be viewed as 28,300 passenger visits.

By using typical spend and length of stay data we estimate that in 2007, domestic passengers at Bournemouth had an associated gross expenditure figure of approximately £5.33 million per annum. This can be broken down into £882,000 for domestic business travellers and £4.44 million for domestic leisure travellers.

Combined Effects

We estimate that the combined effects could equate to £20.13 million per annum – based on current passenger levels and using passenger profile data from 2005.

By using the Regional Accounts we estimate that this level of gross tourism expenditure could support a further 425 gross FTEs in the wider economy. Again, this equates to £47,300 of tourism expenditure supporting one FTE.

	Expenditure (£mn)	Gross Employment (FTEs)	Gross Value Added (£mn)
Gross International Tourism Expenditure	£14.8 mn	425	13.5
Gross Domestic Tourism Expenditure	£5.33 mn		
Total	£20.13 mn		

It needs to be reiterated that this paper is an analysis of the regional impact of each of the airports. What Bournemouth shows is the potential significance that leakage from a region can have upon the estimated tourism expenditure effects.

³¹ This exercise has not been undertaken for the international travel estimates because the CAA statistics detail foreign travellers specifically on international routes, therefore we feel that this represents inbound travel.

³² The exception to this is Newquay, which is addressed later in the paper. We feel that there is sufficient evidence to suggest that the proportion of inbound travel is higher given Cornwall's role as a tourism destination.

It is clear that Bournemouth serves an area that extends along the South Coast, and across 'regional development boundaries'. Therefore, setting Bournemouth against other South West airports can be somewhat misleading and understates its impact. Its sub regional (or gross) impact is deflated somewhat due to its close relationship to the South East. In particular, according to CAA statistics, Hampshire appears a favoured destination for both domestic and international travellers. The economic importance of Bournemouth should not be diminished by the existence of the south west/south east boundary

Much of the expenditure flows 'out of the region' but much also stays in the immediate sub region of Bournemouth/Poole and obviously plays an important economic role in the conurbation. The fact that a lower proportion of expenditure remains within 'regional development boundaries', does come through in this paper – given its remit – but the analysis needs to be qualified with a reminder of Bournemouth's geographical location.

7.2.3. Exeter Airport

International Passenger Effects

According to the CAA Passenger Survey in 2003, 0.4 per cent of total passenger volume using Exeter airport were foreign business travellers via international connections whilst a further 2.4 per cent of total passenger volume was associated with foreign leisure visitors.

Given the latest passenger throughput of Exeter airport of 875,000 ppa³³, this would equate to 3,500 business and 21,000 leisure passenger journeys respectively.

Further data from the CAA Passenger Survey indicated that 1 per cent of international business travellers' final destination was outside of the South West, whilst 4 per cent of international leisure passengers also arrived at Exeter but travelled outside of the region. We have assumed that each of the passengers immediately travelled to their destination and did not spend in the South West. This represents approximately 800 of passenger movements. As expected, the further into the region the airport is geographically located the lower the levels of leakage.

We recognise that, as we travel farther into the region, it is likely that even for those passengers who travel outside, some expenditure will be incurred. However, these effects would be minimal and we have discounted them.

Therefore, we estimate that Exeter currently generates around 23,600 passenger movements associated with international travellers, or 11,800 incoming overseas visitors to the South West per annum.

We estimate that in 2007, international passengers at Exeter airport had an associated gross expenditure figure of approximately £5.07 million per annum. This can be broken further down into £853,000 for foreign business travellers and £4.2 million for foreign leisure travellers.

³³ CAA Passenger Statistics – March 07

Domestic Passenger Effects

According to the CAA Passenger Survey 2003, 5.2 per cent of total passenger throughput through Exeter was associated with UK business travellers whilst 15.5 per cent of total passenger movements were associated with UK passengers travelling for leisure purposes.

Given the latest passenger throughput of Exeter airport of 875,000 ppa³⁴, this would equate to 22,700 business and 67,800 leisure passenger journeys respectively.

Continuing to use the 50:50 split between the South West as the origin (outbound) and the region as the destination (inbound) we estimate that there were 21,500 and 67,800 'inbound' passenger movements related to UK domestic business and leisure travellers respectively.

Data from the CAA Passenger Survey suggests a leakage rate that can be applied for domestic passengers. 5.5 per cent of business travellers and 4.5 per cent for leisure travellers have a final destination outside of the region. Approximately 3,300 of the 'inbound' passenger movements had a final destination outside of the region.

Therefore, we estimate that there were 86,000 domestic passenger movements associated with travelling into Exeter as the destination airport. Alternatively, this can be viewed as 43,000 passenger visits.

We estimate that in 2007, domestic passengers at Exeter generated an associated gross expenditure figure of approximately £8.2 million per annum. This can be broken down into £2.2 million for domestic business travellers and £6 million for domestic leisure travellers.

Combined Effects

We estimate that the combined effects could equate to £13.3 million per annum – based on current passenger levels and prices.

This differs from the estimates derived for Bournemouth – both airports with similar current passenger levels – mainly through a better ability to 'retain' expenditure in the region to its more peripheral location.

By using the Regional Accounts we estimate that this level of gross tourism expenditure could support a further gross 281 FTEs in the wider economy.

	Expenditure (£mn)	Gross Employment (FTEs)	Gross Value Added (£mn)
Gross International Tourism Expenditure	£5.07 mn	281	8.9
Gross Domestic Tourism Expenditure	£8.2 mn		
Total	£13.3 mn		

³⁴ CAA Passenger Statistics – March 07

7.2.4. Plymouth Airport

International Passenger Effects

As stated earlier, Plymouth airport has not had a CAA Passenger Survey undertaken. Comparative data is unavailable when set against Bristol, Bournemouth and Exeter. In particular, there is a relative lack of passenger profile data. As a consequence, we have needed to make some assumptions that we outline in this section.

In terms of the likely levels of foreign business and leisure passengers we think that a realistic assumption would be that the levels and make-up of international passengers would be similar to that of Exeter. Despite Plymouth having no direct international connections, it has a larger population, economy and, arguably, tourism product. In particular, evidence³⁵ suggests that business travel tends to be associated with production industries, in which Plymouth still has a high representation, which may involve indirect international travel.

Therefore, we have assumed that a similar 0.4 per cent of total passenger volume using Plymouth would be foreign business travellers whilst a further 2.4 per cent of total passenger volume was associated with foreign leisure visitors.

Given the latest passenger throughput of Plymouth airport of 74,800 ppa³⁶, this would equate to 300 business and 1,800 leisure passenger journeys respectively.

In terms of leakage, again we have broadly followed the profile of Exeter airport. However, we have assumed a marginally lower figure given the fact that Plymouth is located in a further peripheral position and has poorer links to the main regional transport infrastructure. Therefore, we have assumed that 0.5 per cent of international business travellers' final destination was outside of the South West, whilst 3 per cent of international leisure passengers also arrived at Plymouth but travelled outside of the region.

Given the relatively low passenger throughput of Plymouth and the low leakage rates, the effect of leakage on the estimates are negligible. We estimate that only 50 passengers travel from Plymouth out of the region. We feel that this realistic – given the fact that Plymouth only has domestic route connections, it is highly unlikely for a passenger (domestic or international) to fly into Plymouth only to leave the region immediately.

Therefore, we estimate that Plymouth currently generates around 2,000 passenger movements associated with international travellers, or 1,000 incoming overseas visitors to the region per annum.

We estimate that in 2007, international passengers at Plymouth airport had an associated gross expenditure figure of approximately £437,000 per annum. This can be broken down into £73,000 for foreign business travellers and £364,000 for foreign leisure travellers. This does not take account of deadweight.

Domestic Passenger Effects

Again, in terms of estimating the volume of inbound domestic traffic we have used Exeter as the basis. However, we recognise that as a proportion of its route offering, Plymouth has a much greater reliance on domestic travel. Therefore, we have assumed that the proportion of domestic business and leisure passengers would be 1.5 times that of Exeter.

³⁵ CAA Passenger Surveys

³⁶ CAA Passenger Statistics – March 07

This seems realistic given the fact that Plymouth will have fewer passenger movements associated with outbound leisure travel.

Therefore, we have assumed that 7.8 per cent of total passenger throughput at Plymouth was associated with UK business travellers whilst 25.5 per cent of total passenger movements were associated with UK passengers travelling for leisure purposes³⁷.

Given the latest passenger throughput of Plymouth airport of 74,749 ppa³⁸, this would equate to 2,900 business and 9,500 leisure passenger journeys respectively. Again, this represents passenger movements for both passengers outbound and inbound.

To determine a typical proportion of inbound and outbound passengers on a domestic route³⁹ we continue the approach shown in the Bristol, Bournemouth and Exeter analysis – that of a 50:50 outbound and inbound split. Analysis on a separate route-by-route basis would no doubt offer a variety of different origin versus destination breakdowns.

As a consequence, given 2007 throughput, there were approximately 2,800 and 9,300 'inbound' passenger movements respectively, related to UK domestic business and leisure travel into Plymouth.

Again, we assume that leakage levels for Plymouth airport are relatively low. Leakage rates of 3 per cent and 2 per cent for business and leisure passengers respectively are based on evidence from Exeter but factored lower given that Plymouth is located further into the region. This accounts for very few (280) passengers.

We estimate that there were 12,160 domestic passenger movements associated with travelling into Plymouth as the destination airport. Alternatively, this can be viewed as 6,080 passenger visits.

Therefore, we estimate that in 2007, domestic passengers at Plymouth had an associated gross expenditure figure of approximately £1.15 million per annum. This can be broken further down into £282,000 for domestic business travellers and £868,000 for domestic leisure travellers.

Combined Effects

We estimate that the combined effects could equate to £1.59 million per annum – based on current passenger levels. As expected, this is a significantly lower figure than those airports analysed thus far. This is primarily related to the generally lower level of passenger throughput. As shown elsewhere, these passenger levels have been in decline in recent years and the associated economic benefits generated by inbound passengers would also have declined.

As outlined in this section, some of the key comparative data that we have used for the other airports were not available for Plymouth⁴⁰. We feel, however, that lower leakage rates and a greater proportion of domestic inbound passenger levels we have assumed reflects Plymouth's geographical location as well as its route portfolio.

³⁷ Therefore, this would mean that inbound passengers would account for 36.1% of passenger throughput. This would 'place' Plymouth between Exeter and Newquay which, given the increasing peripheral location and associated increased travelling time using alternative forms of transport seems a realistic assumption.

³⁸ CAA Passenger Statistics – March 07

³⁹ This exercise has not been undertaken for the international travel estimates because the CAA statistics detail foreign travellers specifically on international routes, therefore we feel that this represents inbound travel.

⁴⁰ The recent York Aviation study also provided a broad estimate of the expenditure effects of tourism.

By using the Regional Accounts we estimate that this level of gross tourism expenditure could support a further 34 FTEs in the wider economy.

	Expenditure (£mn)	Gross Employment (FTEs)	Gross Value Added (£mn)
Gross International Tourism Expenditure	£0.437 mn	34	1.1
Gross Domestic Tourism Expenditure	£1.15 mn		
Total	£1.59 mn		

7.2.5. Newquay Airport

International Passenger Effects

In a similar vein to Plymouth, Newquay has not been the focus of a CAA Passenger Survey. Therefore, comparative data is unavailable when set against Bristol, Bournemouth and Exeter. In particular, there is a relative lack of passenger profile data. As a consequence, we have needed to make some assumptions that we outline in this section.

Newquay has had a number of specific passenger surveys that have been undertaken by the airport itself or Cornwall County Council – the owners of the airport. Where appropriate, we have used the data from these surveys to inform our analysis but we have been mindful that we have needed to be consistent with the findings in the wider (and statistically more robust) CAA Passenger Survey.

In terms of the levels of foreign business and leisure passengers, we have used findings from the passenger survey undertaken by Cornwall County Council in 2005. This showed that 8 per cent of passenger throughput at Newquay was international passengers⁴¹. This broadly matches the level at Bristol and Bournemouth and is higher than both of Exeter and Plymouth. We feel that this is realistic given the major tourism product that Cornwall offers.

The Cornwall County Council passenger survey also highlights that one-third of international passengers were travelling on business. This fits with findings contained in an earlier study undertaken by Roger Tyms⁴². Therefore, we have assumed that 30 per cent of international passengers were travelling for business and 70 per cent for leisure purposes.

This equates to 2.4 per cent of total passenger volume using Newquay being foreign business travellers⁴³ whilst a further 5.6 per cent of total passenger volume associated with foreign leisure visitors. We feel confident that these are in the broad region of CAA based figures from the other airports.

Given the latest passenger throughput of Newquay airport of 340,763 ppa⁴⁴, this would equate to 8,200 business and 19,000 leisure passenger journeys respectively.

⁴¹ It should be noted that Cornwall County Council also undertook a passenger survey in 2006. This suggested that the level of inbound traffic could be higher. Only 33 per cent of passengers were resident in Cornwall, 51.4 per cent were from elsewhere in the UK and 15.3 per cent from overseas. However, because these figures are markedly higher than the evidence for other airports we have taken the conservative figure of 8 per cent.

⁴² Roger Tym & Partners, Economic Impact of Newquay Airport - 2003

⁴³ We recognise that these figures are higher than those for Bournemouth and Exeter.

⁴⁴ CAA Passenger Statistics – March 07

In terms of leakage, we have assumed that this is at negligible levels. We have assumed this to be zero for business travellers and one per cent for leisure travellers. Newquay's geographical position suggests it is highly unlikely that the travellers would not spend some time, and money, in the region. We estimate that only 190 international passengers travel from Newquay airport out of the region.

Therefore, we estimate that Newquay currently generates around 27,000 passenger movements associated with international travellers, or 13,500 incoming overseas visitors to the South West per annum.

Therefore, we estimate that in 2007, international passengers at Newquay had an associated gross expenditure figure of approximately £5.96 million per annum. This can be broken further down into £2 million for foreign business travellers and £3.94 million for foreign leisure travellers.

Domestic Passenger Effects

We have used information that has been generated by the passenger surveys undertaken by Cornwall County Council in 2005 and 2006. This shows that as a proportion of total passenger throughput, Newquay has a greater reliance on inbound travel than any other regional airport. Intuitively this seems to fit – we would expect that Cornwall as a destination attracts a larger number of inbound travellers. This will be for both tourism and business because of the cost relativities associated with increased journey time savings.

Again, we have used the previous findings that 30 per cent of domestic travellers into Newquay were travelling for business purposes. Therefore, 14.4 per cent of total passenger throughput through Newquay was associated with UK business travellers whilst 33.6 per cent of total passenger movements were associated with UK passengers travelling for leisure purposes. It should be noted that both figures are higher than those at other airports.

We estimate that there were approximately 49,000 and 114,500 'inbound' passenger movements related to UK domestic business and leisure travelling into Newquay.

Again, we assume that leakage levels for domestic travellers into Newquay are negligible. We have assumed that 1 per cent of inbound domestic passengers (1,000) would travel outside of the region.

This means that we estimate that there were 162,400 domestic passenger movements associated with travelling into Newquay as the destination airport. Alternatively, this can be viewed as 81,200 passenger visits.

We use the UK Tourism Statistics 2006 typical length of stay and expenditure figures for a leisure traveller.

Therefore we estimate that in 2007, domestic passengers at Newquay airport had an associated gross expenditure figure of approximately £15.43 million per annum. This can be broken further down into £4.9 million for domestic business travellers and £10.4 million for domestic leisure travellers.

It is restated that these are gross expenditure figures and do not take account of the expenditure that would have happened anyway: deadweight effects.

Combined Effects

The combined gross expenditure effects of inbound international and business travellers have been estimated in the above sections. We estimate that the combined effects could equate to £21.39 million per annum – based on current passenger levels.

The level of economic impact when set against Exeter and Bournemouth in particular could be viewed as somewhat surprising, given the significantly lower levels of passengers at Newquay. However, the difference can primarily be explained by the fact that a higher proportion of passengers are classified as 'inbound' (when set against Exeter and Bournemouth) and it has lower levels of leakage (when compared to Bournemouth).

Newquay has relatively fewer connections to international tourism destinations and, therefore, has a lower flow of expenditure 'out' of the airport.

By using the Regional Accounts we estimate that this level of gross tourism expenditure could support a further 33 FTEs in the wider economy.

	Expenditure (£mn)	Gross Employment (FTEs)	Gross Value Added (£mn)
Gross International Tourism Expenditure	£5.96 mn	452	14.3
Gross Domestic Tourism Expenditure	£15.43 mn		
Total	£21.39 mn		

Combined Gross Tourism Expenditure Effects

Our above analysis shows that the airports help bring a significant level of tourism expenditure into the region. The below table shows that collectively they help facilitate over £211 mn of gross tourism expenditure in the region.

	Gross Expenditure (£mn)	Gross Employment (FTEs)	Gross Value Added (£mn)
Bournemouth	20.13	425	13.5
Bristol	155.2	3279	103.9
Exeter	13.3	281	8.9
Newquay	21.39	452	14.3
Plymouth	1.59	34	1.1
Total	211.61	4471	141.7

Importantly, these gross expenditure figures do not take account of those passengers that would have travelled into the region anyway, the so-called deadweight effect. The lack of analysis on this is based on a lack of robust data. This would have required a survey at each of the airports asking passengers whether they would have travelled into the region in the absence of the air link. Therefore it is not possible to estimate the *additional* tourism expenditure that the airports facilitate.

This is the first qualification on the above gross expenditure figures. The second factor is that these figures do not account for the flow of tourism expenditure out of the region. As always this is a point of great focus.