

SUBMISSION FROM GERRY MCCARTNEY, SSP ECONOMIC SPOKESPERSON

This submission concerns the first and second questions posed by the committee with reference to the plans for the expansion of provision for aviation within NPF2:

- Whether the policies set out in the NPF2 support the Government's key aims for the development of Scotland to 2030.
- Whether the correct balance has been struck between economic development and environmental protection.

This submission draws heavily on a report produced for Airportwatch Scotland on the expansion plans for Glasgow airport. The full report is available on request.

There is an assumption contained within the NPF2 that the expansion of Glasgow and Edinburgh airports will be beneficial for the Scottish economy. There is no suggestion that airport expansion could be beneficial for the environment and so the balance between economic development and environmental protection (the second question for which the committee seeks evidence) rests entirely on the ability of airports to generate economic growth. It is this assumption that is unfounded and will be challenged in this submission.

Economic development arising from airport expansion

In October 2006 the BAA, formerly known as the British Airports Authority, published the, "Glasgow Airport Master Plan".¹ The opening line of the executive summary states that, "*There is no doubt that Glasgow Airport plays a key part in the prosperity of Scotland's largest city and of the wider Scottish economy*". The document then goes on to outline plans to expand the capacity of the airport in line with an increase in passenger numbers from 8.8 million passengers in 2006 to 13 million passengers by 2015 (and to between 17 and 24 million passengers by 2030). To meet this estimated increase in demand, the plan includes the building of a second runway and the construction of additional terminal facilities. It is clear from the document that this is based on the presumption that airport expansion is beneficial for the economy and that demand for airport facilities and air travel will rise quickly until 2030.

Method for evaluating economic impact

Various methods can be used to assess the economic impact of airports and their expansion. There are three traditional methods to measuring impact (adapted from the TRB report):²

- Input – output method (takes account of the direct and indirect impacts and then uses a multiplier to take account of the induced effects)

- Collection of benefits method (simply describing the beneficial activities associated with the airport)
- Catalytic method (looks at the ‘spillover’ effects on the supply side of the economy such as productivity and inward investment, but also includes negative effects such as increased congestion)

Most economic impact reports for airports describe a strongly positive effect on the economy although most have been developed by airport owners, business institutions or government agencies. The few impact reports that have been written or funded by opponents of airport expansion have been much more sceptical of this positive impact and instead describe a negative effect on the economy.³

The Glasgow airport master plan bases its calculations for the economic impacts on the 2002 Fraser of Allander report.⁴ This basis is explored below:

The 2001 employment survey quoted in the Fraser of Allander report states that 115 companies operate from Glasgow airport employing 5,033 full-time equivalent staff (Table 1).

Table 1 – Direct employment (Full Time Equivalent - FTE) at Glasgow airport in 2001

Category	Number of jobs (FTE)	Proportion of total jobs	Wages	Mean FTE wage**
Catering and retail	1,268	25.2%	£11.3m	£8,912
Airlines and handling agents	1,052	20.9%	£36.0m	£34,221
Other airport-related companies	876	17.4%	£9.7m	£11,073
Other public passenger services	745	14.8%	£3.4m	£4,564
Cargo, freight and courier services	654	13.0%	£4.4m	£6,728
Government services	176	3.5%	£7.6m	£43,182
Non-airport related companies*	131	2.6%		
Other*			£0.8m	
BAA	86	1.7%	£9.9m	£115,116
Building and maintenance contractors	45	0.9%	£0.3m	£6,666
Total	5,033	100%	£83.6m	£16,610

*Different categories are used in the Fraser of Allander report in the different sections

**This has been calculated using a simple division of the total wages by the total number of FTE jobs – this produces an implausible result for some of the categories such as BAA and a mean wage lower than the minimum wage rate

for FTE for some other categories. This calls into question the plausibility of the original data

It is not stated whether this figure is the average number of full-time equivalent employees over the year or whether this estimate is biased by seasonality. Without access to the original report⁵ it is also impossible to state what proportion of the jobs are full-time, what the effect of seasonality is or what the staff turnover rates are. The modeled occupational structure for the permanent employees (using data for all Scottish airports) is shown in Table 2.

Table 2 – The modeled occupational structure of (permanent) direct employment at Scottish airports (based on the Fraser of Allander report)

Occupational category	% of permanent employees for Scottish airports
Passenger services, clerical & sales	23.5%
Semi-skilled	17.7%
Catering and cleaning	12.9%
Maintenance and other skilled	11.4%
Professional	10.4%
Other	8.5%
Pilots and flight operatives	8.4%
Cabin crew	7.3%

The Fraser of Allander report goes on to model the occupational structure of employment and the wages paid to each group of workers. This model is likely to have a number of errors contained within it since the mean wages for some categories is implausibly high and implausibly low for others. These wage figures have then been used to estimate the total expenditure for each employing firm (air transport £181.0m; public administration £10.7m; hotels and catering £22.6m; transport services £21.0m; construction £0.9m; other services £2.3m; total £238.5m). This model appears to have been constructed with standard reference tables and assumes that 35% of the total expenditure of airport firms is on wages. Using this data comprising wages and spending on goods and services by the Glasgow airport firms, the total economic output of the airport was then calculated (Table 3).

Table 3 – Glasgow airport modeled direct economic output

Economic sector	Output
Air transport	£281.7m
Public administration	£13.3m
Hotels and catering	£38.6m
Transport services	£24.9m
Construction	£1.1m
Other services	£3.5m
Total	£363.2m

The Fraser of Allander report then goes on to calculate the indirect economic impacts using a multiplier to estimate the output induced by the spent wages of the airport staff as well as the wages spent by employees of suppliers to the airport (Table 4).

Table 4 – Direct and indirect economic output at Glasgow airport

Economic sector	Direct output	Multiplier	Total output	Total FTE jobs supported
Air transport	£281.7m	1.97	£554.9m	12,530
Public administration	£13.3m	1.72	£22.9m	543
Hotels and catering	£38.6m	1.70	£65.6m	1,006
Transport services	£24.9m	2.28	£56.7m	1,532
Construction	£1.1m	2.09	£2.3m	31
Other services	£3.5m	1.91	£6.7m	71
Total	£363.2m	1.95	£709.2m	15,712

Using an assumption that wages can be used as a marker to calculate value added, an estimate has been created in the Fraser of Allander report of the contribution the Scottish airports make to Scottish GDP (0.9% for all Scottish airports).

A summary of the economic impacts as per the Master Plan are shown in Table 5. This estimates that the economic impact of airport expansion by 2015 is £440m per annum and by 2030 is £983m.

Table 5 – Estimated economic impacts based on assumptions in the Master Plan

		2006 (per annum where applicable)	2015 (per annum where applicable)	2030 (per annum where applicable)
Direct	Employment (inc. govt. agencies)	5,033 FTE	8,200 FTE	12,100 FTE
	Payroll	£83.6m	£136.2m*	£201.0m*
Indirect	Employment	10,700 FTE	17,466 FTE*	25,724 FTE*
Total		£700m	£1,140m*	£1,683m*

FTE is shorthand for Full-time equivalent. This table excludes capital expenditure.

*Modelled by the author based on the same multiplier as used by the Master plan

A critique of the economic case presented by BAA

The economic case for Glasgow airport and its expansion is based upon a one-sided analysis of the impacts, much in the same way as a 'Collection of benefits' economic impact analysis is carried out. ^{Error! Bookmark not defined.} Thus,

even before the accuracy of the Glasgow master plan economic case is assessed, there are economic impacts which are deleterious that have yet to be considered and factored into the total economic impact.

There are several aspects of the economic impact that tend to be overlooked by BAA and governmental reports on airport expansion.⁶ Error! Bookmark not defined. These can be summarised as: opportunity costs and the counterfactual; net capital flows; tax subsidies or tax breaks and environmental and social costs.

Opportunity costs and the counterfactual

This addresses the issue of what would happen if airport expansion was not to take place. This includes the impact of investing the capital elsewhere and the public using alternative transport modes or not travelling. This opportunity cost can be calculated by modelling the impact of spending the money in the general Scottish economy and using that multiplier to calculate the total effect. There are two exceptions to this: alternative modes of transport would be under-represented in taking the mean Scottish multiplier for the model and the flow of capital through the airport (often in the form inward and outward tourism). The advocates of airport expansion would also wish for a negative impact on the general competitiveness of the Scottish economy to be recognised. Clearly this requires detailed economic modelling and a number of assumptions to be outlined if the counterfactual economic position is to be calculated. In order to make some rudimentary estimation of this position the following assumptions can be made:

- The £238.5m of direct spending made by airport firms arises from custom from passengers and others using the airport services
- 50% of the revenue that pays for the jobs at the airport arises domestically as opposed to from foreign visitors (likely to be an underestimate given that there is a net outflow of tourists from Scotland to other countries)
- The remaining 50% of revenue that would have arisen domestically to pay for the airport can be considered to have been invested and spent according to the type II (which includes direct and indirect impacts) output multiplier for private households (the latest Scottish Government estimate for this is 1.6)⁷

On this basis £119.3m of the £238.5m of direct spending made by airport firms can be thought to be drawn from domestic consumers. This would therefore produce £190.9m in 2006, £311.0m in 2015 and £459.0m in 2030. Thus the additional benefit of airport expansion by 2030 is only £524m per annum (£983m - £459m) once this opportunity cost is accounted for.

Net capital flows

This refers to the net balance of capital flows resultant from airport expansion (ie how much capital is spent in Scotland by tourists and is spent abroad by Scots). Not included in this section are any effects due to inward investment

or international investment. It has been estimated that £16.4bn per annum is spent in the UK by international tourists and that £37.6bn per annum is spent abroad by UK citizens.⁸ These figures are not broken down for the Scottish economy or by international gateway. However, if it is assumed that only 50% of international holiday trips made by Scots are from Glasgow airport and that Scotland accounts for 9% of the UK citizens' international trips, the gateway is responsible for a net loss to the Scottish economy of £950m ($(£37.6bn - £16.4bn) * 0.09 * 50\%$) in 2008. This is almost twice the total economic impact estimated above (after accounting for the opportunity cost). If airport expansion continues the trend of facilitating international tourism for Scottish citizens airport expansion will therefore represent an increasing drain on the Scottish economy. The exact balance of the economic impact of airport expansion will depend on the projected increase in international travel (and associated net outward capital flow) and the alternative position of increased domestic spending and the use of alternative transport routes. Any capital remaining domestically should also have the multiplier applied.

Tax subsidies/breaks

The aviation sector is exempt from a number of the standard taxation systems for the UK (principally VAT and fuel tax). This amounts to a tax subsidy for the industry. This has effect of reducing the public benefit of economic growth in this sector since any profits the sector make accumulates before any contribution is made to the country's public services and infrastructure. This economic impact has not been included in this analysis but its omission is noted from the Master plan.

Environmental and social costs

Although the numerous environmental and social costs associated with airports and their expansion can be enumerated in monetary terms these have been omitted from the Master plan document. These have not been included in this document since the aim here is simply to outline the proximal economic impacts. It has been mentioned here however in order to highlight the omission.

Assessment of the accuracy of the proposed benefits

There are a number of assumptions and assertions made in both the Fraser of Allander report and the Master plan that are difficult to justify without further information. These include:

- The characteristics of the permanent employees are applicable to all employees at the airport. This assumption is unlikely to be justified since the seasonal (and therefore temporary jobs) are more likely to be in the lower paid categories that expand the capacity of the airport over the summer period.
- It is not clear that the employment survey takes into account the seasonality of employment at all airports, but particularly Glasgow airport which has a high proportion of charter traffic. Without further information it

cannot be assumed that the already optimistic modelling that the Fraser of Allander institute has undertaken is unbiased by the use of summer workforce statistics.

- The employment statistics upon which all the economic modelling is based was produced in 2001. This is therefore out of date and may have biased the studies. If passenger numbers correlate with jobs, it would be expected that the survey underestimates the airport's output. There is some evidence that the number of jobs per passenger is reducing over time however as a result of 'efficiency' savings. Error! Bookmark not defined.
- The Fraser of Allander report arrives at a type II multiplier for Glasgow airport of 1.95. This is in contrast to the 1.7 type II multiplier quoted by the then Scottish Executive in 2004. It is not clear why the Fraser of Allander report estimate is higher than that of the Executive.
- No recognisance is made of the possibility and reality of Foreign Direct Investment (ie the opposite of inward investment). This amounts to the fact that it is possible that every businessman who secures capital abroad for investment in Scotland could be matched, or superceded, by business abroad securing Scottish capital for investment abroad.

Actual economic impact of the airport

The net economic impact of the airport presently can therefore be estimated at

£-1.36bn (ie a net deficit of £1,355.7m per annum), but a much bigger deficit is likely if many of the optimistic assumptions contained here could be further defined (Table 6). The impact of airport expansion depends largely on the degree to which airport expansion will represent an increase in net capital outflow and the degree to which that capital will remain in the domestic economy if airport expansion does not go ahead.

Table 6 – The current estimated economic impact of the airport on the Scottish economy

	Impact and multiplier	Total
Net tourism deficit	£950m * 1.6	£1,520m
Domestic airport spending opportunity cost	£119.3m * 1.6	£190.3m
Lost international spending in on Glasgow airport services	0.5 * £709.2m [multiplier already applied]	£-354.6m
Total		£1,355.7m

An alternative predict and supply response

The Glasgow airport master plan is an attempt by the private owners (BAA) to maximise profits for its shareholders using the background demand increase for international air travel. This is in concert with Scottish and UK Government to maximise economic growth as its first priority. As has been shown above, it is highly questionable that Glasgow airport, and airport expansion, is a positive impact on the economy. However, if it is taken as read that capacity for travel should be increased (as a good in itself), the alternative options for

facilitating this should be considered. A large proportion of flights from Glasgow airport at present are to London, Birmingham, Southampton and other parts of mainland UK. If investment were to be forthcoming for rail travel this could provide a cheap and sustainable alternative to domestic air travel. It is less easy to replace long-haul flights with sustainable alternatives.⁹ It is worth noting that investment in railways provides a higher degree of indirect economic benefits than air travel and therefore has the potential to create more jobs and wealth than aviation (the type II output multipliers are 2.0 and 1.7 respectively).^{Error! Bookmark not defined.} Therefore, if it is assumed that the facilitation of transport is a net benefit then it is perfectly possible that this could be more economically advantageous if railways were used as the transport mode (especially as an alternative for flights within the UK). Detailed description of this alternative is beyond the scope of this report.

Considering a Just Transition

In reality, there are two challenges to airport expansion that make predictions of demand-induced expansion mythical: these are peak oil and a debt-induced economic crash.¹⁰ There is also a third challenge of climate change whose prevention necessitates a massive reduction in aviation. In addition to these important points, it is also worth considering whether economic growth is a positive impact *per se*. This is beyond the scope of this paper but has been considered elsewhere.^{11, 12} Without a recognition of these salient facts any investment or planning in airport expansion at this time is a folly of unprecedented magnitude. An informed position would instead be planning a staged disinvestment in air travel with alternative transport routes put into place and economic and industrial restructuring to support this.

Summary

- Glasgow Airport currently contributes an annual **deficit** of £1.36 billion per annum to the Scottish economy. This is largely the result of the huge number of Scottish tourists taking large amounts of money out of the economy when they fly abroad on holiday. There is no reason to suggest that the data for Edinburgh airport is any different and it is likely that the total deficit for Scotland due to current airport activity is considerably higher. This deficit is expected to grow if airport expansion is approved.

No assessment has been made of the impact on the Scottish economy if the airport does not expand. This needs detailed work, but there would be investment in other areas as people and businesses spent their money elsewhere. For example, it could be expected there would be investment in rail which would both create jobs and assist the economy. There are two challenges to airport expansion that make demand-induced expansion mythical: peak oil and the debt-induced economic crash. There is also the third challenge of climate change whose prevention requires a massive reduction in aviation. An informed way forward would be to plan a staged disinvestment in air travel alongside investment in sustainable industries and travel modes. This Just Transition would create a sustainable economy and more secure employment.

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References

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 - ² ACRP synthesis 7. *Airport economic impact methods and models: a synthesis of airport practice*. Washington, Transportation Research Board, 2008.
 - ³ Whitelegg, J. *The economic impact of Bristol international airport*. Lancaster, Eco-Logical Ltd, 2005.
 - ⁴ *The impact of the BAA airports on the Scottish economy*. Glasgow, Fraser of Allander institute, 2002.
 - ⁵ A request to BAA for a copy of this report was declined.
 - ⁶ *Pie in the sky: why the costs of airport expansion outweigh the benefits*. London, Friends of the Earth, 2006.
 - ⁷ As published by the then Scottish Executive in 2004.
 - ⁸ <http://www.statistics.gov.uk/pdffdir/ottnr0908.pdf>
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