Appendix D: Air connectivity report for Scotland

D.1 This appendix provides an overview of the direct and indirect air connectivity of Scotland by analysing the itineraries of passengers originating or terminating at the region's airports in international routes during May 2013. As seen in Table D1, slightly over 1 million passengers flew between Scotland and the rest of the world, which represents 18.4% of the total for UK regions. It is worth noting that this does not include Scottish passengers that transfer to other UK regions by road or rail to start their journey. In the absence of detailed information on said transfers, this report does not intend to be an accurate representation of the air transport demand of Scottish residents/visitors, rather than an assessment of the connectivity options that are available in the region's airports.

Table D1. Breakdown of UK regional traffic to/from worldwide destinations (May 2013)

Traffic originating/terminating in	***Passengers ('000)***	***%***
Airports in England(ex-South East)	4,358.7	77.6%
Airports in Scotland	1,032.2	18.4%
Airports in Northern Ireland	138.9	2.5%
Airports in Wales	85.3	1.5%
Total	5,615.1	100.0%

D.2 Figure D1 indicates that 75.2% of passengers originating or terminating at Scottish airports fly non-stop to their international destinations. The remaining passengers (24.8%) fly indirectly through other airports, of which slightly less than half connect in UK hubs located mostly in England. Overall, 13.6% of total traffic is dependent on foreign hubs. The proportion of direct flights increases to 86.4% for routes to/from European Economic Area (EAA) countries. The other geographical markets for which direct connections are available are: Non-EEA countries (74.2%), North America (32.6%), the Middle East (41.8%)[1], Africa (19.2%), and Latin America & Caribbean – LAC (22.8%). While the contribution of South East England's airports in terms of connectivity is important in each of these markets, the traffic share of foreign hubs ranges between 15.2% and 54.8%.

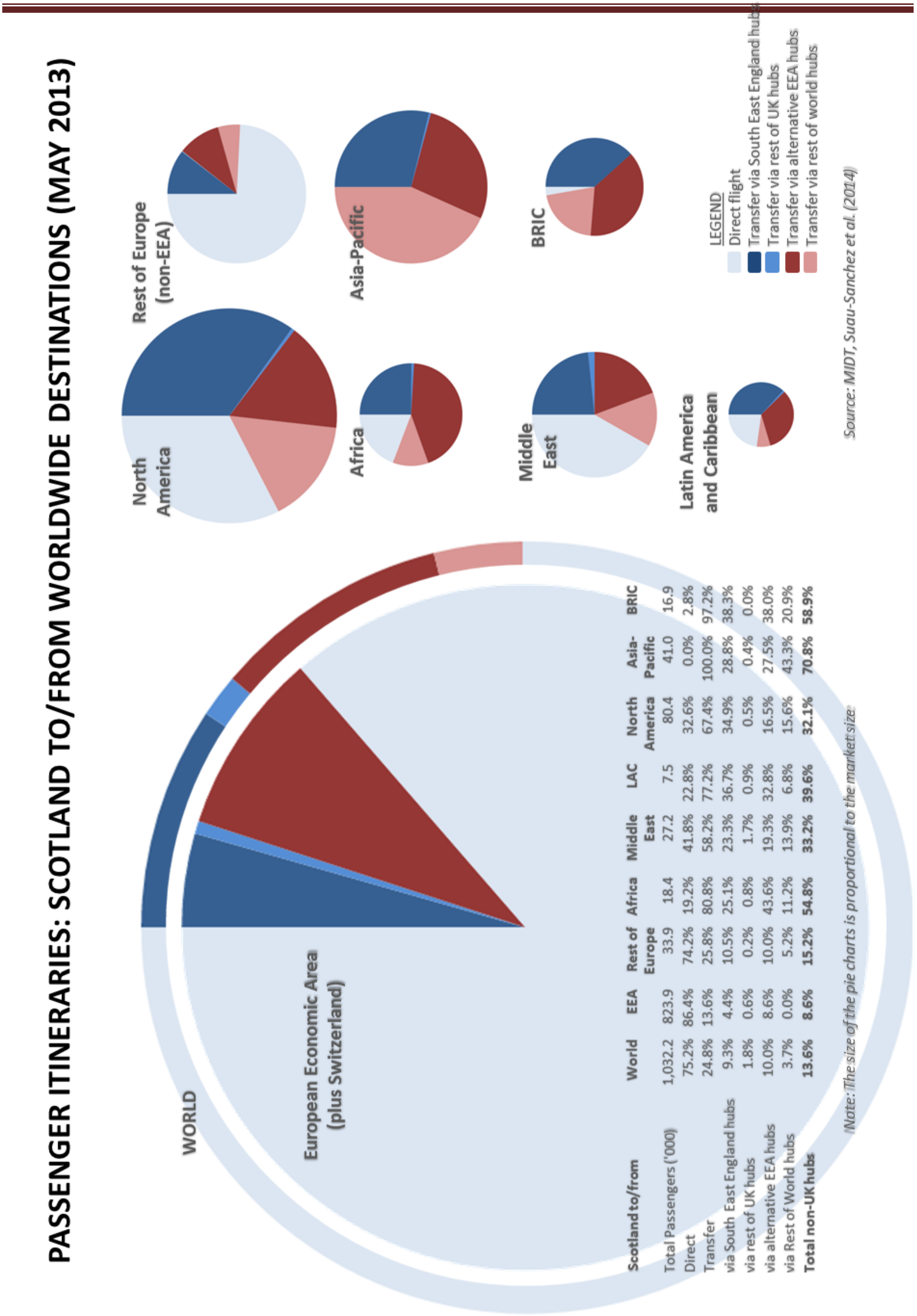
D.3 During our sample period (May 2013), there were no direct connections between Scottish airports and countries in the Asia-Pacific region. Again we observe that the airports in South East England cover an important share of this market (28.8% of passengers), but still the traffic share of foreign hubs is very high (70.8%). A similar picture is drawn when focusing only on the connectivity to BRIC countries (Brazil, Russia, India, and China), where the connecting rate is 97.2% and thus the availability of intermediate hubs is crucial. In consonance with the overall UK results, these figures are relevant in which they signal a clear dependence on foreign airports and airlines in order to keep Scotland connected by air to the world's emerging economies.

D.4 Tables D2 and D3 indicate the top-10 hub choices in each geographical market, measured by the proportion of connecting passengers across all hubs (absolute connectivity indicator: *Ci'*)[2]. The most relevant result is the dominance of London Heathrow as the most important gateway between Scotland and the rest of the world (30.4% of connecting passengers). It is the top-ranked hub in all markets except for the EEA, LAC, and Asia-Pacific, where it is second to Amsterdam, Gatwick, and Dubai, respectively. In spite of that, Heathrow is the top hub choice in routes to BRIC countries.

D.5 In view of these statistics, the conclusion is that the dependence on foreign hubs in some of the air markets that link Scotland with the rest of the world is not linked to reduced domestic connectivity to London and the South East – it is actually better than other UK regions (See Appendices C, E and F) – rather than just being an issue of poor direct connectivity from Scottish airports. The objective of developing new non-stop connections between Scotland and the Asia-Pacific region should be given appropriate consideration in the relevant policy frameworks.

[1] Part of the direct connectivity to the Middle East is to Sharm el-Sheikh (Egypt).

[2] Note that proportions in Tables D2 and D3 are calculated over connecting passengers, while in Figure D1 they are calculated over total passengers. All these proportions are fully equivalent.



Scotland to/from	World	EEA	Rest of Europe	Africa	Middle East	LAC	North America	Asia-Pacific	BRIC
Total Passengers ('000)	1,032.2	823.9	33.9	18.4	27.2	7.5	80.4	41.0	16.9
Direct	75.2%	86.4%	74.2%	19.2%	41.8%	22.8%	32.6%	0.0%	2.8%
Transfer	24.8%	13.6%	25.8%	80.8%	58.2%	77.2%	67.4%	100.0%	97.2%
via South East England hubs	9.3%	4.4%	10.5%	25.1%	23.3%	36.7%	34.9%	28.8%	38.3%
via rest of UK hubs	1.8%	0.6%	0.2%	0.8%	1.7%	0.9%	0.5%	0.4%	0.0%
via alternative EEA hubs	10.0%	8.6%	10.0%	43.6%	19.3%	32.8%	16.5%	27.5%	38.0%
via Rest of World hubs	3.7%	0.0%	5.2%	11.2%	13.9%	6.8%	15.6%	43.3%	20.9%
Total non-UK hubs	**13.6%**	**8.6%**	**15.2%**	**54.8%**	**33.2%**	**39.6%**	**32.1%**	**70.8%**	**58.9%**

Figure D1. Breakdown of passenger itineraries: Scotland to/from worldwide destinations (May 2013)

Table D2. Top 10 hub choices in routes to/from Scottish airports by geographical market (May 2013)

Scotland to/from World		***EEA***		***Rest of Europe (non-EEA)***		***Africa***		***Middle East***	
Hub airport	Ci'	Hub airport	Ci'	Hub airport	Ci'	Hub airport	Ci'	Hub airport	Ci'
Heathrow	30.4%	Amsterdam	23.7%	Heathrow	37.3%	Heathrow	26.7%	Heathrow	36.5%
Amsterdam	19.8%	Heathrow	22.5%	Istanbul Ataturk	18.5%	Amsterdam	21.8%	Amsterdam	20.7%
Dubai	8.2%	Frankfurt	10.7%	Frankfurt	15.7%	Paris-CDG	21.3%	Dubai	14.4%
Frankfurt	7.1%	Gatwick	6.9%	Amsterdam	13.0%	Dubai	10.7%	Istanbul Ataturk	7.4%
Paris CDG	5.2%	Copenhagen	4.2%	Paris CDG	5.0%	Frankfurt	7.2%	Frankfurt	6.7%
Gatwick	5.0%	Paris CDG	4.1%	Gatwick	3.1%	Gatwick	4.0%	Gatwick	3.4%
Newark	4.1%	Dublin	3.9%	Brussels	1.2%	Istanbul Ataturk	1.9%	Paris-CDG	3.2%
Dublin	2.6%	Stavanger	3.0%	Dalaman	0.7%	Brussels	1.2%	Manchester	2.3%
Copenhagen	1.9%	Manchester	1.9%	Dublin	0.5%	Dusseldorf	0.5%	Cairo	1.2%
Istanbul Ataturk	1.5%	London City	1.8%	Cologne	0.4%	Cardiff	0.4%	Abu Dhabi	0.6%
Total Passengers	1,032,226		823,897		33,882		18,387		27,169
Share of total	100%		79.8%		3.3%		1.8%		2.6%
Connecting passengers	255,991		111,938		8,737		14,851		15,814
Connecting rate	24.8%		13.6%		25.8%		80.8%		58.2%
Absolute connectivity:									
via SEE hubs	37.7%		32.4%		40.6%		31.1%		40.1%
via rest of UK hubs	7.3%		4.4%		0.6%		1.0%		2.9%
via alt. EEA hubs	40.1%		63.2%		38.7%		54.0%		33.1%
via Rest of World hubs	14.9%		0.0%		20.1%		13.9%		23.9%
Total non-UK hubs	55.0%		63.2%		58.8%		67.9%		57.0%

Table D3. Top 10 hub choices in routes to/from Scottish airports by geographical market (May 2013)

Scotland to/from Latin America and Caribbean		***North America***		***Asia-Pacific***		***BRIC***	
Hub airport	Ci'	Hub airport	Ci'	Hub airport	Ci'	Hub airport	Ci'
Gatwick	25.0%	Heathrow	47.9%	Dubai	40.2%	Heathrow	38.7%
Heathrow	22.4%	Newark	18.9%	Heathrow	28.3%	Amsterdam	20.8%
Amsterdam	19.0%	Amsterdam	12.7%	Amsterdam	18.5%	Dubai	20.3%
Paris-CDG	16.8%	Dublin	4.1%	Paris-CDG	4.8%	Paris-CDG	8.3%
Frankfurt	5.9%	Gatwick	3.7%	Frankfurt	3.0%	Frankfurt	7.9%
Newark	4.1%	Philadelphia	3.4%	Istanbul Ataturk	1.2%	Brussels	0.9%
Saint Lucia	3.1%	Keflavik	2.9%	Singapore	0.5%	Istanbul Ataturk	0.8%
Cardiff	0.9%	Paris-CDG	2.5%	Bangkok	0.5%	Gatwick	0.6%
Nassau	0.4%	Frankfurt	1.7%	Gatwick	0.4%	Cardiff	0.4%
Antigua	0.4%	Toronto	0.6%	Cardiff	0.3%	Copenhagen	0.2%
Total Passengers	7,450		80,429		41,012		16,866
Share of total	0.7%		7.8%		4.0%		1.6%
Connecting passengers	5,753		54,243		41,012		16,396
Connecting rate	77.2%		67.4%		100.0%		97.2%
Absolute connectivity:							
via SEE hubs	47.5%		51.7%		28.8%		39.4%
via rest of UK hubs	1.2%		0.7%		0.4%		0.0%
via alt. EEA hubs	42.5%		24.4%		27.5%		39.1%
via Rest of World hubs	8.8%		23.2%		43.3%		21.5%
Total non-UK hubs	51.3%		47.6%		70.8%		60.6%

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