

Institution: Buckinghamshire New University		
Unit of Assessment: 24 Sport and Exercise Sciences, Leisure and Tourism		
Title of case study: Air transport service and regulatory developments in the Caribbean/Latin America region		
Period when the underpinning research was undertaken: 2009-2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Prof David Warnock-Smith	Professor Aviation Management	2017-2021
Period when the claimed impact occurred: 2009-2020		
Is this case study continued from a case study submitted in 2014? N		
1. Summary of the impact (indicative maximum 100 words)		
<p>An air transport liberalisation framework and set of recommendations for the Caribbean region that has been adopted by CARICOM, the Caribbean Tourism Organisation and supported by the Caribbean Development Bank and the European Commission (in relation to the Latin America and Caribbean region) for the benefit of consumers (passengers and shippers), suppliers (airlines, airports etc..) and island state economies (e.g. Caribbean countries). Impact consists of a partial opening of markets with incoming tourism and socio-economic benefits being greatest in those states where additional freedoms have been granted in a less fragmented way.</p>		
2. Underpinning research (indicative maximum 500 words)		
<p>The socio-economic impact of air transport in small island states, using a mixed, synthetic methodology, found the sector's socio-economic impact in transport dependent island states to be significant, providing a critical lifeline for continued access to global markets, incoming tourists/tourism spending and other forms of trade and economic activity (Warnock-Smith and Morrell, 2011, Caribbean Development Bank, 2013, Caribbean Development Bank, 2015).</p> <p>The impact of further air transport liberalisation and deregulation in the Caribbean region, using time-series, fixed-effects panel regression, found that the largest welfare gains to the region would be made through a fully liberalised Multilateral Air Service Agreement (MASA) with ratifying CARICOM/Caribbean member states, adopting a 'community carrier' principle and able to negotiate more liberal and reciprocal bilateral agreements as a bloc with larger 3rd party source markets for tourism namely Canada, the US, Europe and to a lesser extent Latin America (Warnock-Smith and Morrell, 2008, Caribbean Development Bank, 2015).</p> <p>Analysing Herfindahl-Hirschman Index (HHI) and Marketing Information Data Tapes (MIDT) related data from Sabre it was possible to identify levels of connectivity between EU and Latin America/Caribbean points. Point-to-point connectivity was found to be high on Origin & Destination markets with shared cultural and language links with some of the busiest point-to-point EU-Latin America/Caribbean markets involving Martinique, Guadeloupe, Dominican Republic, Barbados and Jamaica. Levels of beyond and behind connecting traffic was found to be quite limited and represents some untapped market potential that would lead to further development of bases and hubs in the Caribbean region (European Commission, Joint Research Centre, 2018). The largest gains for EU-LA/Caribbean country-pairs were found to be most likely under new, liberal multilateral EU-Caribbean and EU-Latin America member state agreements (Warnock-Smith and Christidis, 2021, European Commission Joint Research Centre</p>		

2018). There is some evidence from the 2005 Chile-EU horizontal agreement, for instance, of the sorts of traffic gains that could be made through the signing of such agreements (67% growth between 2006 and 2016 versus 15% negative growth between 2002 and 2005 on Santiago-EU points).

It has been possible to detect through a COPA airlines case assessment, the increased amount of connectivity to the Caribbean from Latin America and other source regions made possible by strong flag carriers wishing to serve thinner markets like COPA airlines (based in Panama). In 2017, for example, as many as 154,000 passengers were found to have made connections through COPA's Panama City Tucamen hub between North America and destinations in the Caribbean. Securing traffic rights to carry Caribbean and North American passengers through Panama is an important pre-requisite and a limited number of forward looking Caribbean states (in Dutch and Spanish speaking areas mainly) have benefitted from taking a liberal approach to countries such as Panama (O'Connell et al., 2020).

3. References to the research (indicative maximum of six references)

3.1 [Warnock-Smith, D and Christidis, P. \(2021\)](#) European Union-Latin America/Caribbean Air Transport Connectivity and Competitiveness In Different Air Policy Contexts. Journal of Transport Geography, 92, 102994, ISSN 0966 - 6923 [Delayed Submission]

3.2 [O'Connell, J.F., Avellana, R.M., Warnock-Smith, D. and Efthymiou, M., \(2020\)](#). Evaluating drivers of profitability for airlines in Latin America: A case study of Copa Airlines. Journal of Air Transport Management, 84, 101727.

3.3 European Commission Joint Research Centre (2018), EU-Latin America air transport connectivity, competitiveness and policy, February 2018, Warnock-Smith, D

3.4 Caribbean Development Bank (2015), Making Air Transport Better in the Caribbean, Authors: Warnock-Smith, D and Brunton, I., May 2015 Available at: <https://www.caribank.org/publications-and-resources/resource-library/thematic-papers/making-air-transport-work-better-caribbean>

3.5 Caribbean Development Bank (2013), Socio-economic impact of LIAT (1974) Ltd on the Caribbean economies it serves, 14th June 2013, Warnock-Smith, D

3.6 Warnock-Smith, David and Morrell, P (2011) An empirical study of the socio-economic effects of supporting flag carriers: The case of the Caribbean Community (CARICOM) Journal of Air Transport Studies 2 (1), pp1-26

3.7 Warnock-Smith, D and Morrell, P (2008) Air transport liberalisation and traffic growth in tourism-dependent economies: A case-history of some US-Caribbean markets, Journal of Air Transport Management 14(2), pp82-91

4. Details of the impact (indicative maximum 750 words)

Impacts on aviation policy

Subsequent to the underpinning research, the CARICOM Secretariat and Caribbean Tourism Organisation [5.2] made some revisions to their air transport policies paving the way for a partial opening up of aviation markets in the CARICOM and wider Caribbean region. The 2013 Caribbean Development Bank (CDB) Socio-Economic impact of LIAT study was carried out in connection with a large fleet renewal loan request to CDB by LIAT, which was granted [5.4], allowing the carrier to increase its overall capacity and route capability. The 2015 recommendations were supported and endorsed by various Caribbean Heads of State including Dr Ralph Gonsalves, Prime Minister of St Vincent and the Grenadines.

“As a broad framework of analysis I think the authors of the report have done a fairly good job”
(Jamaica Observer, 2015) [5.1]

As recommended in the underpinning research, in February 2019 Jamaica, Trinidad and Tobago, Barbados, Dominica, Grenada and St Vincent and the Grenadines all signed the revised Caricom Multilateral Air Services Agreement (MASA) [5.2], which extends full freedoms to all Caricom community carriers on routes within and between Caribbean Community states. Non-community carriers would still be subject to existing bilateral and extra-bilateral agreements. This allows small island states to pool scarce air transport resources together and creates an enhanced level of local commitment, flexibility and continuity in the supply of air transport services across the region.

“MASA is...in keeping with their (Caribbean Heads of State) quest to deliver adequate, fair, competitive, efficient transportation services at affordable costs.” (WIC News, 2019) [5.2]

More recently, the European Commission Joint Research Centre has been reviewing its regulatory approach to Latin American and Caribbean states upon recognising the additional gains in air connectivity that can stem from promoting additional traffic rights and reduced regulatory fragmentation to enable additional direct and indirect flights, particularly those that exploit behind and beyond market flows through designated hubs.

“I found it highly relevant for the policy discussion on the liberalization of international aviation”
(with reference to EU-Latin America/Caribbean markets) [5.6]

Socio-Economic impacts

Key regional financing institutions such as the Caribbean Development Bank along with the region’s major aviation service providers such as LIAT and Bahamasair were able to use elements of the underpinning research to justify investments in route networks and fleet renewals as well as lobby regional governments to review aviation taxes as ways to enhance the socio-economic impact of continued air services across the islands; islands which would otherwise be cut off from commercial and scheduled air transport services.

“This work supported the evidence base for investment in a new fleet. The study was also used to corroborate the findings of a separate research report some years later, underpinning the case for reform of taxation on regional air travel” Damien Reeves, Economist, Caribbean Development Bank, June 2020 [5.3]

“We are still transitioning into the new fleet, seven so far and an eighth due in June/July.” May 2014 [5.5]

“We are still using your data and analysis, which you carried out so long ago (in the 2012-2015 period)” October 2019 [5.5]

Julie Riefer-Jones Chief Executive Officer, LIAT

Ultimately, this has helped to safeguard and in some cases enhance air services provided in countries such as Dominica, Grenada, St. Vincent and the Grenadines and the Bahamas, among others. Employment and expenditure estimates, for instance, (Direct, Indirect and Induced) averaged out at 975 FTE jobs and US\$22.42mn related to LIAT’s hub activities and 98 FTE jobs and US\$1.7mn for LIAT’s outstation activities in 2011/12 with a moderately significant variation around the averages (Caribbean Development Bank, 2013).

Impacts on trade in tourism

In line with the above socio-economic impacts and as pursued by CARICOM, a more open and liberal bilateral and multilateral environment for air services, as recommended in the underpinning research, has led to gains in extra-regional connectivity, as a result of the

increased number of air routes and carriers able to operate services into the region. Between 2008 and 2018 change in connectivity from international markets averaged out at +50% across 25 different Caribbean states (Caribbean Development Bank, 2018) [5.7].

“The report made the case for a series of reforms to policy and operations, some of which have been taken forward by the Caribbean Community (Caricom) Secretariat”. [5.3]

For Caribbean states, many of whom reliant on incoming tourism for foreign exchange, the more liberal approach to air transport, the continuation of air services (Caribbean Development Bank, 2013, Warnock-Smith and Morell, 2011) and minimum revenue guarantees (Caribbean Development Bank, 2015) for the provision of foreign carrier air services have ensured that countries such as Jamaica, the Bahamas and Barbados have been able to increase incoming tourist receipts during the post-intervention period (Table 1).

Table 1: Incoming tourist receipts selected Caribbean states in 2010 and 2017

Island state	2010 incoming tourist receipts (US\$m)	2017 incoming tourist receipts (US\$m)
Barbados	1,038	1,082
Bahamas	2,163	2,577
Jamaica	2,001	2,539

Source: UNWTO Tourism Highlights, 2018 [5.8]

Overall, aviation provides a lifeline to the CARICOM region’s economy, enabling incoming tourists to contribute over US\$4bn to Gross Domestic Product (GDP) and provide 280,000 jobs (Caribbean Development Bank, 2015).

5. Sources to corroborate the impact (indicative maximum of 10 references)

5.1 Jamaica Observer (2015), New study outlines recommendations for improving regional airline industry, May 21st 2015, Available at: <http://www.jamaicaobserver.com/NEWS/New-study-outlines-recommendations-for-improving-regional-airline-industry>

5.2 WIC News (2019) CARICOM nations sign Multilateral Air Services Agreement, 28th February 2019. Available at: <https://wicnews.com/caribbean/several-member-states-caricom-sign-multilateral-air-services-agreement-220917044/>.

5.3 CDB Testimony from Damien Reeves, Economist, regarding the benefits and impact of the LIAT socio-economic impact study and Making Air Transport Work for the Caribbean study (2020)

5.4 CDB LIAT fleet renewal loan linked to LIAT socio-economic impact study (2013) <https://www.caribank.org/newsroom/news-and-events/cdb-provides-usd-65-million-liat-fleet-modernisation>

5.5 LIAT Testimony from Julie Riefer-Jones CEO stating use of my research to devise strategies and policies to justify investment applications and decisions (2014, 2019)

5.6 Christodoulou, A., European Commission Joint Research Centre, Testimony covering policy influences and benefits of EU-Latin America Caribbean competitiveness and connectivity funded research (2021)

Impact case study (REF3)

5.7 Caribbean Development Bank (2018), Air Transport Competitiveness and Connectivity in the Caribbean, Available at: <https://www.caribank.org/publications-and-resources/resource-library/working-papers/air-transport-competitiveness-and-connectivity-caribbean>

5.8 UNWTO Tourism Highlights (2018), 2018 Edition, Available at: <https://www.e-unwto.org/doi/pdf/10.18111/9789284419876>