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The economic viability of long-haul low cost operations: Evidence from the transatlantic market

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ABSTRACT

The recent strong performance of long-haul low-cost carriers AirAsia X and JetStar have re-raised the question of the long-term feasibility of long-haul low-cost operations. For the first time, this study contains a detailed financial assessment of low-cost operations on the transatlantic market using best-in class aircraft technology, the Boeing 787. The study's main findings demonstrate how challenging the successful running of a European long-haul low-cost carrier can be. In particular, on-going operating profit appears to be very sensitive to variations in demand and fuel prices, despite the use of new, highly efficient B787s. The findings show any prospective long-haul low-cost carrier that pursuing a demand focussed network strategy can ensure financial viability. This involves the creation of higher seating densities, higher cargo revenues and additional ancillary revenues.

1. Introduction

Low-cost airlines operating in short-haul markets have revolutionised the air transport industry in many of the world's regions. Helped by regional liberalisation processes, they have successfully entered and changed a sector which used to be conservative and protected by high entry barriers. They have modified the airline approach to operating costs and allowed greater access to air travel through lower fares.

In the long-haul market, the low-cost model has offered mixed results. All previous attempts in Europe have so far proven unsuccessful although the low-cost carrier Norwegian recently began operating long-haul services starting in May 2013. The 2000s saw the emergence of long-haul low-cost airlines in Asia: despite scepticism, Jetstar International and AirAsia X have showed that the model might work under certain conditions. The launch of promising new aircraft and the continued liberalisation of intercontinental regulatory frameworks are among the reasons explaining this renewed enthusiasm for an extension to the LCC business model to long-haul markets.

The purpose of this paper is to evaluate whether developments in the air transport environment have rendered a European long-haul low-cost model feasible. The three main developments to be reviewed are the increasing number of ancillary and cargo revenue possibilities, the greater number of freedoms permitting a high number of new entrants into long-haul markets, and long-haul aircraft technological advances making long-haul point-to-point traffic more attractive again.

These developments are used to test the robustness of the LCC model in the busiest long-haul market in the world – the transatlantic market, with the best-in class aircraft technology available, the Boeing 787 Dreamliner to determine if LCCs can generate profits in these long-haul markets. To perform the feasibility test, reliable cost and revenue data were collected from Boeing with ancillary revenue data benchmarked against AirAsia X to construct a financial assessment of two attractive transatlantic routes to LCCs. Underlying cost assumptions were checked by a Boeing Cost Expert for validation purposes. The impact of external factors represented by fuel prices and the level of demand has also been measured.

The remaining sections of the paper are structured as follows: Section 2 will highlight previous studies and the research gap that came about as a result of the aforementioned new developments in the industry. Section 3 will provide further details of the collected data. Section 4 will summarise the numerical results of the long-

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haul low-cost financial assessment and Section 5 will discuss the managerial implications of the findings and draw an overall conclusion.

2. The path to long-haul low-cost opportunities

The increasing body of literature on low-cost airline operations has clearly indicated the intuitive compatibility of low-cost services to short-haul travel (Jiang, 2013), where the provision of costly comfort features is often surplus to requirement for most passengers (Shaw, 2011), where passengers are less likely to want to make costly connections (Doganis, 2010; Shaw, 2011) and where a more favourable liberalised environment is more likely to exist so long as operations are confined within well integrated intra-regional markets such as the EU single market (Doganis, 2010).

Several studies have been undertaken regarding the feasibility of a long-haul low-cost carrier model. Francis et al. (2007), Binggeli and Pompeo (2002) and Van der Bruggen (2007) all focused their analysis on the potential cost savings a low-cost carrier could achieve over a full service carrier on long-haul operations. They all came to the conclusion that the scope for cost differentiation was significantly reduced for long stage lengths. Francis et al. (2007) found that there was a 20 per cent cost advantage on long-haul routes in comparison with 50 per cent on short-haul routes, although Van der Bruggen (2007) did estimate 20–25 per cent on short-haul, compared to 40–60 per cent on long-haul. Moreira et al. (2011) went a step further, by adding an estimation of yields that both Full service airlines and Low-cost carriers could collect in comparison to their unit costs based on operating a 767–300 ER. They came to the conclusion that a long-haul low-cost carrier could become sustainable only if an 85 per cent load factor was achieved as opposed to a 77 per cent load factor for legacy carriers. The findings of a profitability analysis by Daft and Albers (2012) take the long-haul low-cost debate a step further by including a more comprehensive list of unbundled and cargo revenues for an attractive point-to-point Europe to US route using an A330 aircraft. Despite the apparent cost advantage erosion when compared to short sector operations, unbundling and cargo revenue generating strategies could push the break-even load factor down to a realistic level.

New developments in the industry in terms of new aircraft types making long-haul point to point services more feasible (Boeing, 2009; Kingsley-Jones, 2011; Gates, 2012; Yeo, 2012; Country Monitor, 2007), further intercontinental drives towards liberalisation (for example, EU-3rd country horizontal agreements and the latest EU–US agreement), and new trends towards the generation of ancillary and cargo revenues among LCCs (IdeaWorks, 2011; Rendava, 2012), means it is important to revisit previous conclusions drawn on the geographical scope of LCC operations and determine if one or a combination of these new developments can make long-haul LCC services a financially viable option. The recent findings of Daft and Albers (2012) were more positive than previous studies but were still subject to high sensitivities around the assumed load factors, ancillaries and cargo revenues generated. This study intends to enhance this and earlier studies by considering more routes, industry validated cost and revenue assumptions (a disaggregated bottom-up approach) and new, efficient types of aircraft available in today's market.

3. Methodology and data

To properly test the financial viability of long-haul low-cost services it was necessary to generate a revenue-cost model using reliable numerical justifications of the choices and assumptions made. A cost study was carried out and supplemented by a sensitivity analysis taking account of variations in both fuel price and demand. For the revenue analysis three main areas were considered which included passenger, ancillary and cargo revenue. A combination of benchmark airlines (AirAsia X and Jetstar) and previous studies were used to underpin assumptions made in these areas. Three supporting discussions took place in May 2012 with Rigas Doganis, non-executive Director EasyJet, Michael Callahan from Boeing, and Geoff Hearn from Airfinance Journal. The purpose of these discussions was to seek advice on the plausibility of various cost and revenue assumptions and to provide access to numerical data for the main cost/revenue analysis. The actual data collected for both cost and revenue analyses are now detailed in turn.

3.1. Aircraft choice

The cost analysis focussed on the B787-8 for the following reasons:

1. The B787-8 is currently the only new generation long-haul aircraft being produced and operated. Data obtained from manufacturers would therefore be more accurate and realistic.
2. A new entrant, potentially with an initial reduced market share, would have more interest in an aircraft with a lower capacity to offer significant frequencies at the same time as being able to take advantage of the aircraft's superior fuel efficiency when compared with other smaller wide bodies (e.g. B757, B767 and A330). This is all the more important as the two routes to be studied are transatlantic (see Section 3.2) and competitors in these markets would try and offer multiple daily frequencies.

3.2. Route choice

The cost analysis has been carried out for two different transatlantic routes, Manchester–New York Newark (MAN–EWR) and London Gatwick–Los Angeles (LGW–LAX). These routes were chosen for the following reasons: 1. EU–US Open Skies is likely to facilitate the establishment of a long-haul low-cost carrier. 2. The Europe–Asia market is already highly competitive and a long-haul low-cost carrier would find it more difficult to enter as Middle-East full service airlines already operate in this market with a very low-cost base. Long-haul low-fare Asian carriers, however, will inevitably enter or re-enter the European point-to-point market where they will compete vigorously with these connecting airlines. 3. Together with observations from Asia, it is important to test the feasibility of the long-haul low-cost business model in another region to add weight (or not) to its feasibility.

Selecting routes for long-haul low-cost operations is key to their success. Dennis (2005) argues that only ethnic links and holiday destinations offer potential for point-to-point leisure services. Another important evaluation to be considered was airport selection as primary airports have large concentrations of traffic while secondary airports have significantly lower landing and passenger charges. Evidence from academia and commercial intelligence all point to the fact that airport charges account for a small proportion of operating costs on long-haul operations. Primary airports have suitable facilities for wide-body aircraft but face constraints in terms of the number of hours of operation. Primary airports also have slot constraints which may curtail future growth ambitions. If these new entrant long-haul LCCs enter trunk routes (for example, Heathrow to New York's JFK), they will face severe combatant responses from the domiciled incumbents, which will inevitably lead to a price war. Even if primary airports appear more likely to facilitate demand and feeder traffic, passengers' interest in low-fare airlines may value secondary airports for potential transfer to/from