Regional Development and Air Freight Service Needs for Regional Communities

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INTRODUCTION

This article is intended to assist in documenting the needs of regional communities with regards to airfreight services. In doing so, the article first considers the importance of air service access to small and regional communities with particular emphasis on those economies bolstered by agriculture and the production of high-value, low weight, perishable products. The article then explores the airfreight challenges facing regional communities and discusses the needs for: integration; infrastructure; and service reliability. The article provides an overview of potential solutions to assist in meeting these needs, including: improving the flow of information and communication; and applying electronic commerce strategies.

BACKGROUND

Over the past two decades, the air cargo industry has grown dramatically (Yuan, Low, & Ching Tang, 2010). Although world air cargo traffic stagnated from mid-2011 to 2013 (Boeing, 2014), growth returned in 2014 accounting for approximately 35% of global merchandise trade by value (International Air Transport Association, 2015). The dramatic growth in the global airfreight sector may be explained by three observations.

Firstly, the dramatic growth in airfreight can be explained by an apparent industry trend towards the production of high value, lightweight goods (Ari-Pekka & Hintsa, 2009). This includes the new economy associated with the transport of fresh, perishable, high value produce (Sim, Barry, Clift, & Cowell, 2007). Statistics support this emerging economy highlighting that the transport of perishable food accounts for 14% by volume of total global airfreight (Bridger, 2008). Secondly, producers and shippers are realizing that the higher costs associated with airfreight can potentially be offset by the costs savings associated with storage, and packaging when using other freight modes (Yuen et. al,. 2010). Finally, on a global scale, air service costs have experienced a reduction due to the entry of large numbers of wide body freighters to the logistics industry (Gardiner, Ison, & Humphreys, 2005). As such, the overall effect is that airfreight is becoming a commonplace business decision in the distribution systems of many companies (Murphy, Dalenberg, & Daley, 1989).

Increases in the perishable airfreight task are linked to the emergence of a social focus on the consumption of foods produced from regions known for 'clean' production processes. This new social focus has called for research, which investigates the food chain in an effort to understand rural development patterns (Renting, Marsden, & Banks, 2003). Thus, sea, road, rail and air

DOI: 10.4018/978-1-5225-2255-3.ch684

transport of freight in the food production cycle from the farm to the consumer's table has come under scrutiny (Saunders & Hayes, 2007). The scrutiny has been applied in the pursuit of clarity surrounding the cost of transport to the environment, society and communities.

Regional communities are the first step of the food production cycle. For many regional communities, access to airfreight networks means an opportunity to penetrate and participate in markets that cannot be equally serviced by other modes of transport. For perishable agri-producers, access to market requires access to appropriate freight services with the ability to transport products efficiently and effectively from the farm to the consumer plate. Thus, understanding the needs of regional communities with regards to airfreight access is an important factor in fostering sustainable economies for these communities (Kille, Bates, & Murray, 2013).

Although air cargo decisions are becoming the norm in the distribution systems of many companies (Murphy et al., 1989), there is little recognition of the needs of regional communities with regards to airfreight access. There is a plethora of literature and research into international and domestic air cargo utilizing the cargo space of wide body passenger jets or dedicated aircraft freighters. However, there is a shortage of literature on another critical part of the perishable cargo supply chain (i.e., regional aviation and the associated airfreight service needs of regional communities). Furthermore, much of the current literature and studies focus on the needs of shippers in an international setting and provide little to further our understanding of how decisions associated with airfreight fit contextually within a regional community and their economic development. The authors contend that information and technology lie at the core of airfreight service needs of regional communities.

For the purposes of this article, a small or regional community is taken to be one that maintains a 'rural airport' as defined by the United States Internal Revenue Service (IRS). The IRS defines a 'rural airport' as any airport that has fewer than 100,000 commercial passengers departing from the airport during a calendar year, and at least one of the following is true: a) the airport is not located within 75 miles of another airport from which 100,000 or more commercial passengers departed during the preceding calendar year; or b) the airport is not connected by paved roads to another airport (United States Department of Transportation, 2016). Regional aviation includes the air transport operators serving these rural airports.

This article investigates the needs of regional communities with regard to airfreight services. The author reveals that information and technological challenges may be overcome by addressing the key airfreight network areas of concern including: (1) integration; (2) infrastructure; and (3) service reliability.

THE CHALLENGE: AIRFREIGHT SERVICE NEEDS FOR REGIONAL COMMUNITIES

A number of challenges for the regional air transport sector of the perishable food supply chain have emerged. This section explores the impact of: integration, infrastructure, and service reliability on the provision of services to regional communities.

The Need for Integration

Access to air transport services and feeder services is often limited for rural communities. For example, the scarcity of freight forwarding providers presents significant challenges for growers who are left uncertain about availability of potential logistics providers in the region. Rundle (1998) explains that the limitations imposed on agricultural exporters is rooted in the passenger demand and scheduling policies administered by domestic airlines. Hanaoka and Phoosanabhongs (2010) support this and assert that reliability becomes a