

# Preface

The first air cargo or air mail flight is a highly contentious issue. Mail is said to have been first carried from Albany to New York in May 1910 and cargo first carried from Dayton to Columbus, Ohio, in November of the same year (Wensveen, 2007). The first flight by a hot air balloon carrying cargo (a cockerel, a sheep and a duck) was much earlier. The third distinct type of traffic, air express, owes its rapid development to the ending of the Railway Express Agency in 1975, a couple of years after the founding of Federal Express. The airline deregulation act of 1978 further removed any obstacles for the growth of air express operators such as FedEx and UPS, at least within the US.

Air cargo is closely linked to international trade whose expansion has been fostered by the removal of physical restrictions and growth of commercial opportunities through improved communications and international contacts. It has benefited from freer transfers of funds, stability of exchange rates and easier access to credit. Above all the reduction and removal of duties has also encouraged the growth in trade, as has the outsourcing of manufacturing to lower cost firms in other countries.

Air cargo also plays a key role in humanitarian aid. Airlift is provided by both military and civil aircraft often through hostile airspace and to below standard airports. Probably the most famous example of this was the Berlin airlift after the Second World War. In 1948, Berlin was jointly controlled by the Allies and Russians, although the Russians held the area surrounding the city and thus land access. This access was closed and thus an airlift remained the only option to get increasingly urgent deliveries of food, coal and other supplies to what became West Berlin. Over 330 days to 12 May 1949 a total of 2.26m tonnes of cargo were airlifted into Berlin, an average of 6,800 tonnes a day, 80 percent by the US and 20 percent by the UK. Almost three-quarters of the payload was coal, vital in heating the city especially over the winter period. The aircraft used were initially mostly C-47s with 3.5 tonnes of payload, but these were gradually replaced with C-54s and Avro Yorks with 10 tonnes. An assortment of other aircraft was also pressed into service. The peak day involved a total of almost 13,000 tonnes supplied by 1,383 flights, an average of 9.4 tonnes per flight. Only three runways were available and techniques had to be developed for efficient loading, unloading and air traffic control. Maintenance had to be adapted to schedules that gave high utilisation with often ageing planes. More recent examples of international aid have been in response to the devastation caused by earthquakes or floods: here surface transport is either too slow or impossible and air transport is the only means to supply food and clothing to the homeless.

In spite of the importance of air cargo in international trade, aid and relief operations, it has remained the poor cousin to the more glamorous passenger side of the business. This has been reflected in the dearth of air cargo books, with the topic usually dealt with as one chapter in books on air transport. It also receives little attention in books on logistics and the supply chain. Hence this book, which for the first time gives the industry its own up-to-date and comprehensive analysis of air cargo.

Individuals and firms assume that income will continue to grow indefinitely every year and economies will continue on their expansion path. Thus the upswings of economic cycles are fuelled by spending and investment supported by bank lending, whether consumer credit or company debt. Bubbles form, especially in popular sectors such as IT and housing. At some point expansion can no longer be sustainable, the bubble bursts and the downturn starts, triggered or reinforced by a world event or crisis, as well as high prices and shortages of key inputs. As this gathers pace, investment plans are shelved, consumers cut back spending and pay off some of their debt, and companies start to build depleted cash reserves.

The air cargo business fits this story well, with the pattern driven more by international trade and inventory levels than GDP alone. With increased outsourcing to third countries, exports and imports become more volatile: changes in final demand impact inventory levels which lead to a multiplier effect on trade from decisions made by exporters and importers of intermediate goods. This seems to affect air trade more than other modes of transport since consumers often cut back first on the high-tech goods that are shipped by air. In the upward part of the cycle, airlines invest in new and especially converted freighter aircraft, the extra capacity justified by forecasts that often disregard the expansion plans of others. Where these are taken into account an increased market share is assumed, but then the assumption on yields may not be realistic. Many airlines have ordered aircraft towards the end of the upturn and delivery and final payments are timed to coincide with the bottom of the downswing when no airline needs the capacity, causing further financial distress and perhaps bankruptcy. Airlines invest in other airlines on the basis that they need to position themselves in emerging markets, for example China. Forwarders and integrators strive to become more 'global' by buying the pieces of the jigsaw that they lack. These decisions, unlike aircraft, are more likely to be justified by long-term trends, and a short duration downswing has to be suffered to gain longer-term expansion and profitability. This the background to the world of air cargo which this book intends to examine in some detail.

Most recently the global banking crisis that gathered pace in the middle of 2008 had a dramatic impact on international trade and thus air trade. Banks were forced to cut lending and credit in the inter-bank markets almost dried up. Trade credit was affected in addition to the sharp reduction in demand that was also fuelled by a cutback in consumer debt. While this book looks at the evolution of the air cargo industry over a much longer period, the recent downturn gets perhaps a disproportionate amount of space. This is not just because it is still in most readers' memories but because it is a convenient time to take stock of how the various participants have reacted and fared.

