



## A Study on the Air Cargo Logistics Operations in Dubai

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### ABSTRACT

*Air Freight is a phenomenal industry and plays a vital role in modern logistics because it offers a highly integrated and comprehensive facility with safe, fast, reliable, convenient and highly efficient services. When compared to land and sea transport the air transportation industry is relatively younger and has been a tremendous enabler for economic development to societies. Air cargo is playing an imperative role in the value chain of global transport and logistics, which in turn attracts cargo market to grow four to five folds by 2020 surpassing passenger's traffic growth. In this article the author particularly focuses on air freight handling process with reference to Emirates Skycargo and critically examines the operational issues which company may encounter. Findings and recommendations were given to ensure the products and services are aligned with customer needs.*

**KEYWORDS :** Operational efficiency, freight, logistics, procedures.

### Introduction

Over the past two decades air freight services has witnessed a significant growth due to the growing demand from consumers and industries for speedy delivery. Transport system is the most important economic activity among the components of business logistics systems. It is now no longer regarded merely as a luxury commodity but rather a contributor to social and economic benefits. Around one third to two thirds of the expenses of enterprises' logistics costs are spent on transportation. According to the investigation of National Council of Physical Distribution Management (NCPDM) in 1982 (Chang, 1988), the cost of transportation, on average, accounted for 6.5% of market revenue and 44% of logistics costs.

Air Freight is a phenomenal industry and plays a vital role in modern logistics because it offers a highly integrated and comprehensive facility with safe, fast, reliable, convenient and highly efficient services. When compared to land and sea transport the air transportation industry is relatively younger and has been a tremendous enabler for economic development to societies. The reason is because air freight and integrated air express plays a critical role to time-based strategy – the primary challenge for the world's most-progressive firms. In addition it offers suppliers and customers more flexibility, and allow for expedited shipments within time-constrained environments (Enarson, 2006). The 'speed' provided by air freight services can be a valuable attribute in today's time-based competition by connecting upstream suppliers, focal firms and downstream consumers in networks of complex international supply chains and helps to develop internal and external trade. Air logistics pays close attention to customer-centric approach and offers quality freight transportation services striving to achieve customer's demand. The air freight sector as an industry worldwide reached a value of almost 125 billion US dollars in 2012, and is forecast to rise to almost 160 billion by 2016. Ran Wei (2011) thinks that air freight does not contain production of goods, but based on modern information, air logistics provides the whole supply chain to save transit time of delivery, fasten capital turnover, which brings about the integration of goods flow, information flow, capital flow and personnel flow. Even though air freight services accounts only for 1 percent of the total world trade in terms of weight, in terms of value it transports 40 percent of the total world trade (David and Stewart 2010; Zhang and Zhang 2002).

As we discussed above one of the most important attributes of air freight services is its speed.

The main objective of the article is to assess the importance of air freight services to UAE's economy. As a case study the author has taken Emirates Sky cargo / Airlines and began a systematic investigation to develop a deep understanding of the entire air cargo transport system and to examine the challenges of air freight services in Dubai's goods movement and to analyze the air cargo industry's planning and operational issues.

### Need for the study

The logistics sector has been one of the main forces pushing globalization. Dubai has thrived in its role as a regional hub, reaching a posi-

tion of prominence in the global logistics network and today it is one of the critical nodes in the global supply chain. The cargo traffic at Dubai International Airport as well as at other UAE airports has grown exponentially even during the 2008-09 crisis.

The gateway between the East and the West, Dubai is home to one of the fastest growing cargo hubs in the world. Since 2014 DXB (Dubai International) has shifted all pure cargo operators over to DWC (Dubai World Central), Dubai's second airport and the future aviation hub of the world. The opening of Dubai's Al Maktoum Airport had marked a milestone in the worldwide logistics sector (Chacko, 2014, p-12). It will be the largest integrated port and airport facility in a major urban area linked to an extensive network of highways covering a territory from the Indian Ocean to the Mediterranean.

Freight volumes at Dubai International totaled 2,367,574 tonnes in 2014 compared to 2,443,624 tonnes in 2013, down 3.1 per cent again due to the shift of freighter operators to DWC. Dubai Airports is serviced by over 125 airlines flying to more than 260 destinations across six continents. There are over 17 air cargo parking slots for freighters. Emirates is the first airline launched by the nation and is now one of the world's most preferred airlines company because of their consistent delivery and service. Emirates SkyCargo was established in October 1985, at the same time as Emirates was launched and in its first year, Sky Cargo handled over 10,000 tonnes of freight (Chacko, 2014, pp.9-10)

### Review of Literature

The fast transportation of goods from the point of production or assembly to the point of consumption is often facilitated by the air cargo industry. The air industry developed rapidly in all the industrialized western countries.

The real starting point for airfreight as a real alternative to other transport modes was after World War II (WWII). There were two main factors that influenced the industry's development, one internal and one external. The internal driver was the technical development of airplanes and other related products during the WWII. Radar equipment and the jet plane are just two examples. The external driver was the consequence of the war, since it exemplified the need for the transports of all kinds of goods. To meet the transport demand even shipments that were normally moved by sea were transported by air. In order to address this surge in demand new categories of aviation activities such as the charter flights, ad-hoc, and dedicated cargo flights were introduced during that period.

Despite the 'relatively' small share of air freight in global distribution, the significance of air freight as a transportation mode particularly plays an important role for global supply chain management. This is recognized by Kasarda and Green (2005, p. 459) stating that "air cargo enables nations, regardless of location, to efficiently connect to distant markets and global supply chains in a speedy, reliable manner". The huge volume of high-value, time-critical products traversing international boundaries by air annually has resulted in air cargo accounting for 40 per cent of the value of today's world

trade. Air cargo is playing an imperative role in the value chain of global transport and logistics, which in turn attracts cargo market to grow four to five folds by 2020 surpassing passenger's traffic growth.

**The Spin - Off benefits of Air Transport Industry (No author, No date)**

- Air transport helps countries participate in the global market by increasing access to main markets and allowing globalization of production.
- Air transport boosts productivity across the global economy- improved transport links expand the market in which companies operate. As a result, companies are better able to exploit economies of scale thereby reducing costs, and to specialize in areas of comparative advantage.
- Air transport improves the efficiency of the supply chain, for example, many industries use air transport to shorten delivery times as part of their just-in-time delivery systems, enabling them to deliver products to clients quickly and reliably and to reduce costs.
- Air transport can act as a spur to innovation by encouraging effective networking and collaboration between companies located in different parts of the globe.
- Better exploitation of economies of scale - around 25% of businesses report that air transport services have a substantial impact on their ability to exploit economies of scale.
- Servicing and meeting customers - air services allow better contact and more effective communication between buyers and sellers, which contributes to companies making new sales and to meeting the needs of their existing customers.
- It provides fast and reliable delivery of high-value products
- Increasing the range of product markets - the development of e-business helps companies identify low-cost suppliers and air transport helps connect buyers and suppliers; improving companies' handling of returns and complaints: Facilitating the development of e-commerce - for example, enabling companies to transport online shopping orders quickly and reliably between countries, allowing products to be stored in large warehouses reducing retail and distribution costs.

**Objective**

In this article the author particularly focuses on air freight handling process with reference to Emirates Skycargo and critically examines the operational issues which company may encounter. Findings and recommendations were given to ensure the products and services are aligned with customer needs.

**Methodology**

In this research the qualitative method conducted through a series of interviews and meetings. Then survey questionnaire and emails were developed for the quantitative approach. The sample size mainly included the people working senior logistics officers at Emirates/Skycargo who were well experienced. Secondary data is collected from the organization history, company's annual reports and other published records. As a part of our analysis Fish Bone and SWOT analysis were done (see Fig. 1 and 2).

**Findings**

From the technological point of view, Emirates Sky cargo has introduced a system called as the "Sky Chain". Sky Chain the first of its kind is a cargo management system, a comprehensive end-to-end IT cargo management system. Sky Chain improves business efficiencies in the airfreight life cycles. Some of features of Sky Chain include:

AWB Management, finding out the cheapest and fastest routes to reach destination, capacity management, flight load planning, cargo revenue planning, flight disruptions management, adhoc requests, stock management etc. This software platform also includes Track & Trace' – where the exact status of the shipment will be shown. MERCATOR – Mercator is another application which helps Emirates to find out the best flight schedules for the cargo (ETD, ETA, ATA). It assists in load planning and other supply chain planning.

CCS (Cargo Control Systems) by Siemens is a system which enables to store and locate the goods in the warehouse by the help of unit num-

ber and airway bill number. This is already installed in the cargo mega terminal (CMT).

There is still a lot of paper involved when executing the logistics operations in Emirates. Even though the system of e-freight has been introduced it hasn't been properly executed / implemented.

The goods arriving in damaged condition was another major problem faced. The initial reason for this could be first is the improper packing materials used. Another reason could be the kind of methods in which the goods were loaded onto the aircraft.

Emirates were also facing serious lack of resources. The next problem faced is the warehouse congestions. During heavy demand seasons like summer and shopping festival seasons, the warehouse gets congested leading to a situation of lack of space to accommodate incoming goods. Another reason for the warehouse congestions are the goods that is stored in the warehouse due to incorrect documentation.

Misrouting of high value goods is another problem found out. High value goods are extremely important and if lost or not arrived on time can lead to huge monetary claims and claims for loss of sale by the customer. There are also import restrictions posed by the UAE government. Emirates also face competition from other Airline companies like Eithad, Qatar Airways, Lufthansa etc.

**Recommendations**

In order to reduce the cases of mis-routing of high value commodities, outstations and build up staff must be properly taught and trained the different country codes while entering the information in the system and documents.

To tackle the cases of damaged products, Emirates staff must be thoroughly trained on loading techniques and they should be extremely vigilant while loading the commodities into the Unit Load Devices (ULD's).

.Emirates should consider investing in establishing another warehouse for their cargo.

Emirates Dubai office/ team leaders have to implement a collaboration strategy with their counterpart offices in different parts of the world i.e. effective policy and procedures.

The company should cultivate a culture of continuous improvement in their logistics operations.

	Positive	Negative
<b>Internal Factors</b>	<b>STRENGTHS</b> - Strong financial position and Worldwide brand recognition - Good relationships with clients - Good service delivery - Integrated teamwork skills - Good problem solving skills caused by out station. Sophisticated and competent procedures for the efficient management of logistics supply chain.	<b>WEAKNESSES</b> - Shortage of labor - Shortage of material resources like LSP's - Goods arriving in damaged condition - Some outstations do not follow the HUB standards and procedures. - Increase in overhead expenses - Unpredictable increase in inventory rise. - Inability to accurately forecast supplier's stability.
	<b>EXTERNAL FACTORS</b> - Generating more sales from potential as well as existing markets and more penetration in emerging economies can boost its operation. - Building more of automated and sophisticated warehouses. - Growth and diversification of the organizations international networks and service offerings	<b>THREATS</b> - Competition posed by other airlines like Qatar, Oman airlines etc. (% of volume moved via Emirates reduces) - Legal and environmental changes.

**Fig. 2. shows the SWOT ANALYSIS for Emirates / Skycargo airline**

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