

Marketing Air Cargo and Courier Services in Oman as a Niche Logistics Market Segment and Delving into the Complex Intricacies of this High-Value Industry

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ABSTRACT

This research reflects on marketing air cargo and courier services in Oman as a niche logistics market segment and delves into the complex intricacies of this high-value industry. The study used the conceptual research method, where rich, diverse, and relevant literature reviews were collected and analysed to reach sensible factual conclusions on gaps in knowledge on marketing air cargo operations in Oman. The air cargo function was well-developed and made a huge contribution to the fiscus and the Oman economy. This area of air cargo research was a virgin territory in Oman, and much research is necessary. The findings revealed that further improvements in Oman to march GCC competitors, such as the UAE, Qatar, and Saudi Arabia, in air cargo operations were required. It was also established that it was not easy to attract Omanis to these air cargo marketing and operations jobs, especially female candidates, because of odd working hours as well as the need to travel regularly and be away from home for some periods at times. It was found that critical skills were in short supply, especially local top-grade skills, customs and investment rules and regulations, and infrastructure in Oman needed to be improved, as well as processing and turnaround time, to match best practices in the GCC and globally. Delayed deliveries and incorrect documentation were sometimes experienced due to customs, transport, and loading delays. The Covid 19 pandemic has brought several interesting lessons to the study of cargo movements. The sea freight was hit by a critical shortage of containers, and the sea cargo cost was rocked (Din et al., 2021). Oman has undoubtedly made great strides and is marching on for stardom and big achievements. The findings revealed that air cargo operations and marketing were hands-on and required many years of experience, and one excelled after going through the mill rather than straight from college. Some type of air cargo logistics apprenticeship was necessary for one to establish in the upper and middle echelons of the industry. This study highlights the importance of developing cargo centres with proper handling equipment and staff that can enhance their utilisation. The industry is too delicate and sensitive, and subject to many rules and regulations relating to health and safety, security, environmental protection, and anti-smuggling measures. Other researchers can conduct further research using longitudinal studies and possibly involving every key airport in the country. Two of the researchers are expatriate academics from Zimbabwe and would want

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their own home country, Zimbabwe, to learn the same lessons that Oman is learning so that Zimbabwe can further develop its own air cargo and courier industry. One researcher was an Oman citizen, an industrialist, and a part-time academic. This team of three researchers worked hard to put up this unique paper in an area that largely remained untouched and unexplored in both Oman and Zimbabwe. The Covid 19 pandemic has brought several interesting lessons to the study of cargo movements. The sea freight was hit by a critical shortage of containers, and the sea cargo cost was rocked (Din et al., 2021).

Key words: Customs, Competitiveness, Efficiency, Air Freight, Courier

BACKGROUND AND STATEMENT OF THE RESEARCH PROBLEM

This study contributes to theory building in the Theory of Marketing and the Theory of Operations Management and Constraints, focusing on marketing air cargo and courier operations. These theories state that marketing aims to maximise market share and make customers happy, whereas operations theory states that efficiency and maximising productivity are central to business success. Business constraints are felt in either inputs or outputs, thus making the system imperfect or inefficient. These constraints must be identified and managed carefully to achieve optimum performance and avoid glut, overstocking, or shortages. The constraints are reflected in the form of troughs in supply or fluctuating demand for products, leading to shortages or oversupply (bullwhip effect). This study explores gaps in knowledge regarding these theories as a contribution to knowledge. Marketing theory is examined in this study as a support function for air cargo operations. Market orientation is a company philosophy that focuses on discovering and meeting customers' needs and desires through its product mix. A basic marketing theory states that, to maximise sales, a company must position its products or services in the marketplace in such a way that consumers believe they need a particular product for a service or that a product or service they need has a particular benefit. This research will explore best practices through a literature review from across the world and see where Oman is excelling and where it needs to improve and the key lessons it needs to learn from this research for marketing and operating air cargo industry development. One may sum up the challenges faced in the air freight industry as follows: not using technology, not having a team of freight operations that are highly skilled and experienced, protection and security of goods, operation rules for the employees not being followed, insufficient capacity in all respects (capital, equipment, human capital, warehouse space, competent management, trucks, and global networks), and common challenges in the freight industry, such as bad weather, delays, strong winds, rain, and storm disrupts air freight operations. Three aspects always haunt air freight operations: safe handling of goods, proper storage of goods, and lastly to keep monitoring of the flight schedule (Supply Chain Solutions, 2021). The common KPIs in the airfreight business were on-time delivery, on-time pickup, average wait time, average freight cost per ton shipped, ratio of value-added costs (such as packaging, handling, and insurance), quote conversion ratio (quotations that become real orders), and finally tonne-kilometres (sustainability and carbon emissions). There are also other obvious issues, such as customer satisfaction, repeat business, customer loyalty, and customer time value, which are key reasons for the existence of any business.

The purpose of this research is to contribute to the success of Oman Vision 2040 and diversification through the development of logistics services with a focus on air cargo and courier operations, and to advance critical ideas to drive this plan forward. Oman is working to establish a solid logistics industry throughout the country as part of Oman's Logistics Strategy which is part of Oman Vision 2040, to diversify the Oman economy and industry beyond the oil-driven model to a knowledge society insulated from mostly reliance on oil income. The country has achieved phenomenal and admirable progress in air cargo and

courier business, but it still needs to be done. As the economy progresses, the country faces many deep-seated challenges which need to be solved. Some of the challenges are the critical shortage of locally skilled labour in the supply chain and marketing, the absence of a railway system (still on the drawing board), infrastructure deficiencies (opening and connecting the whole country for business is still work-in-progress), connectivity, slow adoption of artificial intelligence-driven systems, customs efficiency, quality Internet connectivity challenges in some remote areas, the appetite of staying in Muscat by most Omanis which makes it difficult to attract them to other new smaller logistics clusters such as Duqm and Ibri, the slow operationalisation of the One-Stop-Shop Concept throughout the country, and the difficulties of getting female candidates to work in air cargo and courier operations due to its odd working hours (including weekends and evenings, as air cargo operations are not an 8.00-5.00 pm job as cargo moves non-stop 24 hours a day, 7 days a week, and 365 days a year). The logistics sector is one of the most difficult industries globally as it links firms, governments, society, and nations in a delicate matrix of trade, politics, and economics. Moreover, Oman will compete for investment, markets, and talent with regional powerhouses, such as the United Arab Emirates and Saudi Arabia in the GCC, as well as facing global competition. This research highlights the correct policies, alternatives, opportunities, risks, and pitfalls for air cargo and courier operators for marketing excellence in government, industry, and society. An imperfect system causes losses, increases costs, compromises efficiency, creates dislocations, and upsets customers, suppliers, employees, and other stakeholders. However, this is not good for businesses. Every year, the country needs to create tens of thousands of new jobs for young Omanis to enter the job market from high school and college. Air cargo and courier operations are one of the cocktails of panacea in rapid employment creation, as already proven by excellent work being done by Oman Airports and ASYAD in addition to other Oman Vision 2040 players. Only good systems generate profits and maximise industry growth and competitiveness. Challenges that are better known are easier to address than those which remain opaque. Therefore, this research is required to shed light on key issues and improve the operations. Given the unity of purpose in Oman, nothing is impossible. This study contributes critical research to this national ethos and public discourse to fill a critical gap in knowledge that remained unfilled yet was critical for nation building, economic development, and GDP growth through logistics. Ask any politicians nowadays what their top priorities and worries are, and the conversation will not be complete without mentioning employment creation. That is why Europe and the USA faced an acute immigration crisis because many 3rd world countries had not created enough jobs, and where they did, these were not as rewarding, as was the case in the developed world. Even where salaries did match the Western world, quality of life would always lag behind the developed world in most sections of the country. This research contributes critical ideas for driving and maximising marketing performance and best practices as well as maximising employment in the air cargo and courier industries in Oman and beyond.

OBJECTIVES AND RESEARCH QUESTIONS

The Objectives of this Research

- a. Establish industry status and issues affecting air cargo and courier businesses and their customers in Oman
- b. Establish global best practices in air cargo and courier marketing and operations.
- c. Identify Oman's position in the world of air cargo and courier marketing and operations
- d. Establish the types of institutions and practices required for Oman to excel in air cargo and courier marketing and operations.

- e. Recommend what needs to be done for Oman air cargo and courier businesses to maximise marketing performance and exploit the opportunities available to them.

The Research Questions

- a. What are the industry statuses and issues affecting air cargo and courier businesses and their customers in Oman?
- b. What are the best global practices in air cargo and courier marketing and operation?
- c. What is Oman's position in the world of air cargo and courier marketing and operation?
- d. Establish the types of institutions and practices required for Oman to excel in air cargo and courier marketing and operations.
- e. Recommend what needs to be done for Oman air cargo and courier businesses to maximise marketing performance and exploit the opportunities available to them.

RESEARCH METHODOLOGY

A research design is based on a comprehensive plan for data collection in an empirical research project, and the design's quality was measured by checking internal validity, external validity, construct validity, and statistical conclusion validity, where applicable, (Bhattacharjee, 2012:35-37). Conceptual research was used in this study. This paper is conceptual in nature and is based on a review of the existing literature on marketing air cargo operations globally for lessons for Oman to learn and fine-tune their systems for best practices, efficiency, profitability, industry growth, and excellence in service. Conceptual research is defined as a methodology in which research is conducted by observing and analysing existing information on a given topic. Conceptual research does not involve practical experimentation. This is related to the abstract concepts and ideas. Philosophers have long used conceptual research to develop new theories or to interpret existing theories in different ways. Research papers from various sources were used, including books, journals, government reports, conference papers, industry reports, professional association reports, and research institutes. From these studies, a conceptual framework for marketing cargo services was developed.

Marketing and operations theories have helped guide companies and governments for the age and remain valid. They first developed the supply chain, then cascaded to other disciplines, and described the constraints or pain points that affected goods service deliveries.

Watertight reliability and validity measures were employed as expected by academic conventions in this kind of research. Thematic analysis has been used here to group related issues and to conduct justice. Reliability was defined as the degree to which the research instruments were free from error and therefore yielded consistent results (Gupta, 2011:132). Validity is the ability of a measuring instrument to measure what is intended (Gupta, 2011:133). Guba (2010:91) described trustworthiness as the process of establishing the validity and reliability of the research. The research results would be trustworthy when participants' experiences are accurately represented (Murthy & Bhojanna, 2010:243). Trustworthiness in qualitative research is made up of four elements, which could be paralleled in quantitative research: credibility (internal validity), dependability (reliability), transferability (external validity), and confirmability (objectivity), Guba (2010:91). These criteria were used to ensure the trustworthiness of the research results.

Inter-rater reliability and content validation were conducted for this qualitative study. Yin (2014:45) gave researchers guidelines to assure validity and reliability by:

- i. using multiple sources of evidence
- ii. establishing chain of evidence
- iii. doing pattern matching
- iv. addressing rival explanations

- v. using theory in single cases (like this one)
- vi. using case study protocol
- vii. developing case study database

These were the safeguards used by researchers to safeguard validity and reliability. Snow and Anderson (cited in Feagin, Orum, and Sjoberg, 1991:20-50) asserted that triangulation could occur with data, investigators, theories, and methodologies. Stake (1995:70-90) stated that the protocols used to ensure accuracy and alternative explanations were called triangulation. The need for triangulation arose from an ethical need to confirm the validity of the processes.

Fusch et al. (2018:19) identified four types of triangulation: Data source triangulation when the researcher looks for the data to remain the same in different contexts; Investigator triangulation, when several investigators examine the same phenomenon; Theory triangulation, when investigators with different viewpoints interpret the same results; and Methodological triangulation when one approach is followed by another, to increase confidence in the interpretation.

LITERATURE REVIEW

This section explores various discussions in the literature regarding the air cargo industry and groups these issues into rich thematic sections for contradictions, corroboration, and exhaustion of facts. The literature review provides an in-depth analysis of the air cargo marketing and operations issues affecting air cargo and courier services, air cargo best practices, global ranking of air cargo, and maximisation of air cargo marketing performance. The next section presents the issues affecting air cargo and courier services. A substantial number of quotations from journals, books, and other sources follow, which helps illuminate the potential problems, causes, realities, and solutions thereof. Trowler (2015:25-26) defended the use of theory as a way of lifting research above mere market research or journalism, and allowing the researcher to step outside generally accepted ways of seeing the social world and said literature review served six purposes:

- a. It uses a set of interconnected concepts to classify the components of a system and their relationship.
- b. It was deployed to develop a set of systematically and logically related propositions that depicted certain aspects of the operation of the world.
- c. They claimed to provide an explanation for a range of phenomena by illuminating causal connections.
- d. Theory should provide predictions that reduce uncertainty regarding the outcome of a specific set of conditions.
- e. Theory helped locate local social processes in wider structures, because it was those which lend predictability to the social world; and finally
- f. Theory-guided research interventions help define research problems and appropriate research designs for investigation.

This was where theory led to the closing of gaps and contradictions, the creation of new theories, and the refinement of existing ones, thus contributing to knowledge and academia. The literature was rife with half-truths, popular myths, contradictions, poorly designed studies, misinterpreted findings (Sanden & Egbert, 2014:94), and conclusions soaked in personal biases and deeply held assumptions of researchers. This was a warning of just accepting everything in the literature and the need for critique and triangulation of literature sources.

Issues Affecting Air Cargo and Courier Services

It is ironic that air cargo in Oman still struggles with several issues and challenges compared to its regional counterparts. The strategic location of Oman in the Global supply chain and in the Middle East calls for a radical change in the way air cargo is handled and managed. Rapid changes in the global supply chain due to the Covid 19 pandemic are outstripping the capabilities of air cargo not only in Oman but also globally. The Covid 19 pandemic has brought several interesting lessons to the study of cargo movements. The sea freight was hit by a critical shortage of containers, and the sea cargo cost was rocked (Din et al., 2021). This was because of the monopoly enjoyed by India and China in production. This became an eye-opener to logisticians and academics to realise the need to enhance air cargo operations, especially in Oman. This remains a solution to stifle the ever-increasing global supply chain. New players, such as the Sultanate of Oman (with its strategic role in the Middle East), need to come in and offer better connectivity of air cargo to the region and world in particular.

The cargo industry is volatile, as witnessed by the market disruption which occurred during the 2008/2009 financial crisis (Xu et al., 2021). The 2019 pandemic came into another wake-up call for global supply chain actors to have capabilities to forecast supply chain movements. According to the AITA (2020), air cargo is key to global economic development. It is credited with creating millions of jobs with the ability to deliver products at competitive prices, accounting for \$6 trillion which is equivalent to 35% of world trade (European Parliament, 2020). This implies that assuming that Sultanate Oman revamps its air cargo operations, it will be a game changer in contributing to Oman Vision 2040. The critical shortage of consumer goods and important industrial products has resulted in many customers demanding better and faster delivery systems. Air cargo remains an imminent solution to this dilemma. The use of airborne cargo is expected to grow by 64% per year over the next 20 years (Hsu et al., 2009). This presents an opportunity for new cargo players to grow and boost their competitive advantages.

Air cargo is not only credited for its convenience but also as the lifeline of landlocked countries, small islands, and developing countries (Meng et al., 2010). This is due to aviation speed and reliability during emergencies. New entrants need to utilise the niche market. As a new entrant in the field of air cargo, airlines can connect distant markets and global supply chains (Wang, 2007).

Owing to the Covid, 19 pandemic, passenger market impacts have affected air cargo. In September 2020, there was a significant change in global air cargo owing to movement reductions (Boeing, 2021). However, this differed for airlines with express and charter carriers. These airlines saw increases in volume and revenue. Accelerated e-commerce diffusion due to the Covid-19 disruptions has seen market growth in these segments. The table below provides some insights into near-term freighter demand boosted by the loss of wide-body planes lower hold capacity (Boeing, 2020).

Near-term freighter demand boosted by loss of widebody passenger lower-hold capacity

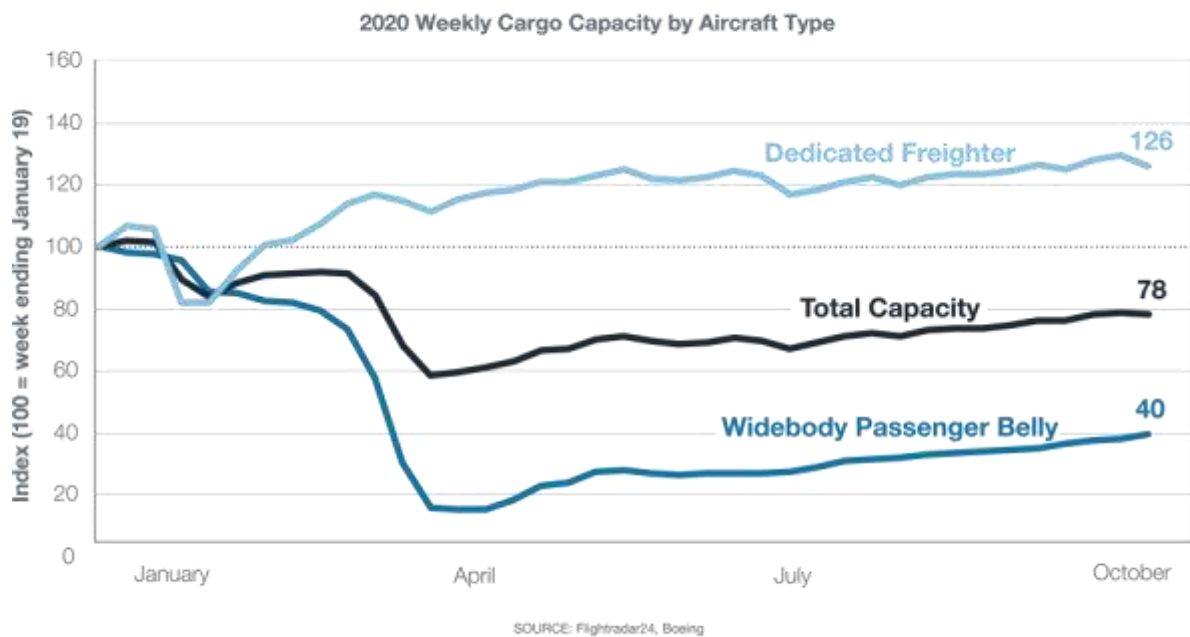


Figure 1: Near-term freighter demand

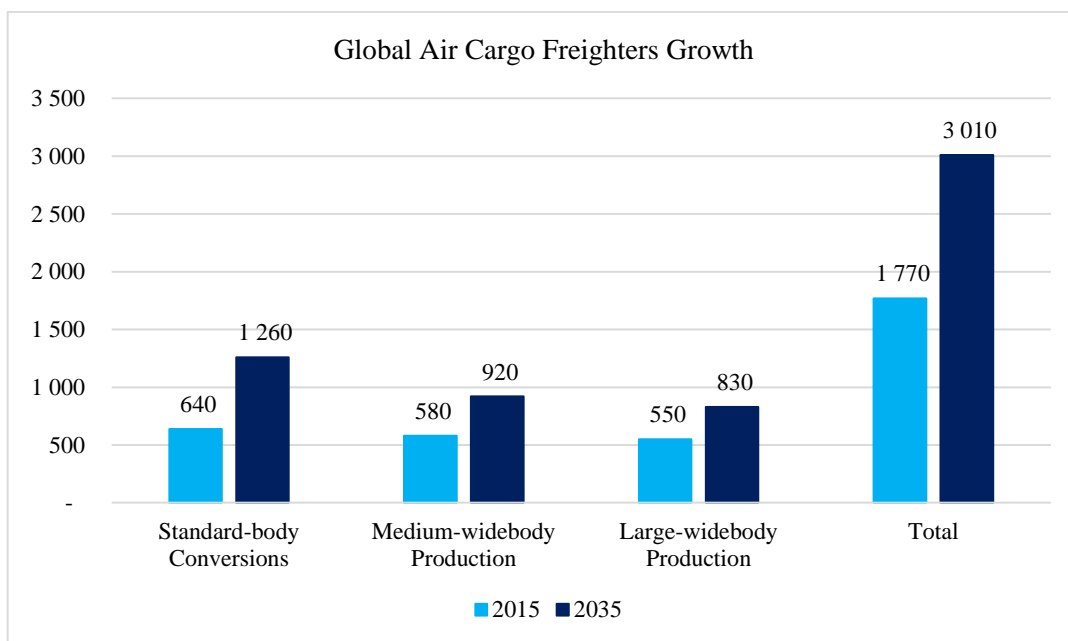


Figure 2: Global air freighters growth

Source: Boeing and IATA Reports

As the air cargo business grows, demand for wider cargo planes is increasing. By the year 2035, air cargo planes would grow by over 70%, reaching over 3,000 cargo planes.

Asian freighters continue to experience exponential growth in air cargo despite Covid 19 disruptions. The Chinese remain the percenters, with markets expanding by 5.8% (Statista 2021). The graph below provides insights into different annual growth rates.

East Asia markets will continue to lead industry growth

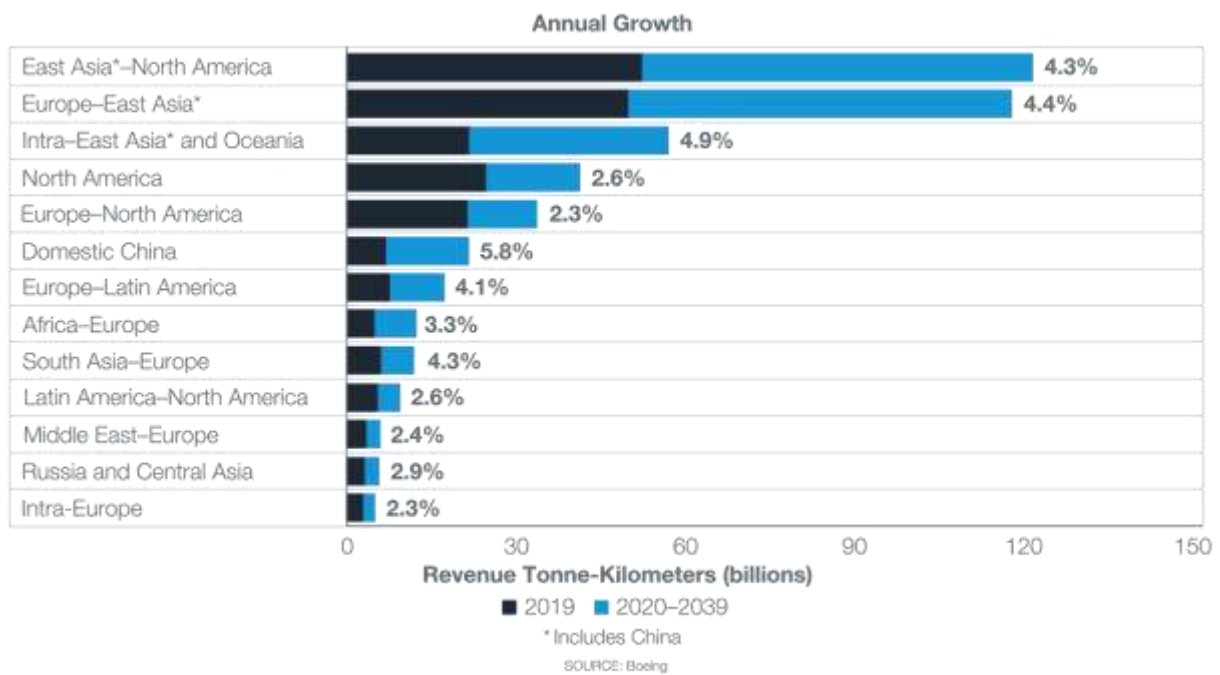


Figure 3: East Asia markets

Despite these global supply chain disruptions, the future of air cargo transport remains bright. Boeing (2020) predicts that the global supply chain will overcome the market disruption and air-cargo is expected to grow in the next two decades (2020-2040). By 2039, 2,430 freighters are forecast to be delivered, with approximately half replacing retiring airplanes and the remainder needed to meet projected traffic growth’ (Boeing, 2020; Transportation Research Board, 2021). Interesting to note is that the air cargo industry is that industry is open to new entrants with the capacity to boost competition and capacity to increase the ever-increasing demand of air-cargo.

The European Parliament (2020) notes that grave concerns the unprecedented impact of air transport in Europe and the rest of the world. Due to flight bans and other Covid 19 disruptions, few major cities remained open for scheduled humanitarian, repatriation, and cargo flights (Center of Intelligence Supply Networks, 2021). The drastic fall in air cargo weakened most airlines, which had to be adjusted by occasionally carrying cargo in passage compartments(Xu et al., 2021). Unparalleled adjustments were incorporated in the airline business. These include job cuts, reduced work patterns, and wage reduction. The financial impact of the Covid 19 disruption will limit the growth of air cargo in the next five to ten years (2020-2025; Asteelflash, 2021; DHL, 2021).

Global air cargo continues to play a significant role in the transportation of time-sensitive, high-value products. Global air cargo constitutes more than 35% of the total value of global trade, and comprises only 1% of the total volume. In 2021, the value of air cargo has reached a staggering \$6.8 trillion, approximately \$18.6 billion every day.

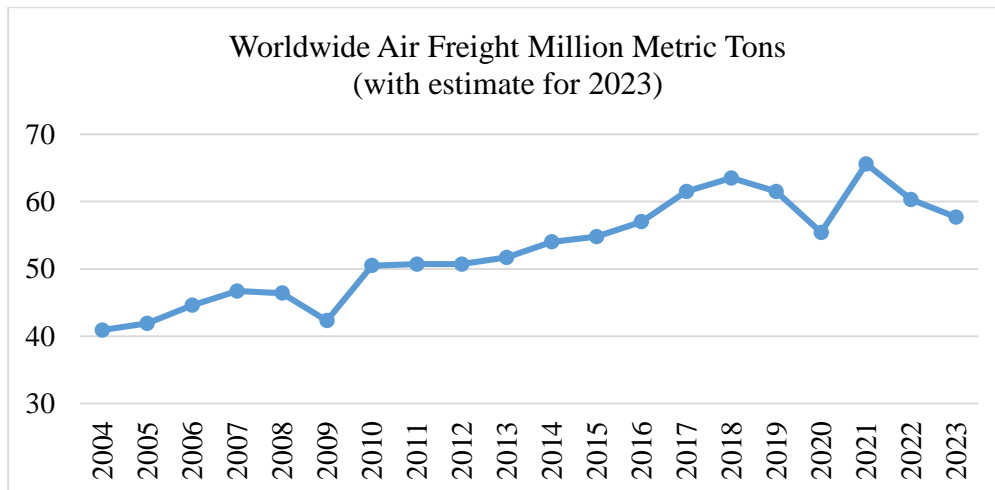


Figure 4: World Air Freight metric tons

Sources of Data: IATA and Statistica

Air-Cargo Best Practices

Air cargo operates under international best practices to ensure uniformity of supply chain processes. The delivery of goods at the airport, loading the plane and unloading at the destination, and handover to a freight forwarder are some of the critical steps to ensure best practices in the industry (Budiarto et al., 2018). It is in the interest of air cargo best practices that the airline Cargo Master Operating Plan should outline the processes and sub-processes involved along the supply chain (Maynard et al., 2015). These processes should fall within the dictates of international practice. Air Cargo operations need to comply with the operator and IATA regulations, as well as in line with the export and import regulations in which cargo will pass through (Maynard et al., 2015; Budiarto et al., 2018).

International best practices of air cargo planning rely on the development of cargo facilities and the continuous improvement of existing infrastructure to suit global practices (Rajiv Nayan, 2021). To comply with the international best practice for air cargo, there is a need for quality of enforcement by respective governments because weak enforcement of regulation does have a ripple effect on trade. Sound logistics approaches require a strategic approach to transport goods along the supply chain (International Air Transport Association 2021; World Customs Organization, 2021). The need to adopt a strategic approach for air cargo operations cannot be underestimated. Continuous improvement initiatives that integrate supply chain links to eliminate duplication and minimise expenses are some of the expectations of the industry (National Academic Press, 2020). The development of integrated networks through the incorporation of the third component is a key requirement in the continuous improvement process. Third-party logistics remains the backbone of air cargo through its provision of effective means, coupled with the right transportation strategy. Air cargo management requires continuous engagement with different parties so that you are kept abreast of the changing rules and regulations.

Customs compliance is detrimental to air cargo management. Importers and exporters need to be vigilant and keep track of developments to hedge against the risks of monetary loss from penalties, seizures, and forfeiture. Apart from customs compliance, it remains relevant to note that air cargo best practices rely upon compliance with international health and safety best practices. Empirical research indicates that air cargo accidents are common in air cargo operations (Yurkanskiy, 2016). Supply chain safety compliance through the maintenance of safety codes, safety policies, sustainability, and environmental concerns is a key issue in air cargo best practices (Morrell, 2019).

Enhancing air cargo management activities is the goal of all supply chain players. According to the International Air Transport Association (2019, p. 4), white papers that support innovation in cargo operation realised that, to improve compliance, air cargo needs to come up with cost-efficient equipment and methodologies to "automatically screen all types and sizes of goods, including dangerous goods, which are simple to build into operation and comply with regulatory certification. The white paper realised that to improve air cargo global compliance to standards, several radical changes need to be made, including the development of relevant standards, guidelines, and partnerships for the safe integration of this new branch of civil aviation into the commercial air space to open new opportunities for the air cargo industry. White proposed the adoption of technology through the use of automated vehicles at the airport, improving processing time and worker satisfaction, and developing next-generation smart, connected services that create transparency in cargo handling services and quality. This will also involve enhancing handling capabilities across industries. There is no doubt that radical changes need to be incorporated into air cargo so that cargo can be moved with a combination of technology and data. This not only improves the movement of goods, but also guarantees the security of cargo along the supply chain (International Air Cargo Association, 2021; International Air Transport Association, n.d.).

Air Cargo and Courier Marketing and Operations

In 2019, the freight market was valued at \$270. 2 billion and projections indicate that by 2027, it will reach 376.8 billion. However, owing to the pandemic, the logistics industry has witnessed a decline in market projections. Air Cargo has implemented a wide number of strategies to preserve its market presence by implementing airline chartering and airline transformation. The pandemic seems to have ended, and air cargo is projected to experience market growth of approximately 4 % per annum in the next 20 years. The air cargo market will be stimulated by an increase in e-commerce business which is expected to reach \$10 trillion by 2022.

The air cargo market is segmented based on service, destination, end use, and region. Service is divided into freight, express, mail, and other services. The market is divided into domestic and international, and private and commercial markets. Air cargo is still dominated by a few players because of the cost factor involved in transforming ordinary airports to handle cargo. The high cost of establishing an air cargo hub, coupled with the effects of Covid 19 has created barriers to new entrants. According to DHL (2021), demand for air cargo is still increasing in different sectors, such as the high-tech, automotive, and pharmaceutical sectors. Due to the Covid 19 pandemic and the critical container shortage since 2019 (El-Din et al., 2021), it is hoped that air cargo can be the only solution to suppress the global market for products. They hope that business will return to normalcy and more belly capacity will be added in 2022 as Covid restrictions are eased.

According to Knowler (2021) Maersk and CMA have acquired new and leased aircraft to allow the carrier to add controlled air freight capacity for customers, in line with the integrated logistic strategy. Recognizing the importance of air cargo and the global shortage of products air cargo airports are allocating financial and professional resources to infrastructure development pinning on high hopes of significant market growth. This creates a big opportunity for new market entrance to enter the market when all players come from financial stress. Farooq et al., (2021), alludes that to enhance air cargo operations there is a need to carry out an extensive market assessment, especially for new players. This process encompasses the assessment of airport strengths and weaknesses, and the identification of potential cargo markets (Transportation Research Board, 2021).

The pandemic brought about a significant change in the type of parcels carried by air cargo. There has been an increase in special commodities, a few letters, and many parcels.

This is a clear illustration of the dramatic shift toward air cargo. In comparison, the transportation of letters decreased from 340 to 328 billion, whereas parcels grew from 6.7 to 7.4 billion. This calls for the need to assess the markets to which these parcels are going so that new entrants and small players understand the sustainability of the market. It is relevant to note that new entrants in air cargo need to assess opportunities and cargo flows in their regions and determine cargo shipments that originate in and are destined for or transit through the sea.

Air cargo market assessment requires an extensive trend analysis and description of the respective roles of airports' air services as they relate to air cargo. They need to understand the types of goods shipped via air, the types of carriers involved in the shipping process, and the geographic areas serviced by airports in the region. The Appreciation for regional and international cargo movements remains critical for both new and existing entrants. Historical data can provide an explicit understanding of commodity flows at airports and throughout the region. These data are important for planning and forecasting purposes.

According to the Airport Council International (2021), demand forecasting remains a key aspect of air cargo management. The demand focus facilitates an understanding of air cargo volumes and commodity flows. Such data sources include freight and mail tonnage carriers, aircraft types, reports, and data collected by governments. Research plays an important role in understanding the air cargo market activities and growth opportunities. Airlines that have an ambitious plan to engage in air cargo should take note of expanding airport facilities that require investments in time and resources to meet demand.

Time and financial resources are required to evaluate the catchment area, regional competitors, and airport positions in the region (Morreil & Klein, 2019). Understanding this business concept is critical in formulating appropriate marketing strategies. Each airline should be in a position to know its position in different cargo and passenger markets because air cargo is larger than the passenger market (Chao et al., 2013). The origins and destinations of airports in the region, types of freight being shipped, and levels of available air services are important factors for understanding the air cargo market or catchment area.

The airline needs to understand that air cargo markets are dynamic and that seasonal temperatures can impact takeoff weights in aircraft (Transportation Research Board, 2021). It is therefore important to note that venturing into the air cargo business requires a closer analysis of airport positioning to grow cargo. The existence of well-equipped air cargo infrastructure in a region has a triple effect on the economy. The considerable infrastructure for an airport should include good rail, a strong forwarder community, and other related aspects which are critical in upholding the market. Many countries assume that having a runway is sufficient to move cargo; however, aspects such as the physical capacity of the airport, consumption and production markets, roadway access, redistribution capacity by air or land, aircraft capacity, and completing airports are vital (Chao et al., 2013; Hsu et al., 2009; Morreil & Klein, 2019).

The success of the air cargo business requires a comprehensive marketing plan which outlines a specific marketing plan with specific objectives and strategies. A comprehensive marketing plan should incorporate internal and external factors into well-designed marketing programs to raise awareness of their existence and influence the target audience (Huang & Hsu, 2016; Wang, 2007).

Oman Airports – Air Cargo Performance

Oman has developed and upgraded air cargo buildings in two major airports: Muscat International Airport and Salalah Airport. The following are the analyses and performance of these major airports.

The Muscat International Airport’s new terminal opened in 2018, with a capacity of approximately 20 million passengers. In 2019, the airport handled 16 million passengers, which was the highest number of passengers. The air cargo handled by the airport reaches 235 K tons. In 2022, the rebound from the Covid pandemic, the air cargo reached 77% of the 2019 volumes.

For Salalah Airport cargo volumes, air cargo volume reached its highest in 2017. The rebound in 2022 reached approximately 70% of that in 2019. The pre-pandemic figures show a decline in air cargo at Salalah Airport. Special attention should be paid to how to develop air cargo marketing for Muscat and Salalah airports.

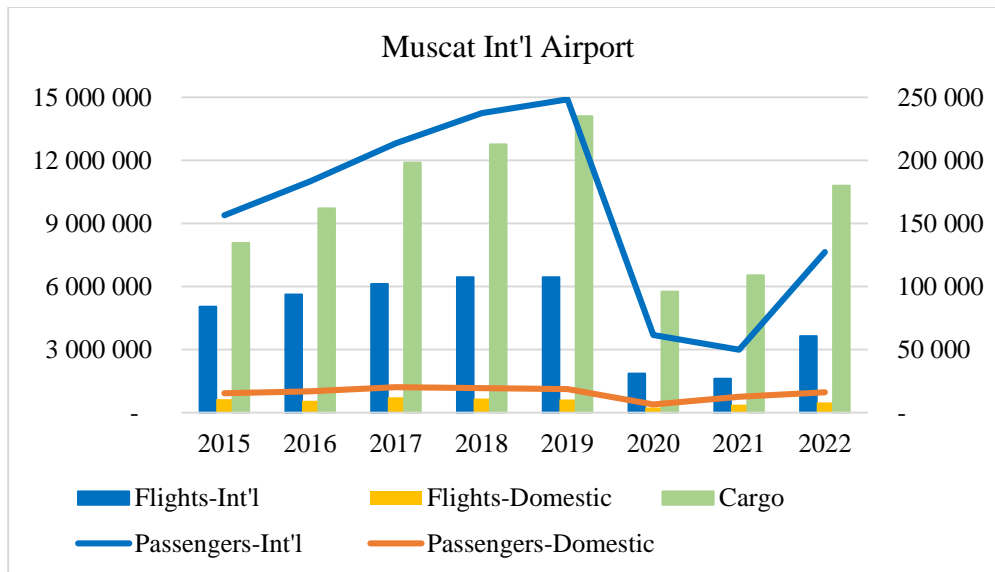


Figure 5: Muscat International Airport flights

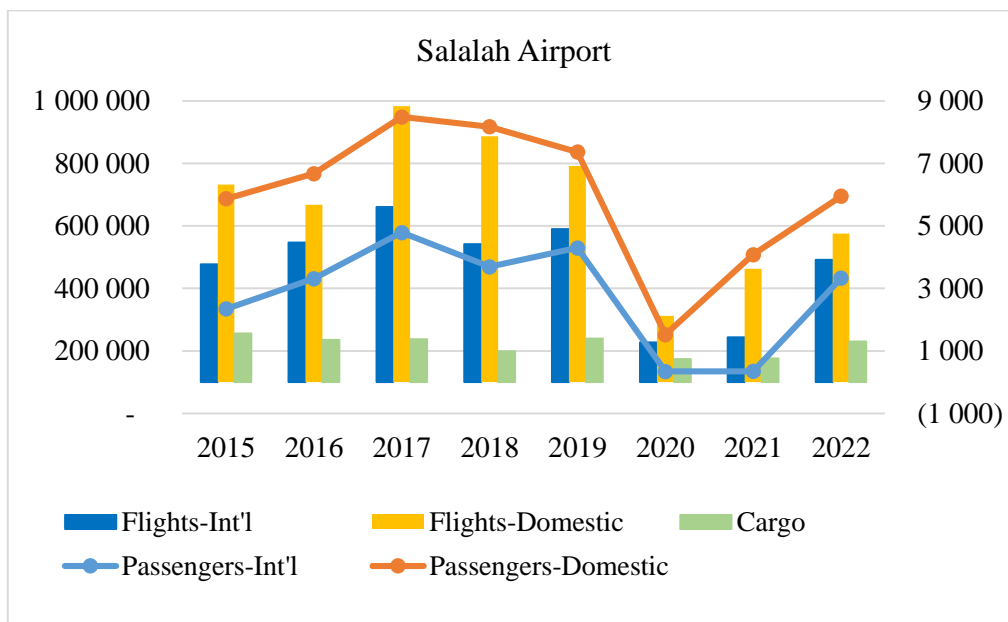


Figure 6: Salalah International Airport flights

Sources of Data: Oman Aviation Authority, Oman Airport, Oman Air Reports

Oman Air is Oman’s national airline and plays a major role in the air cargo volume handled by Oman airports. Oman Air has experienced a growth trend in cargo handling since 2015. Oman plans to have its first two freighters by the end of 2023.

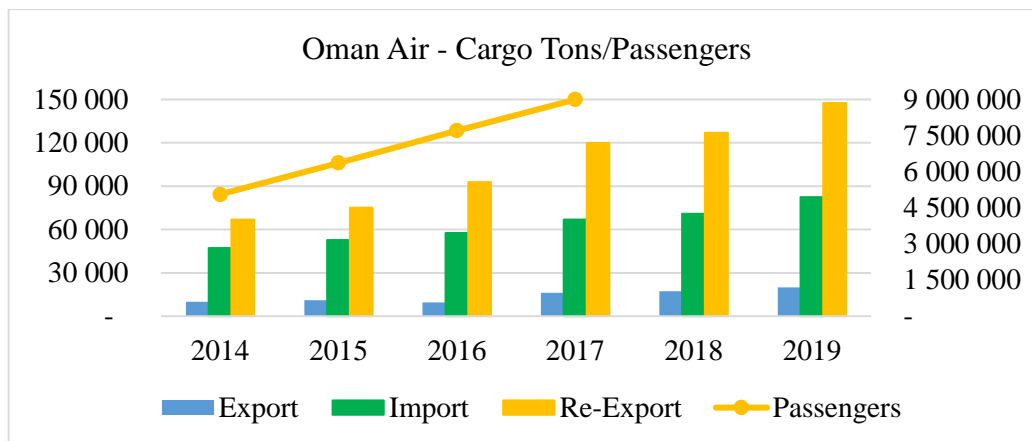


Figure 7: Oman air cargo tons/passengers

Sources of Data: Oman Aviation Authority, Oman Airport, Oman Air Reports

Oman Gender issues – Female Employee’s Challenges

Female employees in general had peculiar challenges in Oman, including difficulties accepting long working hours, working late, odd hours and after hours, and working weekends and public holidays. There were many restrictions on girls and women that did not apply to boys or men for religious and cultural reasons. Female employees were said to be very cooperative at work and were good team players, who boded well for women. Since 2000, Oman has seen more women breaking the glass ceiling and taking up these jobs which required odd working hours, as one can see at places like Muscat International Airport 24 hours every day. However, corporate planners must seriously consider this reality to avoid disappointments.

The industry needs to understand the nature of women and hence try to fit them where they fit and can contribute to operations and other activities.

THEORETICAL AND CONCEPTUAL FRAMEWORK

The two theories under review were Marketing Theory and the Operations Management Theory. Marketing Theory states that marketing aims to maximise market share, make customers happy, and generate repeat business, while Operations Management Theory states that efficiency and maximising productivity are central to business success. Business constraints are felt in either inputs or outputs, thus making the system imperfect or inefficient. These constraints must be identified and managed carefully to achieve optimum performance and avoid glut, overstocking, or shortages. The constraints are reflected in the form of troughs in supply or fluctuating demand for products, leading to shortages or oversupply (bullwhip effect). Correctly applying these theories to business would lead to efficiency, productivity, customer happiness, market share increase, competitiveness, repeat business, success, and profitability. This study explores gaps in knowledge regarding the application of these theories in Oman as a contribution to knowledge. Marketing theory is examined in this study as a support function for air cargo operations.

Market orientation is a company philosophy that focuses on discovering and meeting customers’ needs and desires through its product mix. A basic marketing theory states that, to maximise sales, a company must position its products or services in the marketplace in such a way that consumers believe they need a particular product for a service or that a product or service they need has a particular benefit.

REQUIREMENTS FOR AIR CARGO ESTABLISHMENT AND LESSONS IN THIS RESEARCH

The requirements for establishing air cargo go beyond the runway. Air-cargo facilities must have the capacity to accommodate both passengers and cargo (Britannica, 2021). An airport needs to be in a position to adequately cope with the predicted inflow of cargo and passengers. Considerations should be put in place to reduce air traffic delays during landing, congestion on the runway, taxiways and aprons, crowding, and delays in terminal buildings (Britannica, 2021; Morreil & Klein, 2019).

To achieve efficient and effective operations, there is a need to understand the mix of airport careers and support services required, warehousing operations, and aeronautical infrastructure. Airports have been blamed for failing to anticipate the market mechanism (demand and supply of cargo and passengers) because of their inability to provide adequate infrastructure, lack of efficiency, and properly located air cargo facilities (International Transport Forum, 2021). The selection of an airport that conforms to international best practices remains a difficult task, especially for new entrants. This is due to the fact a lot of technical and financial resources need to be incorporated into the grand strategy. Apart from runway investments, strategic issues include the acquisition of building space, ramps, truck docks, vehicle parking, container storage, and maintenance areas.

According to the International Transport Forum (2021), the basic requirement for any standard airport is flat land, which is in a position to have runways and other supporting facilities that enhance the operations of an airport. The operational capacity of air cargo is crucial. This is determined by the number of runways used for landing and takeoff (Britannica, 2021). To accommodate the efficient flow of air cargo, a single runway is insufficient; hence, a two-runway configuration based on land availability is necessary (Partidário & Coutinho, 2011). On the basis of the availability of land airports that handle cargo, there must be more runways. According to Britannica (2021), the following diagram illustrates a typical runway for an airport:

There is a need for a macro master plan level to understand the land requirements for an air cargo facility (Hu et al., 2018). The macro plan must incorporate the combined footprint of all functional areas associated with the operation. Understanding the total land required can help planners and airport operators identify suitable areas that allow an air cargo facility to function (Drljača et al., 2020). Macro analysis serves two purposes.

- Determine the amount of space based on the anticipated volumes.
- Determine the cargo volumes versus the land available

Airport planners can utilise cargo utilisation rates established by benchmarking several cargo facilities to support their strategic-level analysis.

In addition, benchmarking helps in identifying functional space metrics, that is, the amount of space within the total site that should be allocated for a balanced air cargo facility. The general site allocations are as follows:

- 15% Air cargo buildings.
- 25% for the landside.
- 60% for the airside.

The incorporation of these metrics is critical and helps reduce airport congestion (Britannica, 2021; Morreil & Klein, 2019). The growth of e-commerce and dynamics in global business calls for airport facilities are in sync with business activities.

The air cargo utilisation rate also plays an important role in the development of required facilities. The utilization rate is measured by tonnage per square foot and the utilization rate for small airports is 0.5 to 1.0 tons per square foot while for large airports is usually 1.0 per square foot (Britannica, 2021). There is a need to compare airport utilisation

rates with comparable airports. Given the strategic planning of an air cargo facility, a macro benchmark of one ton per square meter was used.

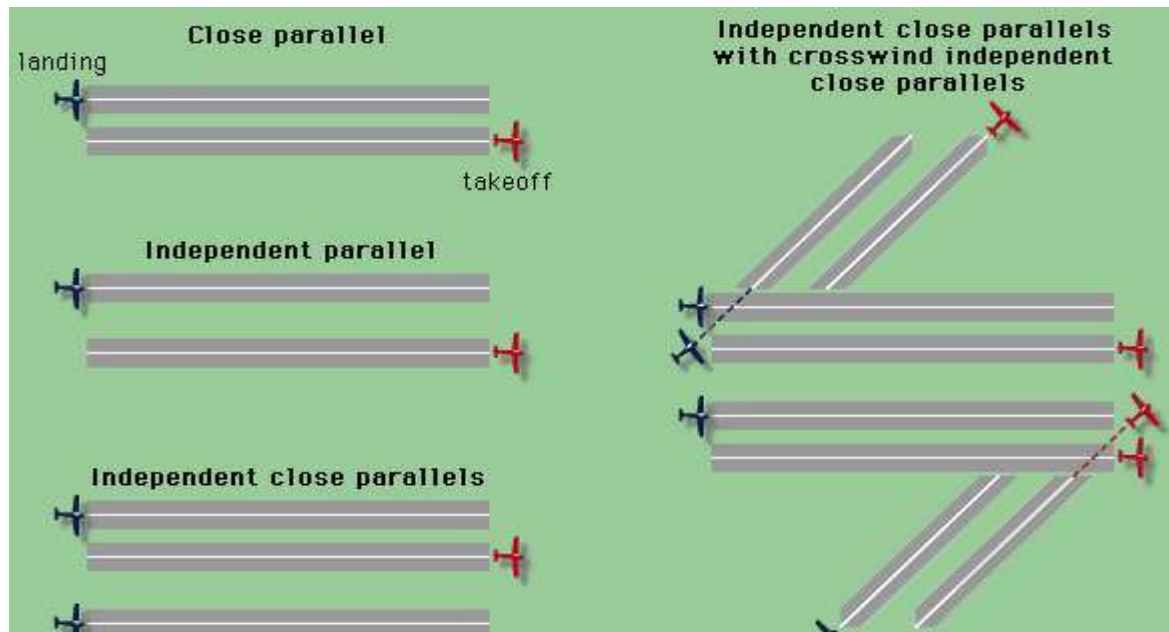


Figure 8: Runway operation utilisation

Single runway limits the operation capacity of an airport and when passenger volumes balloon to approximately 25 million per year with a combination of cargo the runway is unlikely to handle air traffic movements during peak hours (Hsu et al., 2009; Morreil & Klein, 2019; Wang, 2007).

Understanding the air cargo customer base is also a critical component for determining a suitable air cargo infrastructure (Drljača et al., 2020). It is important to note that once the air cargo customer base is determined, it is ideal to generate a portfolio of airport strengths and weaknesses to develop them into a competitive advantage and eliminate possible shortfalls (Hailey et al., 2013; Hu et al., 2018). Data obtained through research are also an important element for ascertaining the requirements of air cargo facilities. Air cargo infrastructure should incorporate both qualitative and quantitative research data to meet current and long-term projections and growth capabilities.

Security aspects now play an important role in setting up air cargo facilities (Hailey et al., 2013; Kahraman & Aydın, 2021). There is a need to consider the important aspect of cargo screening, as air cargo that is transported on passenger planes (belly cargo) needs to be screened off the airport. The incorporation of artificial intelligence needs to be considered to make screening more efficient and prevalent (Airport Council International, 2021; Kahraman & Aydın, 2021). Air cargo screening buildings should be equipped with security requirements that conform to internal security standards. US Customs Border Protection has incorporated the Air Cargo Advance Screening Program to perform risk-based screening of all air cargo (U.S. Customs and Border Protection, 2021). To carry out screening activities, there is a need for sufficient space to hold shipments if additional screening is required.

The development of an Air Cargo facility needs to co-exist with existing shipping preferences, and insightful planning should incorporate multimodal transportation aspects in any cargo infrastructure. There is a great need to integrate rail, sea, and road infrastructure into the strategy. The integration of multimodal transportation will attract large players in Air Cargo, who are in a position to move more shipments. Boeing and Airbus have introduced a new generation of wide cargo aircraft that have a dramatic impact on cargo capacity (Boeing,

2021; International Air Transport Association, n.d.). According to Rogers (2021) citing International Railways Journal Report, “Oman’s first rail system, would link the airport with the commercial hub of Ruwi, the administrative centre of Muttrah and the coastal town of Seeb, 20 km northwest of Muscat. The project would be part of Oman’s Urban Revitalisation and Regeneration Projects (URRP), which sets a framework for economic development over the next 20 years, as well as the Oman National Spatial Strategy (ONSS), the national planning strategy”. This grand strategy is a game changer that turns Oman Airports into an Air Cargo hub. Multimodal infrastructure is critical for creating a competitive and sustainable air cargo infrastructure.

Oman developed economic zones that were well-situated. For example, Sohar has deep-sea ports, a Free Zone, industrial estates, etc.

Developing the Connectivity

Oman is blessed with a unique strategic location that links the east, west, north, and south. Oman has a rich history of trade. To further enhance Oman’s position as a key logistics hub, various logistics hubs have been developed in various regions of Oman. The logistics hub consists of seaports, airports, industrial areas, Free Zones, and railways. The major logistics and cargo hubs are as follows:

Table 1: Oman logistics hub

City/Region	Airport	Sea Port	Free Zone	Industrial Estate	Dry Port
Muscat	Muscat Int’l Airport	Sultan Qaboos Port	Airport Logistics Zone	Rusayl Industrial Estate	Muscat Container Depot
Sohar	Sohar Airport	Sohar Port	Free Zone Sohar	Sohar Industrial Estate	Sohar Logistics Hub
Salalah	Salalah Airport	Port of Salalah	Salalah Free Zone	Salalah Industrial Estate	
Duqm	Duqm Airport	Port of Duqm	Duqm Special Economic Zone		

E-Commerce

E-Commerce or Electronic Commerce is a trading activity through Internet communication to sell and buy products. E-commerce is mainly driven by the internet and technology. Originally, e-commerce was started by business-to-consumer (B2C), but now covers an additional wide range of traders, including business-to-business (B2B), business-to-government (B2G), consumer-to-business (C2B), and consumer-to-consumer (C2C). Like many other countries, Oman and other GCC countries have embarked on e-commerce. The value of e-commerce trading is expected to continue growing. GCC business is expected to double by 2025, reaching \$50 billion. Oman’s market share grew and reached a GCC value of 3%. E-commerce is a vital business platform that can help improve and develop other business sectors. Thus, Oman has great potential to increase its value and market further, currently at 2%. However, Saudi Arabia and the UAE Emirates are expected to lead to growth.

Table 2: The e-commerce value by GCC country and forecast for the coming years in billions US\$

Country	2015	2020	2025
Saudi	1.8	11	21
UAE	1.9	7	17
Qatar	0.5	2	5
Kuwait	0.8	2	3.2
Bahrain	0.2	1.4	2.3
Oman	0.1	0.6	1.5
GCC	5.30	24.00	50.00

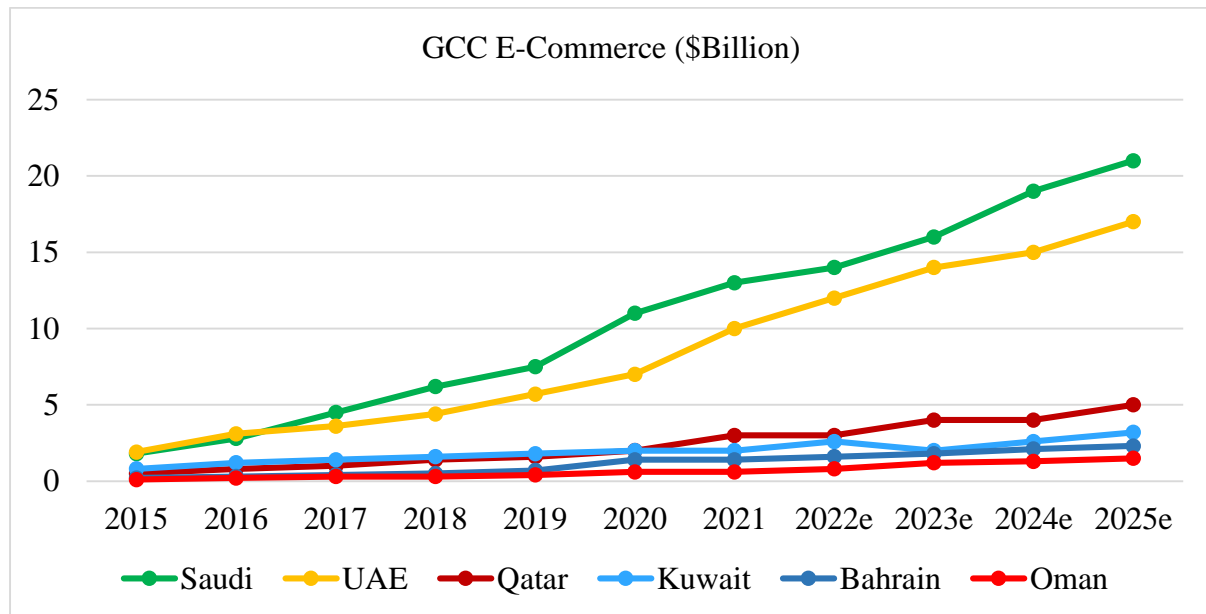


Figure 9: GCC e-commerce growth
Sources of Data: A.T. Keamey, IATA

KEY ISSUES AND FUTURE RESEARCH

The major lessons learned from the worldwide key authors mentioned in this paper which Oman can use as benchmarks, are as follows:

1. The industry demanded highly skilled sophisticated extroverts as labour, that was trained in an apprenticeship type of industrial exposure after university graduation and was a hands-on job rather than an exclusive office job.
2. The literature summarises the challenges faced in the air freight industry as follows: not using technology/artificial intelligence/big data applications fully, not having a team of freight operations that are highly skilled and experienced, protection and security of goods, operation rules for the employees not being followed, insufficient capacity in all respects (capital, equipment, human capital, warehouse space, competent management, trucks, and global networks), and common challenges in the freight industry such as bad weather, delays, strong winds, rains, and storm disrupts air freight operations. There are three aspects that always haunt air freight operations: the safety of the goods, the storage of the goods, and lastly, to keep monitoring the flight schedule. Manual systems are a sure graveyard for any company and should be done away with priority number one.
3. Marketing without Total Quality Management in your company and a backup of solid competent operations staff was an exercise of futility. Here is the conundrum besetting

many companies – high labour turnover was an enemy within and a dangerous cancer that could completely destroy your business. Human resource principles for labour retention and motivation were every company's panacea and solution, and no other. Workers were not tourists to see the beauty of companies but were equally concerned about the competitiveness of their salaries/benefits, job security, work-life balance, respect, career progression, and reward system.

4. The industry is not an 8.00 am-5.00 pm job but working odd hours was a necessity, including weekends and public holidays; thus, it is very imperative to understand the right mix of male and female workforce to achieve the best operational results.
5. Obtaining the required skills required both college and long-term industrial hands-on experience which took many years after college.
6. Marketing in this industry was an exercise to help establishments be efficient, reduce costs, and better serve their highly demanding time-conscious downstream customers, who are nonsense.
7. The industry was driven by serious time sensitivities and delays that quickly impacted costs, efficiency, profits, and downstream operations of customers, which could result in customs and legal penalties and cancelled orders, as well as badly strained customer relationships.
8. The industry is a highly security-sensitive industry where a myriad of government rules and regulations apply and interactions with state security apparatus are the norm in all countries; therefore, legal and strategic compliance is extremely important. Oman faced the challenge of attempted illegal entry by people from mainly the Asian continent, as testified regularly in Oman newspapers. Smuggling is not a big issue for a young economy like Oman, whose people have a high degree of ethics and legal compliance compared to the rest of the world, where this is a huge problem. For example, consider Mexico, Colombia, South Africa, and Haiti.
9. Building trust and confidence was central to success, but this was only possible when deliverables were always met, as expected, with a few exceptions beyond a company's control, such as delayed flights, wars, strikes, conflicts, surprise events, lost, stolen, and damaged goods and vagaries of weather.
10. The literature clarifies that the dress code of your staff matters a lot and must be of top quality, as they are the face of your company. Providing a dressing allowance is a good idea already embraced by many leading companies. The same applies to the quality of the office environment, furniture, and cars driven by your marketing staff which must be of superior quality to build the confidence of existing customers as well as that of potential customers or prospects. Underpaid marketing people demarket companies because they may be tempted to vent their frustrations as they interact with customers and key stakeholders. Researchers have witnessed this firsthand as practitioners as they teach, research, and do business in industry, mingling with society across social ladders. The duty of care is reflected in how one looks after the employees. Charity begins at home, not elsewhere. These marketing principles make and break your company and must be embraced not as a choice, but as a survival and competitiveness tool. This is a part of branding and image enhancement.
11. Some kind of air cargo logistics apprenticeship was necessary for one to establish himself or herself at the upper and middle echelons of the industry. The industry was too delicate and sensitive, and subject to many rules and regulations relating to health and safety, security, environmental protection, and anti-smuggling measures.
12. Facilities such as major international airports were important prestige projects that defined countries and were symbols of national pride. One must keep this in mind when framing marketing strategies and pitching promotions. One only needed to look at

airports such as Muscat International Airport, Dubai International Airport, the new Harare International Airport in Zimbabwe, Johannesburg Airport in South Africa, and the famous multiple Chinese, UK, French, German, USA, Saudi Arabia, and Qatar Airports, to name a few and see how much those institutions inspired those nations. You need to have national patriotism to design a message that correctly depicts the country through its major airports, as positively as possible. One has to love and like one's country, beyond doubt.

13. A smart partnership is required for success between industry, government, and colleges/universities. Industry provided the actual service, colleges/universities developed the required human capital and did research while the government dealt with rules and regulations, public infrastructure, and public support institutions like Customs Services, Immigration, Security, and interstate relations which can never be handled by companies. The government is also known to be a major source of funding for major projects, innovations, and high-risk but necessary strategic projects, such as renewable energy, networks of large warehouses, and logistics cargo centres throughout the country. Joint ventures have proven very successful, in which the government partners with the private sector.
14. Developing and improving the cargo and distribution centres for e-commerce businesses with a focus on first-and-last-mile deliveries by using the latest technologies using AI technology and connecting various logistics intermodal, air, sea, roads, and railways are very important.

THE CONTRIBUTION OF THE STUDY

Doctoral and advanced research must always demonstrate that a significant contribution has been made to knowledge in its field and must be publishable in the academic journal (Trowler, 2015:30). The researcher believes that this research highlighted and brought to the fore many issues which had largely remained unresearched in the marketing of air cargo operations in Oman and in the Gulf Cooperation Council (GCC) in academics and provided possible solutions, such as better service delivery to air cargo customers and society, better logistics management, improved stakeholder satisfaction, reductions in customer and stakeholder complaints, better relations, less poor repeat business records, and failing to operate at an optimum level due to constraints. The academic community will better understand the marketing of air cargo operations in the Oman and GCC/Middle East context, an area that has largely been ignored. The theory of marketing of air freight cargo operations has not been explored in detail in Oman, and this research has been long overdue. The research has done justice to this noble cause.

This topic cannot be exhaustively researched in one research paper. Moreover, this was a conceptual research where primary research was not conducted; thus, there could be other Oman-specific issues that could only be unearthed through primary research in Oman. Air freight is an industry with many complex toxic issues, both economic and political. Other researchers can take the research further using primary research which may include longitudinal studies and possibly involve every key airport in the country. This would help to expose other deep-seated specific Oman-related issues. However, one would ask how successful the primary research would be with the sensitivity of this industry, where some questions may not be answered for state security and strategic reasons. Nevertheless, primary research would definitely help to account for many unknown hidden facts, thus building the theory of marketing in air cargo operations.

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