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- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

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A REVIEW ON THE COST MANAGEMENT STRATEGIES ADOPTED BY AIRLINES GLOBALLY

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ABSTRACT

The global airline industry faces many challenges and is affected by the external environmental changes as well as internal operating environment. The increasing number of commercial airline companies has put more pressure on their management to continually seek profits, reduce cost, and increase revenues. One of the main challenges faced today is the rising fuel cost which is eating into the bottom lines of the airlines causing many of them to declare bankruptcy. Therefore airlines always try to exercise restraint and adopt many strategies so that they can control the rising costs. This paper attempts to identify the current status of the global airline industry and outline some of the key cost management strategies adopted by them.

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KEYWORDS

Aircraft Fleet, Cost Management, Fuel Hedging, Global Airline Industry.

INTRODUCTION

The airline industry is an industry which has low profitability owing to it being highly capital, labour and technology intensive. At the moment, the aviation industry's performance (worldwide) seems to be on the road to recovery, from the economic recession of 2008. Middle-east carriers have shown strong growth figures despite the reduced profits. Far-eastern carriers have also grown in both size and scope, and have seen tremendous growth over the past couple of years. China, in particular, has seen tremendous growth in domestic air travel, and is also managing to manufacture their own aircrafts. The American markets are currently focusing on reducing costs, while European carriers continue to take advantage of benefits associated with joining alliances. The following parts will give brief insights into markets in different geographical territories.

OVERVIEW OF THE GLOBAL AIRLINE INDUSTRY**AMERICAN MARKETS**

American Airlines' parent company AMR filed for Chapter 11 Bankruptcy in November 2011. This gives AMR a chance to manage and restructure its debts and hopefully come out with some of their debts managed, and a brighter outlook for the future. American Airlines was the only legacy carrier to have not filed for bankruptcy to this point. They have long prided themselves on staying out of bankruptcy. However, the harsh reality is that many of American's competitors have emerged from bankruptcy and have turned a profit, namely Delta Air Lines, who posted net income of \$765 million last quarter. American is currently plagued with problems such as labor disputes and high expenses, which makes their situation even more difficult. (Racing Winds, 2011)

Southwest Airlines is the nation's largest carrier in terms of originating domestic passengers boarded. Southwest maintains a dominant position in terms of its low cost advantage. The entry of similar (low-cost) competitors in the market might as well challenge Southwest's position as the market leader. As the airline's CASM (Cost-per-seat-kilometer) increases, the airline becomes more vulnerable and appears to lose some of its market advantage. SW's CASM has constantly been changing due to rising fuel prices and above average employee remuneration (Southwest claim that they have excellent relations with all their labor unions, which overlook over 80% of their workforce). SW has also incorporated structural changes to their aircrafts (such as blended winglets) in order to reduce their fuel costs by reducing fuel burn. Despite these risks, the Dallas-based airline has managed to expand their network, while providing special fares and offers. (Swam Media, 2012)

EUROPEAN MARKETS

British Airways claims that they expect to only break even in 2012, mainly due to higher fuel costs, emissions taxes and crew strikes. In the 1st quarter of 2012, BA made a loss of 62 million Euros, while at the same time, its sister company, Iberia, made a loss of 170 million Euros (Barr, 2012). Due to changing market trends and preferences, passengers in EU are increasingly changing their preference to low cost carriers, which puts BA at a major disadvantage, with their premium fares and high costs of services. The airline's complex management structure is another major disadvantage, as it results in delays in decision making, which is unacceptable in such a dynamic and changing market environment. KLM is also currently facing quite a few problems, due to high staff costs, and large amounts of debt. KLM spends about a third of its revenue on staff costs, its biggest expense. The airline has been blamed of weak management of costs, and it does not seem to be able to recover their debts by the end of 2012. Lufthansa, faced with soaring fuel costs and escalating competition on its European routes, stated that it would eliminate 3,500 administrative jobs as part of a wide-ranging effort to improve its profitability by €1.5 billion over the next three years. The airline reported a loss of \$498 million for the first quarter of 2012. Again, as in the case of KLM, the main competition seems to come from low cost carriers like Ryanair, easyJet and Air Berlin. (Clark, 2012) The worsening economic situation in Greece has had a waterfall effect on most other European countries, therefore reducing demand for air travel, and therefore, affecting the aviation industry in Europe. The EU Emissions Trading Scheme (ETS) has also proved to be an additional burden for the carriers operating within this region.

MIDDLE EAST

Emirates Airline had stated that their profits fell by 72%, to AED 1.5 billion. This is a drastic reduction from the previous year's profits of AED 5.38 billion. Rising costs of jet fuel seem to be the main reason behind this reduction in profit. The jet fuel bill of the airlines increased by a staggering 44.4% in comparison to the previous year. Despite a reduction in profits, the airline has managed to grow in terms of revenues and the acquisition of new aircrafts has also been the driving force behind this growth. Emirates airline manages to contain many hidden costs by maintaining fleet commonality, which would prove to be a long term benefit for the airline, in terms of reduced maintenance and training costs. Airport slot management has also benefitted the airline by being able to provide convenient flight schedules. Etihad Airways aims at breaking even this year, as they have experienced rapid passenger number growth over the last year. Their revenues (for the 1st quarter of 2012) have increased by 28%, to AED 3.63 billion. The airline follows a business model of gradual network growth and code-share agreements, in order to maximize revenue through these methods. The airline has also made equity investments in European carriers, in order to gain the benefits of synergy with these carriers and in the recent new it has bought a 17% stake in the Indian air carrier Jet Airways.

ASIAN AND SOUTH PACIFIC MARKETS

India and China are two of the world's fastest growing economies as of now, as the aviation industries in their countries are also growing rapidly. India and China are part of the BRIC nations (Brazil, Russia, India and China), characterized by rapid growth and economic development. It has been observed in the past that economic growth and growth in the aviation industry go hand in hand, and that is the case in these countries as well (bar a few exceptions). With rapid double digit growth in these countries, and growth in China as high as 20%, several global companies are targeting these countries in order for greater expansion and growth. According to industry predictions, by 2030, one-third of all passenger traffic (globally) will be in the Asia Pacific region, and the number of aircrafts

operating there would increase from 5500 aircrafts to around 14,000 aircrafts. According to Association of Asia Pacific Airlines (AAPA), "Airlines based in the Asia Pacific region carried 17.2 million international passengers in April, a 12.2% increase compared to the same month last year" (AAPA).

The following developments have been observed within the BRIC nations as well as other parts of Asia;

Gulfstream Aerospace Corp. views India as a long-term growth market for its range of business jets. The Asia-Pacific market currently (March 2012) accounts for approximately 27 percent of their total market (Gulfstream). While Gulfstream has been operating with businesses in India for over 2 decades, they forecast that the Indian market would require larger numbers of business aircraft in the forthcoming years.

AirAsia, of Thailand, continues to grow rapidly in the coming year, with plans to invest approximately 1.5 billion baht in expanding its on fleet in the years 2012-2014. The Thai budget carrier "aimed to serve 8 million passengers this year to boost revenue growth to about 20-25 percent and planned to buy Airbus A320s to double its fleet to 48 over the next five years", according to a statement issued to the press.

While Kingfisher Airline's plight is being widely publicized and spread as a 'sign of impending doom' to other carriers in India, some carriers are showing that this is just a passing trend. Jet Airways has bucked the trend in the country by ordering (on lease) up to 100 narrow body aircrafts for use during 2012/13, for approximately \$3.75 billion. Due to Kingfisher Airlines and Air India curtailing most of their flights (due to losses), Jet Airways is set to gain additional passenger and cargo traffic from the 2 aforementioned carriers.

Indonesia's Lion Air is planning to invest in 10 new Boeing 787 dream liners, costing them approximately \$1.9 billion. Their main motivation to do so would be that "the 787 would help Lion Air's marketing campaign with an image of fuel efficiency and the latest technology" (Lion Air).

COST MANAGEMENT STRATEGIES EMPLOYED BY AIRLINES

Airlines have been very reactive to changing trends in demand, as well as rising costs of operation. Cost management strategies have ranged from structural changes to the aircraft, to hybrid fuel hedging agreements. Some carriers have focused on changing certain characteristics of the airline product in order to cut costs, while others have kept their product unchanged, and have focused on cutting costs in subsidiary processes (maintenance, training, etc.). Some of the main cost management strategies that have already been employed by operators include;

AIRCRAFT WEIGHT REDUCTION

Due to the uncontrollable nature of fuel prices, airlines are often at the mercy of rising fuel prices. Rising fuel prices directly affect airlines' bottom line. However, airlines understand the importance of weight reduction in improving fuel efficiency of already existing aircrafts. Therefore, many airlines are adopting subtle changes to the interiors (cabin) of the aircraft, in order to reduce the gross weight of the aircraft. Weight reduction can be achieved even by changing a small aspect of the aircraft's cabin, such as the carpeting (Stensgaard, 2008). Some carriers have made changes to the airline product, by removing useable aspects such as in-flight magazines and in-flight-entertainment (IFE) in the pursuit of weight reduction. Others have made subtle changes to the cabin and structure without altering the airline product at all (for example, lighter seats and carpets, lighter meal carts, removing heavy microwave ovens, etc.)

FUEL HEDGING

Fuel hedging is a tool used by airlines, in order to protect against the effects of the volatility of fuel prices. Basically, fuel hedging involves hedging a bet against future oil prices. Airlines set up hedging agreements with financial entities, and agree to pay a standard rate (the current year's rate) for a predetermined period of time, regardless of whether the future fuel prices rise or fall. If the fuel prices rise in the future, the airline benefits in the hedge agreement, but if the fuel prices fall, the airlines would lose out as they would still have to pay the predetermined rate for fuel. Many airlines have benefited from fuel hedging, however, some airlines have decided against it due to the inherent risk involved. Therefore, some airlines (like Emirates) have gone for hybrid fuel hedging agreements where a portion of the fuel requirement is hedged, while the remaining is procured at the market spot rates.

FLEET COMMONALITY

This is not so much of a cost reduction technique, but more of a proactive approach to manage costs. Fleet commonality refers to having multiple aircraft from the same family of aircraft. For example, owning multiple aircraft from the Airbus A319-320-321 family provides benefits of fleet commonality to an airline by reducing overall costs of spare parts and maintenance contracts. Fleet commonality brings along with it a host of benefits, ranging from reduced expenditure on spare parts (due to common spare parts), to reduced training costs (due to similar interfaces in aircraft of the same family).

FLEET UPGRADE

Newer aircrafts require less maintenance, burn less fuel and are less prone to break down. Some carriers lease/buy new aircraft, as opposed to used aircraft, in order to reap the benefits of efficiency in operations. The initial investment may be higher than buying used aircrafts, but the long-term cost savings far outweigh the higher initial investment.

RESTRUCTURING OF ORGANIZATION

Some airlines may be able to reduce excessive debts and costs by restructuring their management structure. This might involve laying off employees, hiring new staff, changing choice of target segments, changing mission and direction of the organization, etc. Organizational restructuring may be beneficial, as it may be able to directly reduce staff costs, and it may also be able to change the perception of the organization (to the customers) in a positive way.

INCREASED LEVEL OF OUTSOURCING

Airlines can further reduce their operating costs by outsourcing maintenance, repair and overhaul (MRO) activities to external parties who are specialized in the field, as opposed to doing it themselves. Other non-core activities, such as marketing, may also be outsourced in order to eliminate the staff costs that would be involved in running a separate department.

REVIEW ON THE EFFECTIVENESS OF EXISTING COST REDUCTION STRATEGIES

'Cost-cutting', or cost reduction has been the main priority for airlines for quite some time now. Considering that they (costs) are one of the few controllable variables which may dictate success or failure of an airline, airlines have gone to extreme lengths in order to be cost-effective and efficient. The previous section in this document has highlighted certain cost management and reduction strategies that are currently being adopted by airlines. This section (below) will attempt to measure the effectiveness of most of the aforementioned strategies in actually improving the overall profitability of airlines worldwide. The analysis (of each of the strategies and their effectiveness) done in this section would be supported by facts and figures from publications and articles. The analysis is as follows;

AIRCRAFT WEIGHT REDUCTION

Many carriers have decided to go for the 'less-is-better' route, by reducing the overall weight of the aircraft without violating safety regulations. This may include reduction of weight by getting rid of unnecessary heavy machinery in the galley, or by redesigning the interior of the cabin with the use of lighter materials, etc. the main aim of reducing overall weight would be the savings made in fuel burn over the course of a flight. Studies have shown that weight reduction in certain non-core aspects of the aircraft (such as the interior structure of the cabin door, overhead compartments and components in the tail section of the cabin) can yield up to an average of approximately 15-20% of savings (in mass/weight). This, in turn, would result in approximately 10% reduction in fuel burn during flight (Cervellera, 2007).

Qantas Airlines, for example, has reduced the weight of their aircraft by reducing the amount of drinking water and food supplied to each aircraft, and by using lighter and thinner seats and carpets. A Taiwanese Airline reduced the dead weight of the aircraft by reducing the number of newspapers and magazines, using lighter catering carts and removing the front seat footrests. These innovations may seem very beneficial at first sight; however, they have a fatal blemish of reducing overall levels of passenger satisfaction on board the aircraft. Therefore, weight reduction (from an airline's perspective) may be attractive, but must be done with subtlety so as to not dilute the airline product in the process. From a manufacturer's perspective, weight reduction is not only beneficial, but is seen as a necessary step in development of new design concepts for aircrafts. Boeing's new 787 Dreamliner is an example of such a step towards development, as it incorporates the use of carbon composite materials in the construction of its outer body structure.

FUEL HEDGING

The effectiveness of fuel hedging agreements has been debated time and time again, between airlines on a global scale. Certain carriers view fuel hedging as a very risk-free, beneficial practice, while other airlines view the practice as something that could potentially 'put them in the red', or cause the company to go into losses. It is clear that fuel prices are currently the most influential variable costs for airlines, comprising almost 40% (on average) of an airline's total costs. Hedging bets on such a game-changing aspect of total costs can therefore, seem to be a risky proposition for certain carriers. A large part of deciding whether or not to hedge comes down to the way in which airlines view jet fuel hedging (Reals, 2008).

The benefits experienced by hedging include reduced exposure to the effects of dramatic fuel price increases, and increased profitability during sudden increases in fuel prices. Southwest airlines has reaped the maximum benefit of fuel hedging (in comparison to other airlines worldwide) as they had rightly predicted increases in fuel prices, which had enabled them to continue paying for fuel at the hedged rate, and had also helped them maintain their levels of profitability. However, sometimes fuel hedging agreements may end up being extremely cost prohibitive. US Airways, based in Arizona, stated that without hedging fuel, they have been able to make a profit of \$447 million in 2010, by avoiding hedging their fuel requirements. The airline also stated that sometimes fuel hedge agreements may end up being more expensive than paying for fuel at the market spot rates. Some airlines also make sure that they only hedge a proportion of their total fuel requirements. This provision allows airlines to balance risk and reward, in such a way that they benefit from stability in fuel prices (from the proportion of fuel hedged), while benefitting from potential falls in price levels for jet fuel in the spot market. Therefore, fuel hedging has proved to be an effective tool in the medium-term time period for airlines, while, it has not proved to be significantly beneficial in the long run.

FLEET COMMONALITY

Fleet commonality is a technique practiced by various airlines worldwide in order to cut down the cost of maintenance and spare parts for their fleets. Fleet commonality brings along with it the benefits of economies of scale in the purchase of spare parts and maintenance contracts (contracts for the maintenance of aircraft within the same family of aircraft). Commonality may be by model, manufacturer, family or any combination of the aforementioned criteria. Fleet commonality also makes it cheaper for the airline to train pilots, as; for example, pilots with a type rating for one aircraft may be able to operate and fly another aircraft within the same family of aircrafts. The only disadvantage of fleet commonality in this aspect would be that complete fleet commonality may limit the scope of operations of an airline in niche markets or specialized operations. Therefore, fleet commonality can be understood as an absolute benefit to the industry, and as advancement in cost management strategy.

FLEET UPGRADE

This refers to an up gradation of an airline's fleet to a newer model of the same, or different aircraft with similar characteristics. The advantages of upgrading an airline's fleet include better performance and range, improved payload handling characteristics, reduced maintenance and repair costs (over the long run), and reduced fuel burn. Fleet upgrades may also be used as a marketing gimmick, in order to attract potential customers through promotion of the newer aircrafts (for e.g., in the case of Singapore Airlines). However, many airlines fail to realize the 'hidden' costs behind a fleet upgrade. These hidden costs may prove to be a major disadvantage to the airline. This may include the purchase of brand new spare parts, the high costs of acquiring new aircrafts, the opportunity cost of operations during delivery period, training costs of pilots for flying the new aircrafts, and costs of disposal/sale of former retired aircrafts.

Therefore, fleet upgrades must NOT be made purely as a marketing gimmick, as the costs associated with procurement of new aircrafts may prove to be prohibitive purely for a marketing gimmick. However, in the long run, fleet up gradation can prove to be beneficial by pushing down overall maintenance costs for the airline.

RESTRUCTURING OF ORGANIZATION

This practice is usually very rarely carried out, and generally after the occurrence of a mishap or poor performance from an airline. Causes for airline restructuring may range from fragmented organizational structures with low productivity, duplication of functions among areas, and resource imbalance in relation to the operation market potential (Compass Consultoria, 2012). Restructuring may help with grouping of areas with common objectives, minimizing wastage of time, interface conflicts and duplications in work. It may also help in creating new areas with increased focus on the degree and level of customer service. However, organizational restructuring practices have often ignored the human aspects in relation to the process. Restructuring has often led to employees getting downsized and demoted to lower job positions. Employee morale and motivation seem to be the 2 main areas that have been hit the hardest during a restructuring. These factors may seem to be negligible at first (at least from a financial perspective), but in the long run, may be critical towards the potential success or failure of the organization. Therefore, restructuring of organizations must increase the emphasis on employee motivation, rather than just pure financial gains, in order to succeed in the long run.

INCREASED LEVEL OF OUTSOURCING

Outsourcing partnerships in the airline sector have evolved considerably in the past decade. Airlines all over the world are seeking strategic relationships with partners who really understand their business, as well as the industry, and who can work closely with them to solve the challenges of a fast-changing and dynamic environment. Outsourcing in the airline industry is usually limited to outsourcing of repairs and maintenance, as well as catering services and ground transport services. Flight notification services (FNS) and terminal services are also being outsourced to external parties nowadays. Some carriers outsource their entire aircraft crew if they are unable to acquire skilled crew of their own. In the past, it has always been seen as a cost cutting exercise; but in the modern ever-changing business environment, outsourcing has more to do with achieving ongoing efficiencies, innovation as well as improvement to the mutual profit of both partners. Therefore, outsourcing is nowadays not only seen as an operational aid, but also as an input in the planning and development phase of an airline. This involvement of external parties helps in reducing costs from the grassroots level, by planning in advance the proportion of tasks to be outsourced, and at what cost. However, outsourcing may limit autonomy and flexibility of the airline to make their own decisions quickly and seamlessly. Limited flexibility and autonomy may lead to potential losses, due to delays in decision making; which would eventually lead to inefficient performance.

CONCLUSION

This paper attempts to explore the cost management strategies adopted by the airlines globally and concludes that the above mentioned strategies are of vital importance especially in today's times as Airlines are grappling with the rising fuel costs. Many Airlines are adopting the fuel hedging strategy in a big way and it is helping them to mitigate the fuel price hike risk. This paper is just a reference of the various practices adopted by airlines and provides a platform for further in-depth research into this issue.

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