

RESEARCH ARTICLE

Strategic Management Business Model in the Airline Industry - Traditional Network Business Model versus “Low-Cost” Business Model

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Abstract

The powerful economic crisis in the airline industry, badly hit the traditional network airlines. Known as network carriers, national airline, flag carriers, traditional airlines has been developed historically, based on the well known “hub-and-spoke” business model. The hub was located in the country of origin, assigning the national identification to the airline. The crisis in the field started in around the years '90 and continued to grow in intensity after the terrorist attack from September, 11, 2001. The history of commercial aviation shows us the fact that the airline business industry historically generated important profits, resulting in huge overcapacities. After the '90, the economic crisis and the fear of terrorist attacks resulted in huge overcapacities and modest revenues reflecting an economic decline to be present for a long time in the airline business industry. Surprisingly, at a first look, the “low-cost” carriers have been helped by the economic crisis. They have been seen as the economic alternative of air transport on a specific destination, meant to reduce the airline travel budget of the individual and corporate clients. This “low-cost” option proved to be very convincing at that time when passengers started to avoid high fares charged by network carriers, developed on expensive hub models. Now, on the medium-haul routes, the “low-cost” airlines provide 80% of the airline service quality at less than 50% of the network airline cost. Therefore, “low-cost” carriers, touch more than 70% of medium-haul flights in the US and Europe, separating them from the origin of the business concept of “niche carriers”. However, for the most long-haul intercontinental flights, hub concentration stays a mandatory condition. For the network carriers the challenge consists on reinventing their traditional business model. If they would be able to provide the same service level at dramatically lower costs, the network carriers will consolidate their market position and they will promote the entire industry toward a new level of efficiency. This paperwork analysis the transition constraints and outline the vision of a new business model in the global airline industry, who eventually will lead the industry at a new equilibrium period.

Keywords: *Strategy, network carriers, « low-cost » carriers, global alliances, commercial aviation industry, new business model.*

Premises

In the last trimester of the year 2000, the difference between revenues and costs reached warring, negative limits in the airline business field. Initially, the crisis manifested as a revenue crisis, followed afterwards by a costs crisis resulted from overcapacities. As in the year 1991, who was confronted with the Iraq war effects, the crisis has been deepened due to the fact that existing barriers were still major in the airline business field. The state aids injected in the national carriers sustained the overcapacities in the airline business market. Unlike 1991, other major reasons contributed to the outbreak storm in the airline business:

- The aviation crisis deepened due to the global economic crisis started in 2008,
- The fears of terrorists attacks after September 11, 2001 has negatively influenced the manifested demand of air transport,
- 2003 Iraq war and SARS epidemic has for the second time influenced the reduction of air transport demand,
- The airlines did not excelled on innovation,
- “Low-cost” carriers have offered an attractive alternative to price sensitive clients.

After Southwest created the “low-cost” model in the beginning of years 1970, 15 more years in US and 20 more years in Europe were needed until this challenge has been taken seriously. Until then, this model has been perceived as a limited, regional phenomenon in US and Great Britain.

Network carriers have seen the “low-cost” business model, as a restrictive niche model for the airline business market, meant to attract low-yield passengers from other transportation networks than airlines. Low-cost carriers offered standard low-level services. Even at the beginning of the crisis, when the low-cost carriers from US and Europe raised their market share, the network carriers didn’t change opinion.

Studies and strategic examinations of the «low-cost» phenomenon had changed later the relaxed attitude of the network carriers. Has become more and more obvious that, «low-cost» carriers not only targeted niche clients during the crisis, but also have created a potentially sustainable business model alternative, more adapted to the industry challenge than the traditional one.

Studies in the field has have shown the fact that one «low-cost» airline can operate at 40-50% from the average unit cost of the traditional networks. This cost difference could be explained only marginally from a difference in staff wages and from a simple vision of point-to-point” operation. However, the success of “low-cost” airlines is given by the business philosophy adapted to the market demand, fully sustained by rational and rapid operation processes.

As an example, “point-to-point” services are offered only for the medium and short-haul destinations through a homogeny and efficient fleet planning with an adapted type of aircraft. At least one third from the cost difference comes from a typical production «low-cost» model, based on a rapid aircraft rotation between two major destinations, resulting in a higher productivity of aircrafts and crews. The cost of labor is lower due to higher staff productivity, lower wages and different rules as well as from a low level service concept.

- The cost with CRS (Computer Reservation System) is lower due to the unique internet sales platform used in the «low-cost» model.
- Maintenance cost is lower due to the young and homogeny fleet and due to the aggressive negotiation of maintenance contracts and used subcontracting.
- Handling cost is lower due to the dense scheduling in secondary airports, rapid aircraft rotation and minimum use of ground services. On secondary airports the contracts are more convenient for the airlines.
- Landing costs is lower due to the operation on uncongested, secondary airport with minimum service level.
- Other cost reductions comes from the procuring and efficient use of carburant, special financial conditions offered at the aircraft purchase, and lack of on board services.

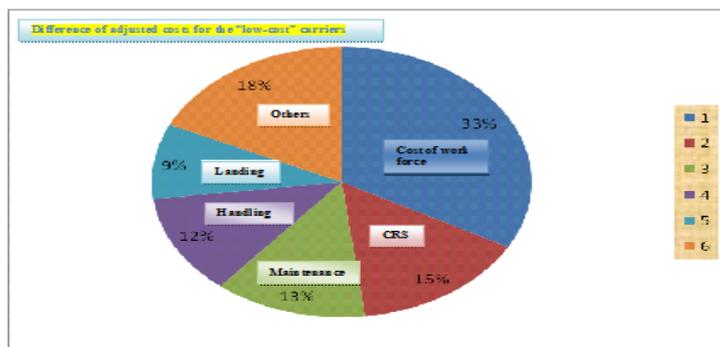


Fig. 1: The main cost elements who make the difference between network carriers and “low-cost” carriers

The strategists of network carriers identified at least three major errors in their initial perception of «low-cost» model:

- The «low-cost» service level is focused not poor. In the most cases, «low-cost» model is highly reliable and convenient for passengers, could be even more convenient than the one offered by network carriers in huge congested airports. This service offer value to the clients through direct flight and minimum time spent in airports.
- «Low-cost» carriers attract price sensitive passengers providing low-yields, who would never travel by aircraft in different conditions, therefore stimulating latent demand. They also attract price sensitive passengers from the network carriers.
- Although “low-cost” started on an uncovered traffic niche, it succeeded to develop on the medium-haul markets. Except crowded hubs, «low-cost» carriers could enter all local markets providing enough transport demand for at least one daily flight operated with aircraft type Boeing 737 (with about 120-140seats). This market segment account for about 70% of the European continental markets and more than 70% from US continental markets.

It is almost certain that «low-cost» carriers will not gain an overall market share of 70%, but there are some markets where they have consolidated a firm position. "Low-cost" carriers have already reached 9% market share on domestic flights in the United States of America expressed in revenue and 24% market share expressed in number of passengers and are still growing rapidly.

The reality shows that for more than 70% of continental flights, "low-cost" operators are able to provide 80% of service quality at more than 50% of the unit cost of the traditional carriers. Future success of traditional airlines depends largely on how quickly and flexibly responds to changes in demand and to the 'low-cost' challenges.

Environmental Analysis

In recent decades, commercial aviation activity generated an annual increase of 4-6%, due to overall GDP growth and

increasing demand for air travel resulted from globalization. Since air transport is becoming increasingly popular trend of growth was reflected in the long term to a level of about 2%, range that can be linked to efforts to increase efficiency. Historically, we can speak of a precarious balance between the field generating profits and losses. In the sphere of value creation, the balance proved to be delicate; very few companies were able to recover the cost of capital employed on well-defined periods of time. Some economists support the idea that long-term commercial aviation industry does not allow players to create substantial value from operation.

One exception to this rule was shown in 90, when global economic growth has stimulated demand and availability of air transport passengers to pay their high fees. Moreover, major airlines have capitalized by technological progress and by the optimization models, developing the concept of network management. Quantitative analyzes have helped to optimize the ratio of expected demand and offered capacity built into effective route models. Driven by the liberalization of the airline industry, traditional carriers created global routes networks around major hubs. During this period, incumbents have tried to direct as much traffic to their hub, so that they can create a disproportion between the connection traffic and its transportation cost.

Some major airlines have created multi-hub systems.

Predominant targets of optimization were directed to cover all types of demand on origin and destination resulted from all traffic segments connecting into the hub. Maximum connectivity is generated by traffic waves coming into the hub, which increases the probability of hub connectivity, both inbound and outbound. Negative aspects of this strategy are given by the loss of convenience for passengers who prefer direct flights and by a penalty to the carrier operating cost.

Waves of traffic created by this business model results in temporary congestion on airports, which generates: reduced air and land productivity on the airport area, the

risk of losing hub connection which requires the development of special processes, fluctuation of equipment use and of ground facilities, that reduce productivity on airport ground zone. In addition, congestion and critical connection time causes a low performance in terms of scheduled flights punctuality.

Without an alternative business model, passengers have no choice but to accept the operational model created by traditional airlines, paying for the inherent complexity. Particularly high rates charged for business class passengers, support the costs transfer to cover low-revenue passengers costs. Product differentiation they get in return is relatively low on medium-haul destinations.

In my opinion, passengers generating low revenues, marginally support the regular operation to produce business traffic convenience. The main focus of air transport differentiation is given by the restrictions of reservation and by the service offered on board. Ground processes are also differentiated by offering lounges access to passengers traveling business class and by check-in priority. Airlines have built this complex operating model to serve the needs of connecting passengers, generating low-revenue, which have been forced to connect in hub, to increase the airline routes portfolio, most of the cost being covered by premium customers.

In the economic crisis context, manifested in the second half of 2000, passengers generating high revenue began to show a growing reluctance to pay premium prices.

In this way, large airlines have entered a vicious circle. As long as their competitors have optimized routes portfolio and hub connectivity, in order to increase productivity and passenger's convenience, they had to act the same way. Any deviation from logic may prove fatal.

The logic of computerized reservation systems penalize reduced connectivity with loss of bookings and therefore income. Being forced to pay the operating costs and capital costs for their partly oversized fleet, it would have been taken a short period of narrowing revenues to bankrupt at least medium-sized companies.

The only innovation option in this business was opening to global alliances and partnerships that have exploded in the second half of the '90s. Important carriers had been organized in various business partnerships and global alliances and three major alliances were developed.

In this way, a value for customers was created, given by the possibility to travel globally with the same alliance, and some value for the airline through an additionally low-income obtained. The scale effect in procurement and IT systems have transformed global alliances in success. Meanwhile, deregulation efforts have resulted in the emerging of 'low-cost' carriers. In this manner, the limited scope of global alliances together with a lack of interest for a higher integration, have prevented the achievement of cost reduction at all its potential. Although alliances are important strategic options, they failed to prepare its members to face "low-cost" threat.

Competition and Industry Attractiveness Analysis

Traditional airlines facing the «low-cost» model challenge, should deal with three important aspects:

- First, they cannot meet the "low-cost" challenges without weakening their competitive position compared to the one of other incumbents. For example, reducing hub connectivity to increase productivity, would immediately be penalized by the logic of the CRS systems (Computer Reservation System) and therefore this action will result in fewer passengers and lower revenue, which could eliminate mid-volume operators from the market before having the chance to improve costs and become more efficient.
- Second, incumbents were not successful in capturing latent demand existing in the market, this demand was stimulates by 'low-cost' operators. If incumbents were able to capture latent demand with lower prices, this would cost them more, because their unit cost base is significantly higher than the one of "low-costs".

- Competition is not only a scale game as it was in the past, when it was easy for a traditional carrier to eliminate a new entrant from the market, through a price war practiced on a limited time. Now “low-costs” are struggling with various weapons, such as no hubs and adapted processes. On the other hand, incumbents cannot copy the "low-cost" model being forced to support operating hubs at least for intercontinental routes.
- Finally, incumbents faced not only a loose of market share in favor of 'low-cost' operators, without being able to share with them the new stimulated demand, but also faced a lower level of revenue. This result is probably the most threatening aspect of the "low-cost" challenge on a long term perspective.

Domestic U.S. market analyzes, reveals the fact that yields obtained on routes operated by both traditional and "low-cost" carriers are 40% lower in just several months.

The largest "point-to-point" markets in Europe, Dublin-London, illustrates another critical effect: in 1986, when Ryan air entered the market, demand has increased four times, dropping market share of British Airways and Air Lingus. Unfortunately, in the same period yields decreased to a quarter. This suggests that macroeconomic desire to pay for air transport on this route has remained stable. Once cheap and efficient suppliers enter a market, demand is amplified.

Therefore, these models move to a new level of efficiency, creating additional demand for the industry? Examples of other industries in trouble, passing through t severe crisis of efficiency and demand shows that the emergence of innovative business models as the "low cost", can break old structures and business models and result in significant changes. In the United States of America, in the steel industry, large traditional companies, which formerly were irreplaceable, have been replaced by smaller companies, more flexible and market oriented.

In the telecommunications industry, new companies such as Deutsche Telekom, have

partly reinvented the business model and survived the pressure of new aggressive entrants, such as Vodafone. In essence, the old companies of such industries have experienced extensive restructuring or closing times. There are at least three reasons why traditional airlines should be able to restructure their business and survive the current crisis, turning into profitable growth:

- On short and medium term would be impossible for an intercontinental destination to be served without a hub. To fill an Airbus 380 and to benefit from the enormous unit costs difference of this type of aircraft, an airline must still attract demand for an intercontinental destination from multiple origins. In addition, passengers accept transfers easily to intercontinental destinations. As long as the big carriers can operate profitable intercontinental routes, hub structure cannot be eliminated. In any case, it is necessary to resize and redesign operating hub.
- The deregulation of air transport industry as well as huge economic pressure could cause consolidation, overcapacity reduction and unlock the efficiency potential, which has not been addressed till know. The merger of AIRFRANCE-KLM marked the starting point of the consolidation wave in the airline industry.
- If the network airlines are able to restructure their operational platforms and at least partially reduce the cost difference between them and the 'low-cost' competitors, an economic change can help them to survive and strengthen the positive impact of increased efficiency and ultimately to turn on profit.
- If traditional airlines would restructure, through massive unit costs reduction without reducing significantly the service level provided, they will participate in the new demand generated by the "low-cost" operators.

The general industry potential may further increase if the additional demand is not uncompensated by declining yields. An increased efficiency without deterioration in

the standard service provided is the key of reaching profitability for traditional airlines. Increased demand from economic growth would further strengthen this mechanism.

Bizarrely, the above described development reflect the fact that the success of the "low-costs", which currently poses a threat to incumbents, destabilizing the entire industry, could become the traditional airlines catalyst to break the vicious circle of connectivity and complexity. Finally, the winner of this fight will be the consumer, because it will benefit from a wider range of options at lower prices. Industry will look different, part of the small operators will be taken over by some larger airlines or will disappear, alliances in the field will reach new levels of synergy and only the strongest "low-costs" will survive. After the business monoculture of the 'years 90's and after the severe global economic turbulence, achieving a new balance between the two business models can be a real and viable economic hypothesis.

The Strategic Business Model in the Aviation Industry

Any airline goal is to operate efficiently, in terms of profit and value creation. Being a support activity of economic exchanges at a global scale, commercial aviation involves high investments, latest technology, expensive infrastructure, highly professional staff, international regulations and procedures.

With the general trend of airline industry liberalization, free competition gradually replaced the bilateral interstate agreements. Under these agreements, authorities, generally Ministries of Transport, negotiated issues including a broad area of air transport organization, from national operators' traffic rights to the fares applied on a route, so that operation costs could be recovered from the financial contribution of existing traffic on that route.

Increasing competition through airline industry liberalization has reduced barriers to entry of private airlines in air transport market, producing a major impact on incumbents. Therefore, new companies entering the market have been designed to contain a flexible organizational structure,

adapted to the competitive environment, involving a minimum of operational and administrative costs and resulting in higher productivity than the one of the traditional airlines.

Following the boomerang effect, traditional airlines, in order to produce value, were forced to adopt a number of key measures to restructure and streamline its business, which focused both on reducing costs and increasing revenues. The following objectives were the starting point for internal business restructuring:

- To eliminate the costs of complexity, by isolating necessary variety from standard procedures
- To reconfigure network architecture
- To create distinct tailored business streams:
 - To industrialize the 80% routine, focusing on simple flows and quality
 - To create specialized processes for 20% non-routine, challenging activities
 - To focus on discretionary costs when they are valued and paid for,
 - To join a global alliance for effective programming of network capacity.

The strategic management model for an airline proposes to find a set of basic minimum conditions and criteria necessary for an airline to initiate and develop an efficient operation. The strategic model needs to include modular development principles. Starting from the basic principles of aviation, I will try below an outline of the strategic model.

Content

This model aims to achieve three vital activity areas within a particular airline, such as: routes operational structure, passengers service distribution and company interface with passengers, services segmentation adapted to different passengers types.

- **Planning / restructuring network and hub operation in order to eliminate scheduling constraints and benefit from the opportunities created by hub operation**

Scheduling aircraft operation in both directions in order to produce substantial passenger flows in hub, connecting with later scheduled flights.

This measure aims to increase aircraft productivity (CUZ). Achieve fast aircraft rotation, by simplifying the ground handling. This measure helps the decongestion of airport infrastructure.

Variation of the compromise between efficient operation and optimal hub connectivity.

Simplifying the Interface between Passengers and Selling Platforms/Simplify the Interface between Passengers and Departure Control System on a Particular Flight, By

Separating the complex and simple tasks and industrializing simple tasks

Reducing the non-value interaction between passengers and airline staff

Simplify reservation, ticketing and registration of passengers per flight

This measure has a multiple determination: reduce waiting time of passengers with the pre-flight procedures; help to better use the airport infrastructure; transfer control of ticketing and check-in from agents to

passengers; reduce the cost of airport staff; leads to an efficient use of airport infrastructure, generally not adapted to traffic volumes.

Create Separate Business Systems for Distinct Customer Segments

- Offering a high level of service where necessary, provide a service as limited in terms of costs where possible
- Ratio optimization of local passengers versus connecting passengers
- Ratio optimization of high-yields frequent passengers versus-low yields occasional passengers
- All these aspects are meant to reduce operational complexity, to achieve pure business flows and to offer specialized and quality service, by delivering good qualitative schedules.

The effects of these measures will generate lower costs, provide differentiated services by type of traffic and increase economic activity and commercial viability, reduce overcapacity in the market. The model must be integrated into a modular global structure where individual airlines business models could match the puzzle. Global intermodal planning of airlines leads to the final goal of aviation industry, the one of achieving operation profit.

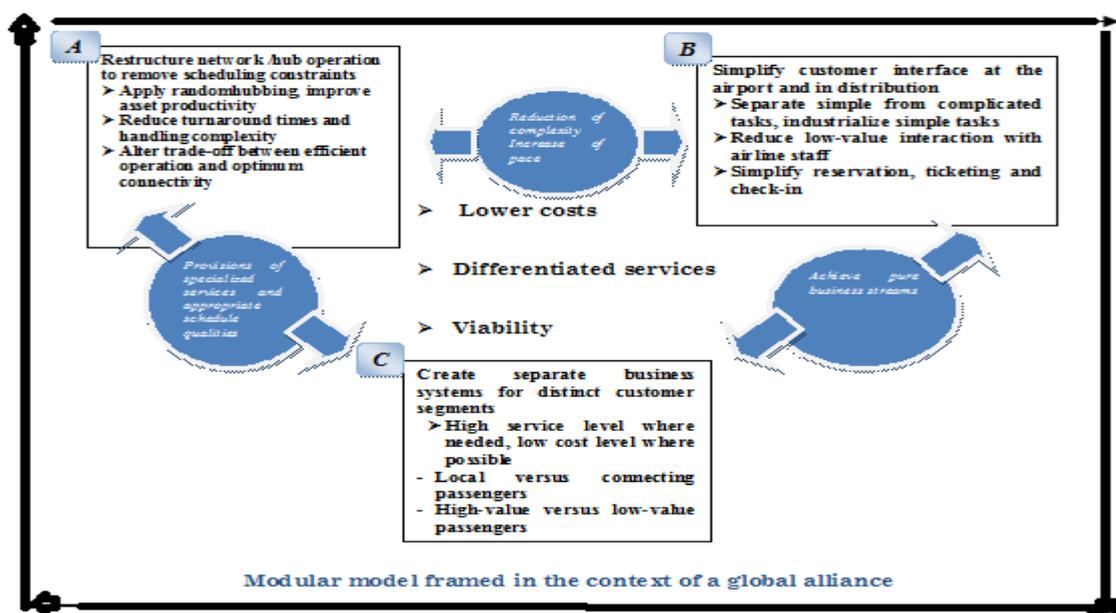


Figure 2 :New airline business model

The Beneficial Effect of Global Alliances in Airline Industry

Alliances between air carriers on international markets have become a dominant feature of the civil aviation industry. Many customers require global air transport services, which are impossible to be effectively provided only by a single carrier. Thus density savings are created by merging modular networks.

Many city pairs would not support a viable scheduled flight on local "point-to-point" traffic, which means that these cities are traffic collectors through a connecting point, generating sufficient density to support a scheduled flight. However, cross-border mergers are prohibited in many jurisdictions. The clear need for inter-network connection led to a rapid expansion of the alliance relationships, as a close substitute for merger. More recently, airlines have established "Joint Venture" cooperation to serve specific markets, where the passenger revenue is independent of the effective carrier. This neutrality is significant because it maximizes the opportunity to operate efficiently and benefit from density. There are now enough evidence that relationships inside an alliance led to a significant benefit to the consumer in terms of both improved service and cheaper fares. Concerns over anti-competitive effects for passengers flying on routes from one hub to another, when similar services from different alliances overlap, should be offset by the "Joint Ventures" neutral relationship able to produce pro-competitive efficiency.

In order to meet customer demand in a cost effective way, airlines were forced to determine trading partners to help providing optimal coverage and service.

In conclusion, airlines cooperate starting with the basic mutual acceptance of passengers until the more complicated "joint- ventures" for economic and legal reasons. Many passengers demand unified service for intercontinental travel. "Point-to-point" operation does not require carrier's cooperation, but may be developed only between points with high density. Most pairs of cities do not support viable regular operation and alliances providing passenger flows. Recently "Joint-Ventures" have brought closer cooperation between airlines, on several markets.

The passengers benefit from closer airlines cooperation, through quality improvement, better operating schedules, fare combinability and smooth trip, is a generally accepted hypothesis. It is also generally accepted the fact that passengers benefit from savings in fares due to density economies, increased efficiency and elimination of so called horizontal double marginalization.

Ironically, the probability of succesful business innovation and closer cooperation has been increased by the pressure of "low-cost" carriers. In that respect, the crisis could turn out to be benneficial for the industry as a whole.

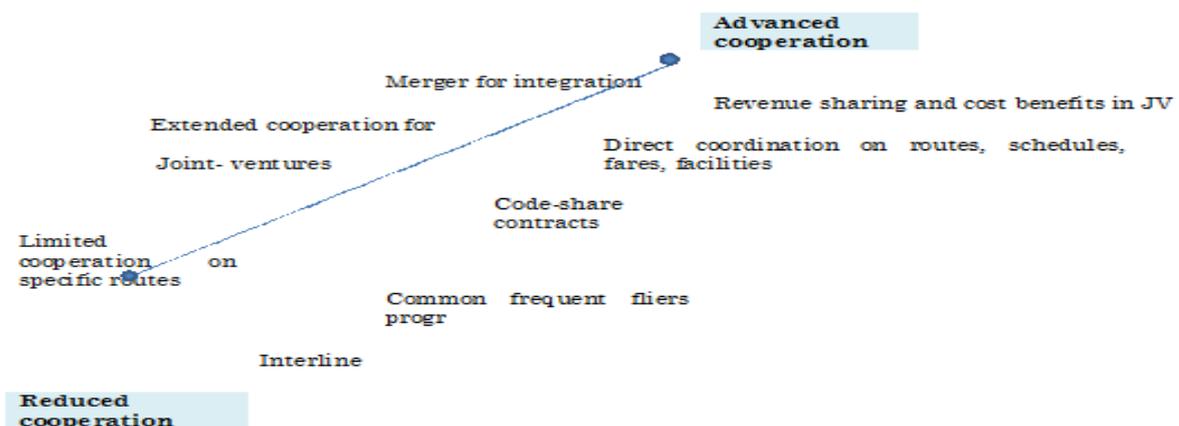


Figure 3: Levels of Airline Cooperation

Strengths and Weaknesses of Strategic Model

The strategic model outlined above is a starting point for restructuring operational processes within an airline.

Weaknesses

A lack of detailed framework analysis to be applied for an airline restructuration could be considered a limitation of this model.

This model is not an integrated or integrating model for the commercial aviation industry. In order to improve the efficiency offered in a market, airlines need to take a comprehensive view of the industry, to define its specific role within the global air transport network, to compete in an organized manner and to finally serve the connectivity needs of passengers.

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Strengths

This model outlines a generally recognized starting point for restructuring processes in airline business. The model is decomposed in action pathways meant to improve an airline performance. A further decomposition of processes could be developed on different parts of the value chain. In order to achieve its scope, this model should be part of a global context. Otherwise the economic goal of industry profit risks to be compromised.

To make profit, a mandatory condition is to plan and maintain the optimal operating capacity in the market.

This condition leads the competition battle away from the market share objective which is not the economic scope of an airline operator. Therefore a macroeconomic approach could lead to an optimal planning of capacity in the airline industry network [1-3].