

SPECTRUM OF COMPETITIVENESS OF PASSENGER AIRLINES ON AIR CARGO MARKET

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Abstract:

The air cargo market shows a continuous growth over the past decades, and despite the current downturn, forecasters do believe such trend will continue into the future. In this market, passenger airlines are one of the key actors, accounting for around forty to fifty per cent of the world's revenue tones kilometers. However, passenger airlines' market positioning is currently very challenging: longstanding financial difficulties, inferior market positioning, outdated business model or increase competitiveness. This situation raises some doubts on airlines' cargo business's survival. Furthermore, passenger business is characterized by low margins, which further raises doubts on airlines' long term survival.

This paper addresses precisely the airlines' current difficulties, tracing back their roots and explaining their influence. The final goal is to explore the various strategies that airlines can deploy towards air cargo business. The specific strategy depends the airlines' spectrum of competitiveness on the air cargo market.

The paper starts with a review to the current drivers and trends in the air transport market. Section 2 provides analysis to aviation sector' drivers and trend. Section 3 is dedicated to the focus of this monograph: air transport companies whose core business is the passenger, but also provide freight transport services – combination companies.

This Section goes through a set of relevant topics, namely: specificities of air cargo business, strategies, positioning within market and explores current challenges.

Turmoil in the Skies: drivers and trends of air transport sector

Over the last three decennia, a series of unprecedented forces (or drivers) have thrown the air transport sector into turmoil. In the adaptation process several trends have been emerging; however at this moment is not clear how it will evolve or what configuration will emerge. The following figure (**Figure 1**) presents the main drivers and trends shaping the air transport sector.

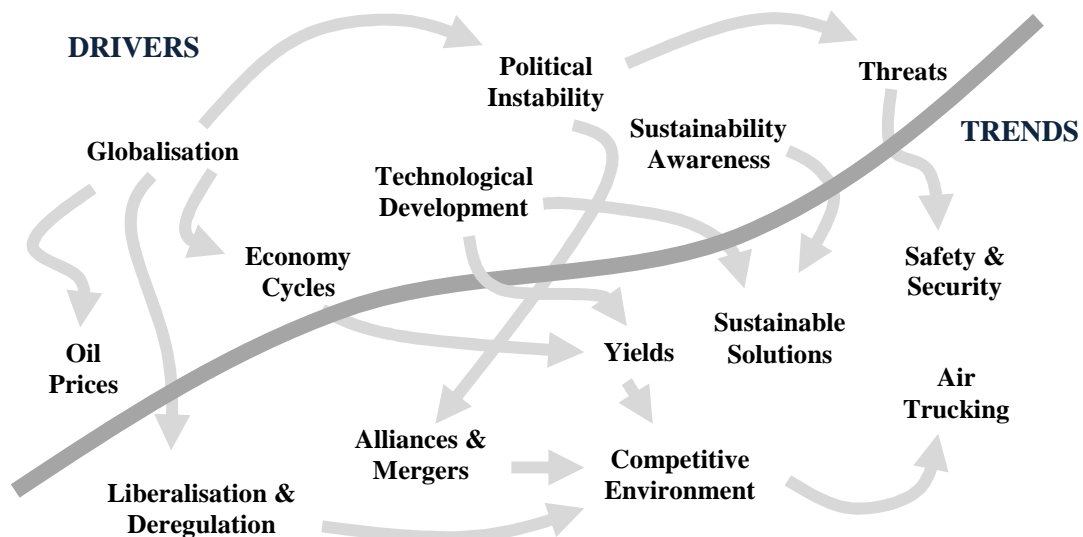


Figure 1: Drivers and trends of air transport sector

Drivers

A driver is an action that provokes a disorder in a system. This action can either have origin inside the system – *endogenous* – or be generated by an external event – *exogenous*. Also, driver can differ in terms of magnitude or scope. Looking for the evolutions and changed occurred in the world as of seventies, eight main drivers have been identified (Figure 1).

Globalisation

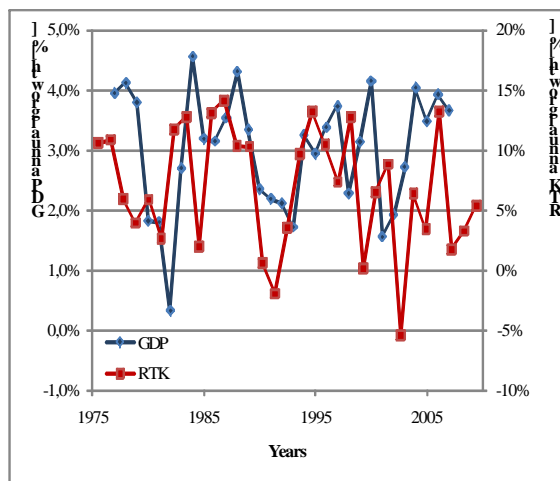
As of seventies, governments all around the globe, although driven by western economies, are gradually opening their internal market to foreign, which is resulting in a

progressive integration of world's societies at intellectual, political, economical and technological levels. This phenomenon is normally called as Globalisation. Nowadays, people, capital, goods and information enjoy unprecedented freedom.

Globalisation has brought major impacts on transport sector (ELOFRET, 2008). Yet, compression of time has likely been most decisive one for air transport; since it changed the way societies and industries considered this mode of transport. Air transport became progressively a key competitive factor in many companies.

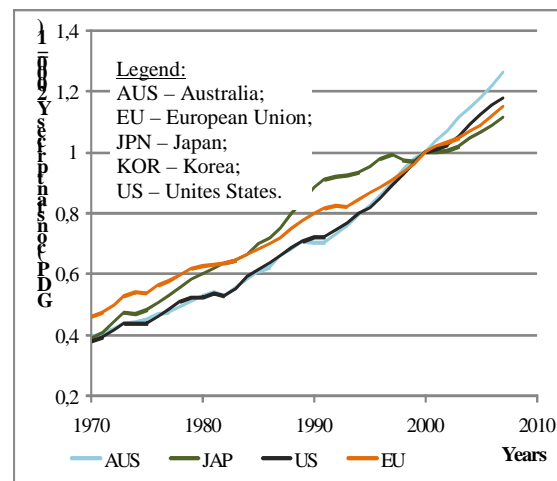
Economic Evolution

It is consensual the derived nature of transport industry towards other industries and, thus, its dependency (Boeing, 2008, Button and Stough, 2000). Zhang and Zhang (2002) found air cargo sector has grown between 1.5 to 2% above global GDP, and Zondag (2006) cites a study that, through a long term analysis, concluded for a correlation between airline's net operating margin and the world's GDP. Two aspects are worth of mentioning: first, the cyclic behaviour of economic development (Figure 4), and second, world's economies' long term development (Figure 3). These properties have been likely impacting and steering the development of air cargo industry, which is reflected on the behaviour of air transport sector (Figure 2).



Source: Boeing (2008)

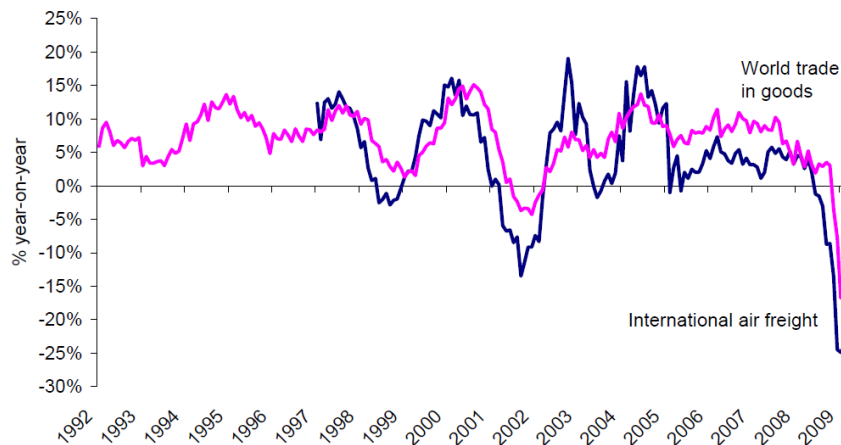
Figure 2: World GDP and air cargo annual growth



Source: OECD

Note: Current prices

Figure 3: GDP's evolution in several regions



Source: IATA (2009b)

Figure 4: World industrial production and air freight evolution

International political stability

Geopolitical relationships have a major impact on civil air transport operations. International air transport market is largely regulated by international bilateral agreements. Difficult diplomatic relationships may result in the void of those agreements leading to the cancelling of the routes; whereas, close diplomatic relationships may lead to the establishment of more liberal agreements that brings more freedom to companies.

Globalisation has been positively influencing countries' relationships and, as a result, there is a strong trend towards liberalisation of air transport markets. Yet, there is also a considerable number of regional geopolitical tensions threaten these efforts. The current economic downturn has revived again the shadow of national protectionism in some governments. The actual consequences and impact of these movements are still unclear, but unless countries change their perspective some delay may occur.

New threats

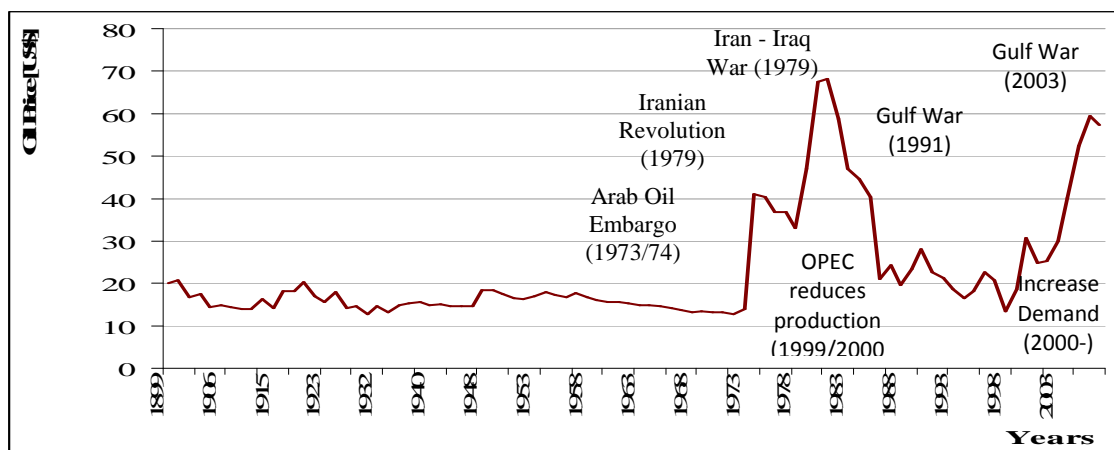
This last decade will be remembered by the appearance of new forms of threats in aviation, namely: terrorism and diseases. Air transport sector is for a long time a vector for terrorists either making themselves and their demands visible, or forcing others to act in some way. The common tactics include or bomb attacks or hijacking of aircrafts. Additionally, other kind of threat has also emerged recently: unknown and incurable diseases, like for instance the SARS epidemic in Asia in 2002 and 2003, or influenza in

Mexico 2009. Air transport is in this situation, a victim of its own success, since it may quick spread diseases around the world.

Instability of oil prices

Fuel cost is a major element on an airline's cost structure. It accounts alone for 30% of an airline's total operating costs (O'Connor, 2001), although this amount very much depends on oil prices on international market. Fuel price is related with oil prices, and oil is very much a commodity. Its price freely fluctuates on the market in function of its availability and speculation levels. Air transport companies may reduce the variations by hedging their future fuel purchases, but only to a small extent.

Figure 5 sketches the evolution of oil in international market for the last century (Doganis, 2006, Allaz, 2004). Instability in oil prices started in the seventies and there are no signs of slowing down. Taking into account the sudden 2008 peak, it is most likely new peaks emerge on the future, which will be problematic for the sector. The future does not seem positive to the sector. Oil prices only tend to increase as the finite sources of oil are being exhausted at a fast pace. Such trend only indicates the sector needs seeking alternative sources of fuel.



Source: WTRG Economics (2007)

Note: Constant 2006 values

Figure 5: Oil Prices (years 1889-2008)

Technological developments

Aviation is the consequence of technological development (Rhoades, 2008, Wensween, 2007). Amongst all of the technological development, arguably internet and web base communications are the most relevant development of the last decades. Internet became

the preferential distribution channel for selling tickets (passengers), leading to the development of new marketing and business strategies.

Air cargo transport companies have been intensively utilising new communication tools coupled with other technological improvements for improving quality service operations. The very success of Integrators lies on the intensive utilisation of automatic process and web based communications for streamlining the transport process and reduce costs. UPS for example has a dedicated satellite based communication network to manage their transport process in the United States.

Technology is bringing more efficiency and productivity to air transport sector and looking into the pace of development, further improvements are expected into the future.

Sustainable awareness

Environment was recently brought to the foreground of political debate and social concern. Societies and governments have been realising human activity is jeopardising the planet's stability and liveability.

In Europe, European Commission has brought forward a proposal (European Commission, 2006) for legislation. In parallel, populations and customers either individual or institutional are also increasingly aware of the need for protection environment and demanding further reductions of environmental burden. Companies and enterprises, either pulled by their customers or as part of sustainable commitment, are also engaging in more environmental friendly approached and processes. For example, Wal-Mart or Dell are requiring their supplier to report carbon emission (Air Cargo World, 2009a), which may increase pressure on air transport providers to curb carbon emissions.

Current pressures for air transport sector reducing their carbon footprint are likely to intensify in the future as natural resources are exhausted and global warming worsens.

Trends

This chapter explores the trends the air transport sector has been following over the past couples of decades (Figure 1).

Liberalisation and deregulation wave

On the words of Rigas Doganis (2006, pp 12) “the most significant trend during the last 25 years or so has been the gradual liberalisation of international air transport”. However, nowadays this is still more the exception than the rule as only some countries have de facto liberalised or deregulated their air transport markets.

Common to all the opening movements is the fact of the central focus being the passenger and not the freight business. And, although first opening movements on the freight market have already occurred (for example in the United States), this has happened more as test bed or preparatory stage for the passenger segment then for the sake of the freight market.

A detailed review on the liberalisation and deregulation phenomenon lies outside the scope of this paper. Moreover, there is a substantial amount of literature dedicated to this topic, the interested reader is referred to: Doganis (2006), Reis (2005), Sinha (2001), Chan (2000), European Commission (1997).

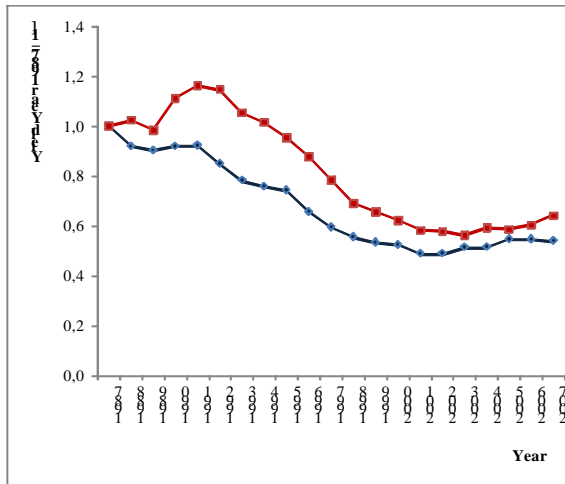
The actual impacts of liberalisation processes on air cargo sector remain largely unknown. Firstly, the amount of research dedicated is still somewhat scarce, which does not allow for factual (or at least confident) conclusions. Moreover, privatisation of the sector has rendered difficult collecting data on the sector. Secondly, some changes on the freight market might have been driven by passenger market (and not necessarily as a reaction to changes in the air cargo business). Thirdly, in parallel to the opening of air transport market changes at other levels have occurred, like for example: emerging of new demands, new technological developments or even deregulations on other modes of transport (Zhang and Zhang, 2002, Button and Stough, 2000). Button and Stough (2000) found an average increase of 20% when comparing 1980 to 1977.

Liberalisation and deregulation initiatives are likely to continue in the future as new countries realise the inherent benefits and opportunities. Consequently, further turmoil and alterations on the structure of air transport sector, with significant impacts on the freight business, are expected to continue in the future.

Not so declining yields

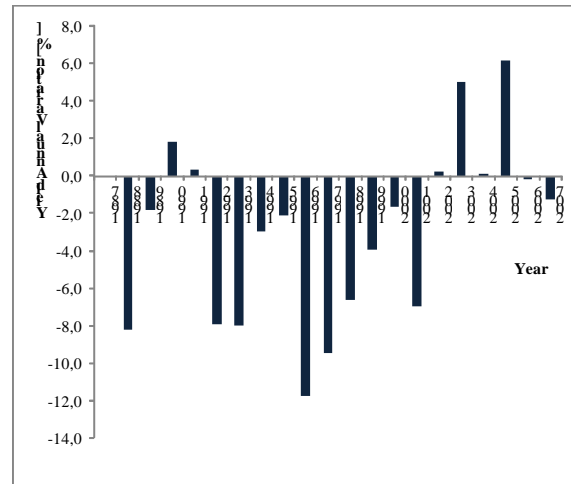
Looking to the past couple of decades, there is a long downward trend on both freight and passenger yield (Figure 6 and Figure 7), which has mentioned represents an increasing pressure on companies to reduce costs and increase productivity and performance. The downward is not however constant but resembles a wave shaped curve. There was a long downward movement followed by an increase and again a decrease. The first downward phase that ends in 2001, brought a total reduction total of 51% compared to the year 1987 corresponding to an annual negative variation of 3.7%.

Within the current negative economic downturn and an ever increasing competition, yields are not likely to increase significantly. In this context, surcharges could provide some relief by increasing companies' revenues, although demand may be affected.



Source: Boeing (2008)

Figure 6: Passenger and Freight Yields



Source: Boeing (2008)

Figure 7: Freight Yield Annual Variation

Air transport business – cyclical and marginal industry

Air transport business “is an industry which as a whole is both cyclical in nature and very marginal in terms of profitability. Yet it is one in which a handful of airlines do manage to be consistently profitable over many years” (Doganis, 2006). This sentence summarises the inherent behaviour of this industry.

Airlines' maximum revenues are seldom above 5% per year. This level of return is below average return on other industries, which is raising some concern on academia on whether these are enough to cover the negative years and plus to generate enough internal capital (Doganis, 2006, Button, 2003, Button, 1996). There are however notable exceptions on the market. For example, Integrators have been able to report sustained

positive result since their emergence around seventies. However, this is more the exception than the rule.

Currently, world is undergoing a major economic downturn. The repercussion on the air transport sector was immediate with airlines registering a US\$5000millions loss in 2008. Air cargo activity has contracted by 4% for the year 2008, compared with to 4.% growth in 2007; and only in December 2008 there was an unprecedented 22.6% decline (IATA, 2009a).

In the short term there is the prospect of the maintenance of the current economic depression, which foresees difficult time in the coming months or years. In the long run, there is prospect of economic growth and the likely return to positive grounds, however if this will be enough to cover current losses only time will answer.

Agreements and Alliances

Agreements have been widely used by airlines on the passenger business, with high success (Rhoades, 2008, Airline Business, 2008b, Doganis, 2006). However, the same is not happening in the air cargo business, for several reasons (The Journal of Commerce, 2005, Airline Business, 2005a, 2004). Conversely, companies have been favouring bilateral agreements. For example the passenger air transport company Lufthansa has several bilateral agreements with other passenger companies such as Air China, South African Airways and US Airways, as well as Integrators such as DHL (Airline Business, 2005a).

Nonetheless, passenger business's agreements can have a significant impact on air cargo business operations, because a significant part of air cargo moves on passenger aircrafts' lower deck

The ultimate type of agreement is a merge (or acquisition). In international aviation, this hardly occurs due to governmental protections that prevent foreign control of national companies. Liberalisation and deregulatory have been changing the status quo and some movements are already visible, for example: in European Union, with the merger in 2004 between air transport companies Air France and KLM.

This trend is likely to intensify in the following times. The likely intensification on the reduction of demand for air services (Airline Business, 2009a), owing to the

deterioration of world's economic environment, might lead air transport companies seeking for further agreements in order to get more protection and increase their competitiveness. Additionally, the spread of liberalisation to other parts of the world may foster agreements. Doganis (2006) and Rhoades (2008) refer that alliances are only intermediary steps towards merging amongst companies. Whether this is correct or not only time could prove, the fact is that further integration is expected to occur in the future.

Security and Safety

Emergence of new threats is a key trend over the current decade. As of September 2001, United States and other governments worldwide have been tightening safety and security regulations on civil aviation.

Security and safety measures have been introduced at all levels of civil aviation's operations. Both European Union (European Parliament, 2002) and United States (GAO, 2003) have been introducing strict rules.

Although of unquestionable value and importance, these measures add costs to the operations, either directly (such as: investment in new equipments) or indirectly (such as: possible increase of delays and lead times) (Air Cargo World, 2008, Shipping Digest, 2008).

In the future the level of threat is likely to increase, so the sector should be ready to continue incorporating the increasingly strict safety and security rules. Particularly further regulations and measures are expected to be introduced for the transport of freight on passenger aircrafts, mirroring what is occurring with the passenger security measures, which are likely to raise costs and bring higher difficulties in complying customers' demands.

Environmental awareness

Air transport sector is under a growing pressure to curb and limit its carbon footprint (Airline Business, 2008d). Air transport companies are responding accordingly (Air Cargo World, 2009a, Airline Business, 2008e, Air Transport World, 2008).

Initiatives for reducing carbon foot print include: replacement of older for state-of-the-art aircrafts, more fuel and noise efficient (Business and Commercial Aviation, 2008);

operational measures, such as: reducing aircrafts' taxiing and waiting times, single-engine taxiing, cutting aircrafts weight through lighter seats or on board equipment, turning off lights, or reducing thrust take offs (Airline Business, 2008e, Air Transport World, 2008).

Initiatives for curbing environmental impacts are likely to bring air transport companies' costs down, since they all include reducing and optimising consumption of resources and production of waste. Furthermore, going towards an environmental responsible attitude provides a better image in societies and politicians helping minimising friction between them and the sector. In the future sustainability and environmentally awareness will certainly increase, with European Union clearly taking the lead and many other countries following. Therefore, air transport sector will be particularly targeted. Air transport companies will have to take this trend into consideration as it will only but growth in the coming future.

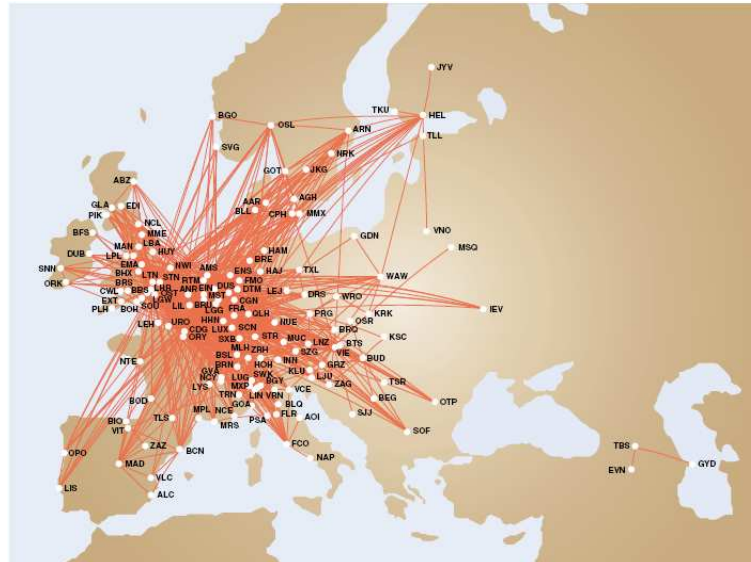
Cooperation with other modes of transport: air trucking

Replacement of air for road transport on portion (or portions) of an air transport journey is a growing trend, in some regions of the world. This solution is called as air trucking or road feeder service.

Air trucking has become quite popular in some regions, namely: Europe and United States, to replace short- to medium-haul (domestic, regional or continental) feeder flights of medium- to long-haul (intercontinental) flights (Air Cargo World, 2009. Traffic World, 2008, Button and Stough, 2000, Traffic World, 2000). Boeing (2008) reports, in the United States from 2005 to 2007, a growth of 9% on the number of road-based flight routes, and a growth of 34% on the frequency of road-based flights schedules. In Europe from 2002 to 2007, the same report computes an annual growth of 24%, from 3870 up to 11497, on the weekly road-based flights frequencies offered by passenger air transport companies (Figure 8).

The main reasons for the emerging trend of air truck are, first, an increasing pressure on the costs' reduction (Air Cargo World, 2009b, Traffic World, 2008), and second, lack of available space on board aircrafts, particularly those of medium to short range (used on continental distances) (Traffic World, 2008).

Air trucking is an important trend in continental European and United States air transport market. In the future, the current slowdown of economy coupled with a likely increasing of competition should put further pressure on cutting on transport costs and, consequently, increasing the relevance of air trucking.



Source: Boeing (2008, pp 54)

Figure 8: Air trucking routes (as of May 2007)

Competition with other modes of transport: sea on long-haul and road on short- to medium-haul

The recent years saw a progressive incursion of road and sea modes of transport into domains (markets and goods) that were traditionally clients of or shipped by air transport (Airline Business, 2007). Although being by far the fastest mode of transport and highly reliable, air transport is also the most expensive one, which is enough to make customers carefully reflect on the importance of time for their goods.

Additionally, other forces have been reducing competitiveness to air transport: progressively slow-down on the economic growth and current recession, or a decrease on the rate of creation of high value and new mass market products, and those existent are maturing towards commodities (Boeing, 2008, Airline Business, 2007).

A steady increase of competitiveness of other modes of transport is likely to occur in the future, which raises important questions on the competitiveness nature of air transport sector or on its place on the, besides bringing further pressure on the air cargo players.

Air Cargo Market

In the recent decades, air cargo market has become highly dynamic, as new drivers and trends emerged in the landscape. Progressively, new goods became eligible for air transport, new agents entered into the market, and new interactions have been established. The market has evolved in complexity and dimension and, nowadays, is quite heterogeneous. This chapter provides a snapshot on the air cargo market.

Nature of Air Cargo Demand

Zondag (2006, pp 30) clusters customers into three types, being:

- *Knowledgeable* of air cargo services – when customer is able by herself to specify the needs and requirements, to contract supplier and monitor services;
- *Aware* of air cargo services – when customers is not able by herself to specify the need and requirements, but is aware that air cargo is likely the most suitable transport solution. This customer has thus to contract a freight forwarder, integrator or other air cargo agent;
- *Not conscious* of air cargo services – when customers does not know (and is not interested in knowing) about the details of transport solution.

Demand for air cargo services is rather complex and dynamic, depending upon a set of factors. Figure 18 divides the spectrum of freight in terms of its propensity for being air transported. As just mentioned, some goods, owing to the risk of transport, are banned from air transport. In what concerns goods allowed to be conveyed by air, three main groups may be identified. One concerns those goods for which there is no economical justification (except on very specific situations) for utilising air transport. On the other extreme lays those goods for which air transport is the only possible transport solution. These goods are captive of air transport. The final division includes those goods for which air transport is viable, but other modes of transport may also be a possibility. The actual mode of transport will largely depend on the competitiveness level of each transport solution. Examples include most of the goods on **Error! Reference source not found.**, such as: computers, machines, or clothing.

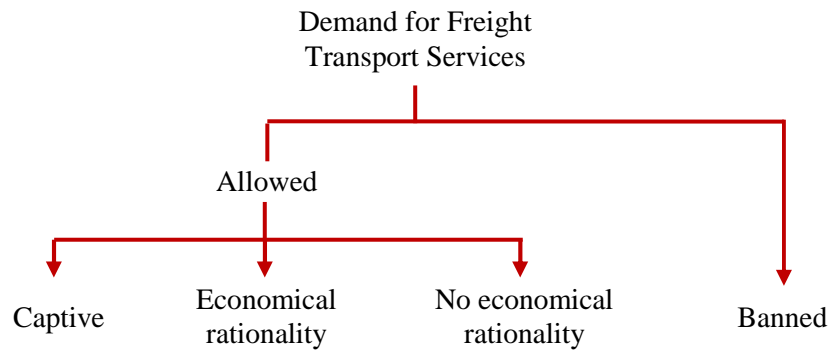


Figure 9: Spectrum of air cargo demand

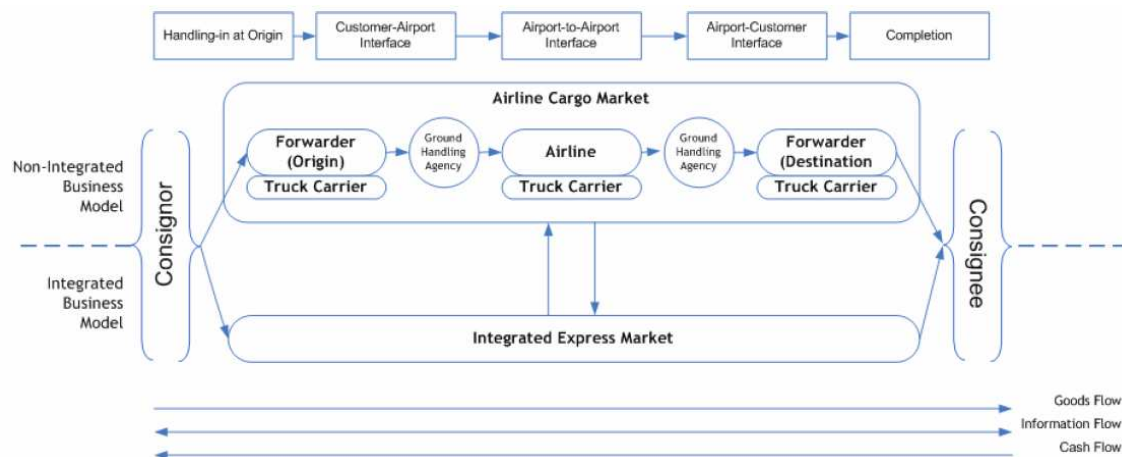
Nature of Air Cargo Supply

Agents in the Air Cargo Market

In the air cargo market there are a large set of agents performing different roles and interacting in different ways, such as: cooperation, competition, negotiation, verification or regulation. Within the scope of this monograph there are three agents particularly relevant, being: freight forwarder, air transport companies and integrators. The remaining ones, notwithstanding playing key roles on the market, play less relevant roles for the purposes of this monograph, such as: functions of facilitator, supplier, supporting or regulation. These agents are: customs authorities and other governmental agencies, national and international regulatory agencies, airports and cargo terminal, handling companies and other mode of transport companies.

Supply of Air Cargo Services

Transport providers have been supplying new services aiming to accompanying customers' demands and gain competitive positioning. Supply of air cargo services has been increasing in complexity and scope. Nowadays there are multiple hybrids and overlapping configurations in the market (Taylor and Hallsworth, 2000). Notwithstanding, supply of air cargo services may roughly be divided in two main models: (Figure 10), being: non-integrated and integrated.



Source: Zondag (2006, pp 23)

Figure 10: Concepts of air cargo services

The non-integrated concept corresponds to the traditional provision of air cargo services. On this concept, several transport agents participate on the transport service in a coordinated fashion. Typically there is an agent, working on behalf of customer, responsible managing the transport service – freight forwarding role (albeit not necessarily being a freight forwarder), and a set of other transport-related agents performing different roles. Thus, vertical or horizontal integration is not common on this type of configuration. Each agent is an independent company, and the transport chain holds for the duration of the transport services (extinguishing thereafter). On this transport service, albeit customer also dealing with a single entity – freight forwarder – every other agent is visible to end customer.

In the integrated concept there is a single agent responsible for every transport-related service. This agent plays the role of integrator (albeit not necessarily being an integrator). The customer understand the transport service as being provided by the same company And even when third parties are involved, they are not visible for the customer. Global freight forwarders have been providing integrated transport services.

Combination companies

Passenger Business versus Air Cargo Business

Combination companies run in parallel passenger and air cargo businesses, sharing resources and procedures. However, in actual terms these are two different market requiring different strategies and model business. The principal differences are:

- Passenger market is inherently balanced, conversely to cargo market (O'Conner, 2001, pp 162);
- Passenger market is essentially a mass market; while freight business remains largely an industrial business, with human contact and personal networking do still play an important role (Zondag, 2006);
- Passengers prefer direct routes, often have preferential schedules, and pay a great deal of attention to comfort and safety aspects of airports and aircrafts (Teichert et al, 2008). Conversely, on air cargo demands there are no concerns for the route, aspect of cargo terminal or aircraft. Moreover, choice of an air cargo transport provider involves a very careful and thorough process, and arrangements are established after extensive negotiation and analysis (Airline Business 2004).
- Passengers are a uniform product; by contrast, air cargo appears in very different forms, shapes, weight and sizes, which requires more efforts of handling and complying with goods' specification and customers' demands. Level of customisation is thus inferior, unless when focussing in a specific market segment as Integrator do;
- Passenger move by themselves, do not requiring further involvement from the transport companies; while air cargo is passive being necessary the involvement of third parties to deliver or pick up goods at airport, which inevitably leads air transport company contacting with other modes of transport (O'Connor, 2001, pp 162).

How relevant is air cargo in the air transport companies' business?

Combination companies are air transport companies that provide both passenger and freight transport services. In 2004, Georg Midunsky, managing director of Cargo Counts¹, pointed out that around 95% of combination companies consider air cargo segment as secondary business (Airline Business, 2004). Zondag (2006) argues that relevance of air cargo business largely depends on how companies' board of administration considers cargo: core, ancillary or dispensable. Notwithstanding, air

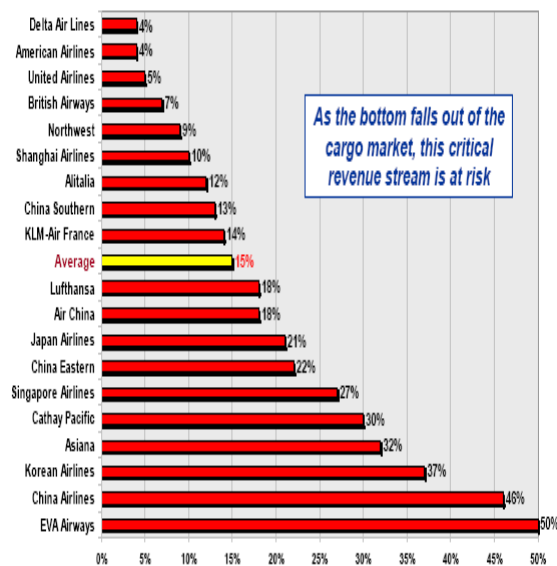
¹ Cargo Counts is a Lufthansa subsidiary that manages the capacity of other carriers

cargo business may play a key role on companies' financial performance. Its importance is visible at two levels.

Firstly, at route level (or geographical market) level. Profitability in long distance (or intercontinental) transport services is largely function of air cargo business; as passenger business seldom provides enough revenues to make profit. Air cargo business thus plays a key role for sustaining routes and thus market coverage, which is of paramount relevance in a network industry like air transport business.

Secondly, at company level. Figure 11 presents the percentage of air cargo business's revenues on some combination companies. The interval is wide and if indeed for some companies air cargo business seems positively a marginal activity (as for example Delta Airlines contributing with as low as 4% of total revenues) on many others it should be considered a relevant business contributing with as much as 50% of total revenues.

Zondag (2006) also points out for 15% the average relevance of cargo business in combination companies.



Source: Serpen and Mirza (2009)

Figure 11: Cargo revenue as a percent of total revenues, in 2008

The Relationship with Freight Forwarders

In a movement initiated after the World War II, combination companies have progressively focussed on passenger business. In this process, they decided to relegate those functions two third parties, opening the door for freight forwarders entering the air

cargo business. Over time, they gained control of air cargo business, negotiating directly with end customers and becoming combination companies' main customers (Figure 12 – left). Nowadays, Freight Forwarders continue to be combination companies' main customers and largely control general- freight (express-freight was meanwhile taken by Integrators).

This relationship is certainly more favourable to freight forwarders than combination companies (Air Cargo World, 2000). The former, having direct contact with final customers, are in better position to understand the market requirements control the market. Additionally, freight forwarder may offer added valued services, upon transport services, being able to increase margins. Thus, competition on freight forwarding market has evolved towards price and quality of services. Conversely, combination companies are relegated to an inferior positioning in the market, of mere transport providers. Their scope for offering added valued services is reduced, and thus competition on the air cargo market has evolved centred very much on price (Zondag, 2006). Over time price of air cargo was reduced to the marginal cost, with passenger business bearing the reminiscent.

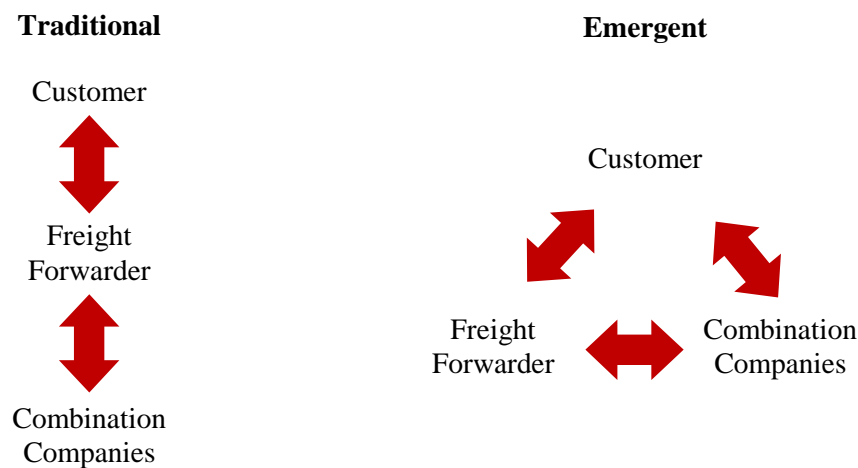


Figure 12: Relationships in the air cargo market

Nowadays, relationship between freight forwarders and combination companies remains largely the same as Figure 12 (left). Recently, some combination companies have been attempting to engage in directly negotiations with end customers (Figure 12 – right). The goal is to gain direct access to end customer and thus improve their competitive positioning. However, this is not easy task since it implied to bypass freight forwarders, which being the main customers may trigger some retaliations (namely, ending

business), and since retail business (marketing and negotiating with end customers) requires a different approach than wholesale business (marketing and negotiating with freight forwarder).

Clouds in the sky – combination companies' challenges

This paper hitherto has evidenced the many transformations air transport sector underwent over the past decades. Air cargo business in particular grew both in size and in complexity, and the competitive environment is tough than ever. Combination companies in this sense are faced with several challenges (Figure 13) that if to survive will have to be overcome in due time.

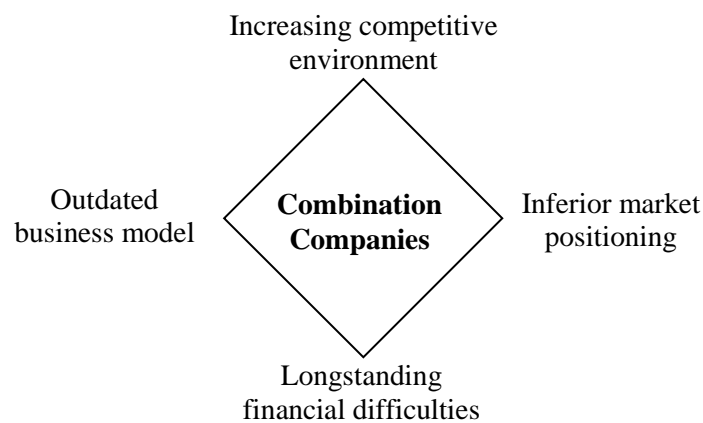


Figure 13: Challenges facing combination companies

Increase Competitive Environment

One of the most significant trends over the past decennia is undoubtedly the steady increase of competitiveness in both passenger and air cargo markets. Liberalisation and deregulation wave is abolishing economic regulations. Progressively, governmental protection is ending and new comers have entered the market. Additionally, economic cycles have been put further pressure on companies to increase performance levels; otherwise market withdrawal is inevitable.

Passenger companies are undergoing being more or less successful, restructuring and adapting their networks and processes; on the air cargo business it has been more difficult. Amongst other factors, initial positioning has influenced current positioning. On the former business, they started from a comfortable position (control of the market

and political support); whereas on the latter they started from an inferior market positioning (towards Freight Forwarders and new comers Integrators).

Longstanding financial difficulties

As in any other business, capital availability is of paramount relevance for investing in new equipments or technologies, entering into new markets, proceeding to acquisitions, or surviving through the negative times. In the case of combination companies, such availability is even further relevant as they need to achieve competitiveness leaps in order to come closer to Freight Forwarders and Integrators.

However, air transport business is characterised by marginal profits and cyclic behaviour, which does not provide air transport companies enough revenues to generate financial surplus. Recalling that passenger business is the core business, it is thus natural channelling the bulk of financial efforts towards this business and, only in case of availability, favouring air cargo business. The problem is that by deferring investments in up to date technology and knowledge, combination companies are only increasing the gap with Integrators.

Outdated Business Model

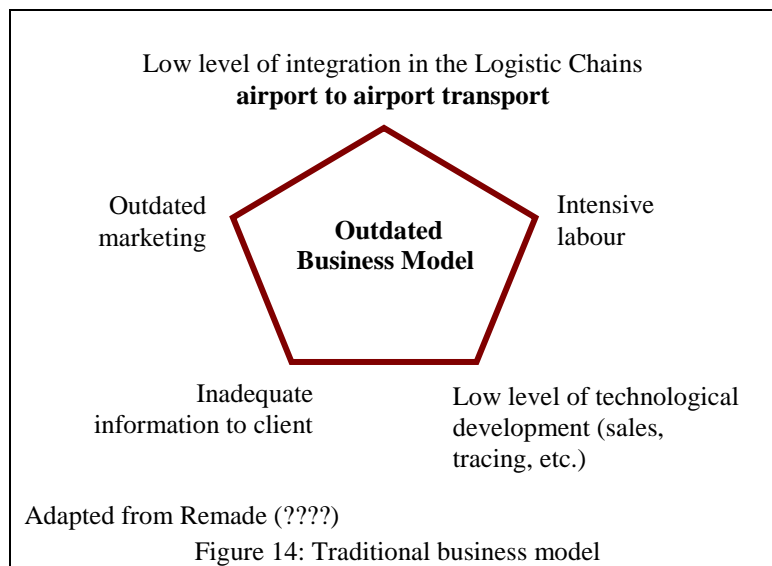
A relevant challenge some combination companies are facing is to continue faithful to a business model that is no suitable for current market conditions. This becomes more obvious as air cargo business become less relevant and strategies become simpler. Such business models were developed in a different environment, most likely during the regulated time and when market demands were different. Meanwhile, the world has changed and demands requirement evolved, but no efforts for updating have been done owing to a lack of know-how.

Although varying amongst airlines, the traditional business model is largely based on the factors laid down on the following scheme (Figure 14).

The lack of suitable business models is a major handicap since it hinders quality and prevents the deployment of resources on the provision of high quality services. However, more serious is the lack of know-how on air cargo business that prevents the development of better business model. And this is one of the major challenges

combination companies are facing. If they ever want to increase their competitive positioning significant leaps will have to be achieved at this level.

Combination companies with (more) developed strategies have necessary already undergone this change in order to compete head to head with the other competitors, mainly: Freight Forwarder and Integrators.



Inferior Market Positioning – stuck between Forwarder and Integrators

Combination companies have evolved towards an inferior market positioning owing to considering air cargo business a secondary business. Eventually, they reduced resources and efforts on this business, relegating on third parties - Freight Forwarders – business marketing and operations. The outcome was a loss of contact with end customer and competitiveness essentially based on price (with very limited scope for offering added value services and thus increase prices).

Integrators have been ever growing since their emergence around seventies: firstly tackling an underserved market – express freight – and recently moving towards the traditional market – general-freight. Furthermore they do offer far better transport services (albeit considerably more expensive).

On the other hand, many combination companies do not have enough know-how to conveniently operate on air cargo business. Additionally, most of them have chronic financial difficulties, which reduces their capability of investing in either in state-of-the-

art equipment or on resources’ schooling, which is required to improve competitiveness positioning.

Thus, combination companies are stuck in-between Freight Forwarders that control the general-freight market (contact channels with end customers) and Integrators that control express market and provide the highest quality services. A market position which is worsened by the difficult financial situation and lack of know-how.

Possible Strategies for Combination Companies

We now elaborate a framework of strategies that companies may follow. The actual implementation depends upon several factors, namely: company’s level of commitment towards cargo operations, positioning on the market and direct competitors, market properties, and companies’ financial health. Naturally, higher complex strategies evolve higher risks and costs, but returns are also high.

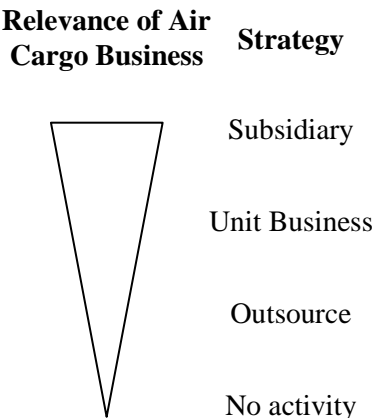


Figure 15: Business approaches to air cargo

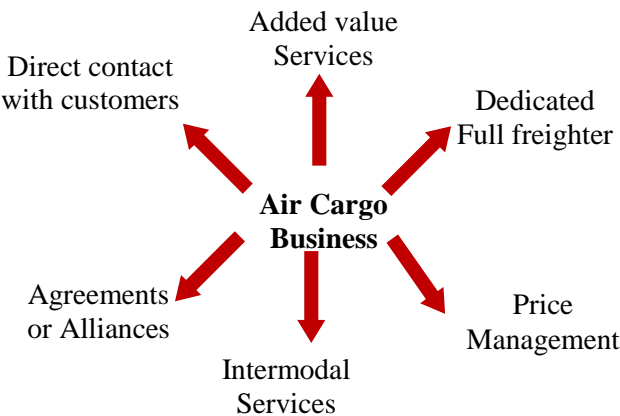


Figure 16: Common features of air cargo unit business

No air cargo business activity strategy

The lowest possible commitment towards air cargo business is simply not providing air freight services at all. Two main reasons may lead to this decision. First, air cargo business’ requirements may not be compatible with air transport company’s overall strategy. In this situation, company may prefer withdraw from the air cargo business than hampering passenger operations’ performance. This is the case of the so-called low cost companies. These companies tend to operate small to medium range aircrafts

(normally, Boeing B737 or Airbus A319), with limited air cargo capacity, and have very short rotation times that are not compatible for unloading and loading operations.

Second, freight transport market can be of reduced dimensions and demand may not be enough for justifying a dedicated air cargo unit business. Third, air transport company's board may simply not consider air cargo business worth of investment.

Outsource strategy

The second type corresponds to provide air cargo services but keeping to the minimum possible extent their efforts (and commitment) to this business. This may involve to establish long term block space agreements with third parties, such as: freight forwarders, general sales agents or specialised air cargo management companies.

On this strategy, every air cargo market related activities are produced by a third party, while the involvement of air transport company is reduced to the physical transport of freight.

Possible reasons for deploying this strategy include a need to focus managerial attention on the passenger business (owing to a potential increase of competition); a need for reducing costs; or a solution for improving quality of service and revenues (as the specialised third party is in position to do a better job). As an example, this was the strategy, of SN Brussels that in 2004 outsourced to European Cargo Services. The reason was the lack of known how since on the previous six years air cargo business had been managed by other company: Swissair (Airline Business, 2004).

Unit Business

The third strategy involves the establishment of a dedicated air cargo unit business within the organisation. This unit can range from a simple cargo department, with low level of autonomy, up to a separate division that pays the parent company for utilising resources. This is by far the strategy with higher degree of possibilities, and the exact configuration will depends on the air transport company's external forces. Figure 33 presents some of the services that might be executed and offered.

A simpler cargo department would deploy simple strategies, offering solely airport-to-airport services on the passenger aircrafts' lower deck (and eventually combi-aircrafts or full freighters); and an array of other added value services, such as: track and trace of

goods, or customers' clearance services. Additionally, also implies lower financial investment for both implementation and running.

A more complex strategy would be to implement a separated division. This division would have the freedom to operate combi-aircrafts or have dedicated full freighter operating on the busiest markets, offer intermodal transport services (such as: airport to door, door to airport or even door to door) which entails establishing vertical agreements with other transport companies, establish horizontal agreements with other air transport companies to increase the portfolio of services or, even, enter in a more strategic form of alliance; or engage in direct relations with final customers. This approach implies higher risks, and initial costs, although if successful could yield larger benefits.

Example of a passenger air transport companies with separate division are Air France and KLM, or British Airways World Cargo (Zondag, 2006).

Subsidiary Strategy

The most advanced strategy towards air cargo is to establish a subsidiary unit. A subsidiary is an independent company that is wholly or partly owned by the parent company, and normally shares its name (for better market recognition). A subsidiary unit has a great amount of autonomy: defining its own type services, operations and equipment. Depending upon the specific configuration of the subsidiary, the only requirement might be to maximise the parent company's available capacity. Apart from this, the subsidiary has total freedom to run the business, which may include, besides the already mentioned features depicted in Figure 33, buy space in other air transport companies, or dedicated marketing strategies.

Examples of this strategy include the Lufthansa Cargo AG or Singapore Airlines Cargo (Zondag, 2006).

Conclusions

Nowadays, aviation sector is undergoing a major turmoil, aggravated by the current economic downturn. The analysis to the market reveals that in average air cargo business represents 15% of companies' total business, and that passenger business is characterised by low margins (up to 7%). Thus, in this current environment, air cargo

can be an important source of revenues, and be a decisive factor for a company's profitability.

However, recent evolution of the air cargo sector has not favoured passenger companies. These companies face significant challenges which should further increase in the future if the current drivers and trends are to hold. The main challenges are: increase of competitiveness, weakening positioning in the market, outdated business model and a longstanding financial difficulty. If on some of these challenges, companies bear no responsibility and have been caught by the current turmoil; on others, companies were the main responsible for the current situation. This is the case of the weak competitive positioning, which was caused by passenger companies have over time relegated air cargo business to an inferior positioning and, often, outsourced to third parties. Passenger companies are therefore in need to overcome the current situation.

Several strategies towards air cargo business have been identified, being: outsourcing, unit business or subsidiary. A fourth strategy was also foreseen which is abandonment of air cargo business. Different strategies bring different risks, costs and also revenues. In overall terms, a higher level of commitment implies a higher control over the business and, thus costs and risks; but, because companies control the business is also in position to reap higher benefits. However, the choice should not be function of the potential level of revenues, but on both the nature and intensity of the challenging factors above mentioned, and the company's own strategy towards air cargo business.

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