# Overview of air transport industry tourism essay

Sport & Tourism

By ATAG, " the air transport industry is the global network of commercial aircraft operators, airports, air navigation Service providers and the manufacturers of aircraft and their components. It is responsible for connecting the global economy, providing millions of jobs and making modern quality of life possible". The Air Transport Action Group (ATAG), based in Geneva, Switzerland, represents the full spectrum of this global business. ATAG brings the industry together to form a strategic perspective on commercial aviation’s sustainable development and the role that air transport can play in supporting the sustainability of other sectors of the economy. FAA, Another definition of aviation industry defined by the FAA Aviation, therefore, is defined as activities related to mechanical flight, which include the operation, maintenance, design and production of fixed and rotary wing aircraft. Aviation is a highly technical industry that overlaps with the space industry in a number of ways; however, it is important to distinguish between the two because, while they share certain functions such as manufacturing, they operate independently.

## 3. 1. 2 The Value Chain for Air Transport

The nature of air transport is changing and in many countries different forms of organization are used. Gomez-Ibanez (2003) differentiates between spot markets, private contracts, concession contracts, discretionary regulation, public enterprises and hybrid forms. In air transport almost all these organizational forms are practiced. Interestingly there is no country which has organized air transport as a privatized vertically integrated public utility subject to regulation. Typically a disaggregated approach has been adopted consisting of regulated infrastructure and a partly liberalized downstream

market. Airlines sell their final products consisting mainly of seats and freight transportation directly via internet websites or indirectly through travel agents and freight agents to consumers and firms (see figure 3-1 below, S 2). The internet has effectively decreased the market power of booking systems and has reduced the market share of travel agents over the last ten years particularly in developed economies and those fast growing ones where the countries are well connected by the national and international network system of which most of African countries lag behind. Air fares are traded on spot markets, part of packages with holiday services or other services like car rental, hotel rooms, travel insurance and so on. In the business segment airlines sell their tickets at a discount to large companies. These downstream markets are more or less competitive industries. The airline market is still a tightly regulated industry when airlines try to serve destinations outside their home countries. For these services airlines require traffic rights (‘ freedoms of the air’). Restrictive air service agreements allow for only a limited number of flights and carriers on many international routes, thereby artificially reducing supply, with the result that fares are above competitive levels. Open skies agreements usually eliminate these regulations and the associated rents but some forms of ownership restrictions still prevent access to these markets (Doganis, 2002). The economic rationale for this kind of regulation is weak, but complete liberalization is not on the political agenda. Overall, liberalization has been a success story (Morrison and Winston, 1992). In the US air fares decreased in real terms by 40 per cent from 1976 to 2001 and about 60 per cent of this drop can be attributed to deregulation (Morrison, 2002). European deregulation is in line with the US experience. Since 2000 Low Cost Carriers

(LCCs) have intensified competition. This is especially the case with Southwest in the US, where its entry forced fares down on direct routes, and to a lesser extent on adjacent routes (Morrison, 2002). Similar effects are observed in Europe when Ryanair enters a market. It appears though that direct competition is the main driver, while potential competition has a rather weak effect. Therefore aviation markets are seen as not fully contestable (Borenstein, 1992). Although airplanes are still seen as ‘ capital with wings’, part of airlines fixed costs are sunk in, for example, developing hub operations or the marketing of routes. The network character of air transport has posed two interesting problems for competition policy, namely the occurring of hub premiums and the development of alliances and mergers. Hub premium is the phenomenon when one dominating airline charges a higher fare for flights from the hub airport. This might be due to market power, but could also be explained by economies of scale and scope, higher frequency, more destinations and frequent flyer program. According to Tretheway and Kincaidearly estimates were relatively high with 12 per cent Borenstein (1989), 27 per cent GAO (1990) and 18. 7 per cent DOT (1990). Later Abunassar and Koford (1994) found only 10 per cent and Morrisson and Winston (1995) 5. 2 per cent, which completely stems from the higher quality of services. As LCCs have emerged at the beginning of the century this and made discussion lost its importance.

## Figure 3-1 Air Transport value chain

Source: Adopted from Hans-Martin 2012 pg 5Overall, the welfare gains of deregulation are so large that re-regulation is not a serious policy option. It is a market with imperfections driven by economies of scope and density

subject to competition law regarding mergers and alliances, predatory pricing, cartels and price fixingIn the past three decades, regulatory reform and privatization, have however subjected these sectors to competitive forces that have transformed these industries. With the introduction of competition law in many jurisdictions, the justification of their continued exemption has come under intense scrutiny. While the argument for the benefits of competition can be generally made, the lack of harmonization of competition laws together with the international nature of these sectors which is further complicated by higher concentration, network characteristics and government sanction barriers to entry continue to present challenges for competition authorities, Sock –Yong Phang 2009 p 193). Airlines acquire a number of inputs during early stage of industrial markets. Aircraft are bought from manufacturers or are leased from specialized leasing companies (see form figure 3-1 above S1). There is a functioning secondary market for leasing and buying aircraft. Aircraft production is characterized by learning economies and state subsidies. There are only a few producers in certain market segments like large wide body jets. Overall there is no need for economic regulation, and the issues are addressed through competition and trade policy. Airlines buy fuel on the world market using different types of contracts including hedging against the risk of oil price changes (see figure 3-1 above S3). As for commercial aircraft refueling can only be done on the ground, and thus airports might create access problems for ground handling services. Airports can also have opportunities to cross-subsidize fuel for certain carriers or certain destinations. Airlines need the right to start and land at the airport they intend to serve. This is not a problem at airports with ample capacity, but there are access problems at busy airports. Outside the

US, airlines apply for slots at busy airports (see S4). The slot coordinator distributes slots following rules defined in line with IATA rules. In the US, access to busy airports is rationed on a first come first served basis (grandfather rights). The lack of market based slot allocation and of off peak and congestion pricing by airports has been criticized for a long time (see Levine, 1987). The welfare losses are estimated to be in the range of several billion a year (Morrison and Winston, 2008; Mott Mac Donald, 2006). Lately however, the issue of congestion pricing has been completely revised taking into account the vertical structure of airport and airlines. Air traffic control (ATC) services (S7) are another indispensable input for airlines. These services consist of local services at the airport and en route services in the upper air space. ATC guides the aircraft from the gate to the take-off runway and controls the flight within a certain radius of the airport. Then it is handed over to the en route manager who guides it to the final destination and hands it to the local ATC provider. ATC is responsible for coordinating flights so that air transport is safe and delays are minimized. Given the high fixed costs and the fact that there cannot be two competing air traffic management systems in the same flight corridor makes most of the ATC services a natural monopoly (Oster and Strong, 2008), regulated or controlled by the state. Airlines buy a wide range of services from airports (S5). Airports provide aircraft movement facilities including aprons; a paved area immediately in front of airport buildings, on which aircraft are loaded and unloaded, runways and taxiways and passenger processing facilities consisting of aerobridges, baggage systems, check in facilities, public areas in terminals, flight information displays and landside roads. At some airports, terminals are leased to airlines and ground handling is performed by the

airlines or third party providers. Some airports provide local ATC others do not. Airports also supply non-aeronautical services such as car parking, restaurants, administrative office space and other commercial and retail services. In organizing retail, airports face a make-or-buy decision. On the one extreme, airports sometimes have their own retail divisions while on the other all non-aviation activities will be outsourced to a private developer. There are also a number of options in between these two extremes (Freathy and O'Connell, 1998). We outline these options in turn. The fully-integrated approach might be a suitable option if these activities require limited skills or involve high level of investment. Thus, parking tends to be provided by many airports themselves, while retail remains embryonic and tends to be implemented by airports themselves only in airports with critical mass and established retail operations (staff, logistics, etc.)" (Bamberger et al, 2009). The advantage of this approach is the centralized operation and control of various commercial aspects. The main disadvantage is most likely insufficient non-aeronautical knowledge of airports' staff. Management Company. To avoid the problem of insufficient commercial knowledge, a specialized management company can be hired. The airport pays the company monthly fees and a percentage of the net operation incomes derived from corresponding operations. Usually the airport authority is in charge of financing, providing space, facility design, developing operation standards, keeping inventory, tenant relationship, and financial accounting of profitability. Private developer. A private developer can be hired to design and develop commercial facilities. The developer provides the required financing and administration of all phases of retail or parking facilities' operations as well as subleasing of developed space. The advantages of this

approach are the know-how of the developer and unified equity controlled development of facilities. The main disadvantage is that the airport loses direct control over commercial operations. Multiple prime retail operators. The commercial space is to be leased to multiple retail operators (or concessionaires), who obtain the right to sell goods and provide services. Their lease terms are reassessed after a certain period of time. Airports usually offer contracts for particular categories of concessions, so that different retail operators develop and run a substantial amount of the space. The airport collects rental fees in term of fixed of stepped percentage rates based on gross retail sales of operators or based on leased commercial space. Prime retail operator. The airport contracts to one prime retail operator (or master concessionaire), who takes responsibility for the sale of goods of all categories. This decreases inventory costs and leads to economies of scale in purchasing. However, according to Knight (2009) this structure leads fewer choices, uniform retail outlets and higher prices. Hybrid structure. Airports may also implement a combinations of governance structures for different areas of responsibility (e. g. for different categories of goods, for terminals with different characteristics, etc.) in attempt to build optimal hybrid structure, which combines advantages of separate structures. All disintegrated management structures imply a number of common drawbacks; compromised coordination, private information leakage, quasi-rents loss (if the counterparty deviates from initial agreement) and the holdup problem. Regarding retail activities Bamberger et al (2009) note that in the past airports preferred retail operators with local know-how and the possibility to pay higher fees. But today along with good performance, other factors have become first-priority, namely, financial robustness, a wide-

ranging brand portfolio, a great flexibility concerning available offers and international know-how. It is difficult to assess these different in governance structures empirically, as little data is publically available. While Bourdou (2010) favors direct airport development Pashkin (2011) argues for private developer. Airports have been depicted as natural monopolies due to their asset specificity and economies of scale. The empirical evidence for the latter is not conclusive as studies show that economies of scale run out at levels in the range of 3 million to 90 million passengers (Niemeier, 2009). The sunk costs character of airport investment is unanimously acknowledged, but differs with the kind of services involved. The runway can be redeployed to uses creating only marginal value but office space in a terminal can be used for other value creating uses. The market power of an airport depends in particular on the available substitutes. This differs from airport to airport and for the type of service. For example, there are good substitutes available for Manchester airport because nearby Liverpool airport offers good services for origin and destination traffic and Heathrow is the more attractive hub for connecting traffic. Other airports such as Dublin or the two Parisian airports (under common ownership) lack such good substitutes. Airports with persistent market power do not necessarily have market power across all services. Some have market power for local origin and destination traffic in specific market segments and hardly any market power in the freight market. Some have market power in the provision of aeronautical services but only limited in the non-aeronautical services. For example Schiphol airport has market power in the provision of aeronautical services for business travellers, but the market power for parking is limited by a well-functioning public transport system. Some of the profits of an

unregulated airport with market power reflect market power but they can also reflect locational rents. The decision of an airport to develop a LCCT may also be based on whether economies of scope can be identified. This raises the question of the minimum passenger number above which an airport can differentiate its products and remains profitable. While there are not yet enough studies in this area to be sure about the conclusions, product differentiation strategy, such as the design of LCCTs can help airports secure business volume and improve their competitive positioning (O'Connell, 2007¸ Kazda and Caves 2008; Tchouamou Njoya and Niemeier, 2010). In general, it is expected that the simplified design will have a significant impact on airport cost structure. The impact of LCCTs on non-aeronautical activities on the one hand, and on other airport users on the other hand are the two broad areas that need more research. Closer relationship between airports and airlines, such as airline ownership or control of terminal facilities allows airports to share the risks and costs faced when offering new facilities. Likewise, the ownership of airport facilities may help airlines to optimize terminal operations (Albert et al. 2005; Kuchinke and Sickman, 2007). While common ownership of airport facilities may reduce competition, it is also interesting to note that, although the number of airports in commercial service continues to grow, government ownership and interest in an airport is significantly more wide-ranging than that of airlines, showing the importance of an airport to a local community. In most cases, the need for infrastructure expansion, such as the development of LCCTs, are enforced by governments, whose objective is regional economic development. The development of regional airports has been in most cases dependent on the incentives they can offer to LCCs (Francis et al. 2003). Though in EU and USA

the LCCs helped to increase the welfare by low price fare due to its low operating cost, this is uneasy for many undeveloped economies including Tanzania. One way to approximate required terminal capacity is to use a figure between 0. 007 and 0. 01, multiplied by annual passenger flow, to obtain the required number of square meters (Tanzania airport master pan 2010). Taking an example of Singapore spent S$585 millions to build a new terminal in response to the emerging trend of low cost carriers (LCCs) in Asia and after receiving firm commitment from Tiger Airways to use the terminal near Changi Airport. Ground handling services can be differentiated between land and air side services. On the air side it consists of ramp, baggage, freight and mail, fuel and oil and central infrastructure services. These services can be provided in-house by airlines themselves, which would be backward integration, or by airlines as third party handlers, by independent ground handling companies and by airports. Ground handling services are not bought on a spot market but under a long-term (1-7 year) contracts or are produced in-house. The monetary value of ground handling services accounts for 5-8% of the airline ticket. The vertical supply chain in ground handling starts with the airport, continues with the handler, and ends with the airline. What kind of market organization and governance structure is chosen by airlines, airports and handlers for this vertical supply relationship will normally be determined by transaction cost economics, but it is also influenced by the regulatory framework set by the governmental authorities and the market structure in each activity level.

## 3. 1. 3 An overview of airport-airline relationship

In the past decades, the study of the airports has been done separately and very little attention paid to the air transportation business structure. It is critical to pass on this scene because airports are input providers for airlines though airports do not deliver to the final consumer, but provide intermediate services. The economic effects of the vertical relationship between airport and airlines have been studied quite extensively in recent years (Hans Martin 2012).

## Integration and implications for competition policy

According to the study conducted by Harns Martin 2012 drew a major conclusion as for policy is that the relationship between airlines and airports matters and must be taken into account. The continuous privatization of airports makes it important to look at this aspect very carefully since the effect is two sided in its nature in a sense that it might bring positive features when it is done well, but also it can bring negative outcome relationships. Weighting them against each other will be task of governments in order to determine the extent of regulation. Congestion poses another important problem for regulation as congestion charges of private monopoly airports will not be benefit optimal. Moreover, competition authorities will have to decide whether joint ownership of airlines and airports should be allowed or anticompetitive behavior can be monitored and administered

## Deregulation of air transportation

Deregulation of air transport has not only brought competition into the airline market but has fundamentally changed the structure of air transport.

It has created an increasing number of specialised markets thereby leading to a much more effective division of labour. Hans and his colleagues have detected a number of such markets (e. g. travel agents) in their analysis of the value chain. Perhaps the most important change is the provision of commercial and retail services at airports. Airports have become very entrepreneurial and have tried out different forms of organization. This innovative management is to some degrees developing at major airports for example with the supply of low cost terminals. However, product and price discrimination are still rarely seen in particular at busy airports which do practice any type of peak or congestion pricing which they use in car parking. Airports differ also very much in their approach towards Ground Handling Services (GHS). While some have left the market or have outsourced it completely other have combined a strategy of erecting barriers to entry with minor reorganizations. Rent seeking and regulatory capture as well strong unions in some countries are slowing down the process. This leads finally to cross subsidies option in which some analysts suggest perhaps one of the main factors to reduce the productivity of airports. Network effects are driving the partially liberalized airline market. With these economies perfect competition is incompatible and market power will be created. Sometimes this market power is only temporary. According to Hans and his colleagues 2012, the integration in form of alliances and mergers are difficult to assess for competition authorities and the traditional approach to define relevant markets ignores systematically the wider network effects. The very conspicuous nature of relationship between the airports and the airlines are clearly shown in the value chain mode figure 3-1 above. Economists have made good progress analyzing these problems

systematically and governments must take them into account for example whether joint ownership of airlines and airports should be allowed. In particular congestion poses another important problem for regulation as congestion charges of private monopoly airports will not be benefit optimal. With commercialisation and privatisation the need for effective incentive in line with regulation will be growing, but an independent regulator will be missing. The general concern is that rent seeking and regulatory capture might prevail and prevent policy from establishing independent authorities to regulate the monopolistic bottle necks and therefore according to Harns and his colleague is that an overall, such strategies stabilize market power and creates hold up problems thereby reducing the efficiency of the whole value chain of air transport.

## 4. 1. 4 Ground handling restructuring services

In this part the principal focus is the analysis of the Ground Handling Services (GHS) as such more and more countries liberalized ground handling which led to reorganization of the market with important performance effects. In other word ground handling services neither needs a high degree of specific investments nor large economies of scale with respect to the relevant market (Templin, 2010). However, some existing markets which aimed to open up this market; faced a lot of resistance from various stakeholders, good example is the EU Directive 96/67 in particular airports and labour unions were opposed, so they could provide the service themselves. Some airlines routinely contracts with the airport for ground handling services. Other airline may contract for third party ground handling when the number of daily departure is small. Some proponents argue that

airport ground handling is good because it generate revenue for the airport; lower airline costs and retains air services for carriers that might otherwise quit the market. Ground handling services in its broad sense cut across many fundamental areas of the airport including fuelling, maintenance, terminal and ramp services. Airports differ on their way about ground services as the principal target focuses to the revenue generation. some analyst describes the ground handling has added to the list of incentives offered to airline , however it is not evident whether these services retains airlines or whether certain airlines now expect an airport to offer such services. Per-turn pricing for ground handling has transformed this aspect of aviation services competitively. Many airports had used the control over access to restrict entry to the market and the implementation of the directives thus led to substantial change in the market structure. In general, prices for ground handling services decreased since the introduction of the Directive" (Airport Research Center, 2009, p. 18). As a result of reform and become less strict, independent GHS companies are now expanded their business operations because they can enter new markets elsewhere, achieving further economies of scale and scope. The major international competitors in market service providers for the ground handling include Acciona, Swissport, Avia Partner, Securicor, Menziees. International service providers are often parts of a larger conglomerate, active in the logistics sector, and can obtain benefits of scale and scope by enlarging their presence in this sector. They also have the scale benefits of multi-plant economies and network effects through multiple station operations. This allows them to make one contract with an airline that is active at several airports. Usually Self-handling has been mainly applied by the dominant airlines at their own hub Fuhr (2005).

Within airline alliances, this service will then be offered by the ground handling company of the home carrier to their alliance partners. It seems that the airlines, by using the potential threat of competition, mainly aim to get better service conditions, rather than trying out independent service providers, so their market share remains low. Still, what we observe at the moment is only a transitory phenomenon. For airport operated GH services surviving the increased competitive pressure means requiring significant adjustments in wages and labor flexibility. There is still some cross subsidization going on from other airport services to cushion this effect, but this will not be tolerated by the owners forever. Those airports, which have early pursued a policy of creating separate subsidiaries in order to get better wage conditions and working flexibility, find now, that these subsidiaries could be sold off or can enter into a joint venture with a logistics company. They are no longer seen as part of the core business. Hans and his colleagues argued that GHS can be regarded as a competition to secure market power. In many countries the policy has helped to open up this market and to move it towards a market structure that is determined by competitive forces. Though still there remains problem for competition policy, because in some countries entry is still difficult and the collective efforts towards harmonization of competition policy are needed to address this challenge which needs political will.

## 3. 2 Air Travel Demand

Air transport is an integral part of the global economy. It is essential to understand how the sensitivity of air transport demand affects policy and economic decisions, to ensure that these decisions are made on a more

effective basisThe demand for air travel is sensitive to changes in air travel prices and incomes. However, the degree of sensitivity (i. e. its demand elasticity) will vary according to different situations. Reliable estimates for demand elasticity are essential in order to ensure that air transport policies are effective (IATA 2010)Demand elasticity measure the change in the quantity demanded of a particular good or service as a result of changes to other economic variables, such as its own price, the price of competing or complementary goods and services, income levels and taxes. The elasticity of air travel demand varies according to the coverage and location of the market in which prices are changed and the importance of the air travel price within the overall cost of travel. The review of previous research found consistent results showing that air travel price elasticity on short-haul routes were higher than on long-haul routes. This largely reflects the greater opportunity for inter-modal substitution on short haul routes (e. g. travelers can switch to rail or car in response to air travel price increases). Air transport policy decisions run the risk of being ineffective, or even counter-productive, if the correct demand elasticity is not used. (IATA)For example, a revenue-raising policy that raises the price of travel on a route (e. g. higher airport charges) will reduce passenger numbers more than expected if the price elasticity is under-estimated. The price elastic response to air travel price increases found at the route level means that demand falls at a proportionately higher rate than the increase in price. Worldwide international and domestic revenue passenger kilometers flown grew 5. 9% to a new high of 5. 2 trillion kilometers in 2011. The growth of the past two years compares favorably with the 4% to 5% trend of the past 20 to 30 years. Contributing to the surge in air travel was a rebound from the

recession of 2008 and 2009. Clearly, air travel demand remains robust despite slow economic growth in many regions. Nevertheless, despite the increased passenger demand, airlines struggled to make significant profits. Although revenues rose 9. 4% to $598 billion, profits fell by almost half compared with 2010, to $7. 9 billion. This was largely due to a sharp increase in the cost of fuel; the average price of a barrel of oil rose from $79 in 2010 to $111 in year 2011. Looking at 2012, rising oil prices and continued economic weakness, especially in Europe, appear to be the greatest threat to airline profitability. In 2011, airlines added 865 direct services, bringing the total number of direct airport-pair connections to nearly 35, 000 by the end of 2011, but there was substantial geographical variation in passenger market performance. Latin American airlines saw the fastest growth, with an expansion of over 11%. African airlines experienced the weakest performance, with barely positive growth, partly due to the impact of the Arab Spring on the north of the continent. Among airlines in the larger regions, North American carriers grew less than 3%, reflecting the maturity of their domestic markets and the lack of significant capacity growth. Growth for the Asia-Pacific airlines was over 5%, but down on the previous year’s performance, due mostly to the impact on travel of the tsunami and earthquake in Japan. European airlines saw the strongest growth, at 9%, among airlines in the three largest regions. When looked at in isolation, the trends in domestic air travel have a different pattern. Representing just fewer than 40% of worldwide industry volumes, domestic aviation markets are dominated by the United States and China. The US market expanded just 1. 3% in 2011. But the Chinese market grew almost 11%. This is because the intention and ambition of China in economic terms

is clear not just from its statements but from the infrastructure and related investment, as is likely, the economic growth translates into domestic air travel and the propensity. The Indian market, which is one-twelfth the size of the US market, grew even faster at 16%. Brazil is another example of an emerging market with large potential and the growth there was almost 14% in 2011. Japan’s domestic market, conversely, shrank 15% because of the tsunami and earthquake in early 2011(International Air Transport Association Annual Report 2012 68th Annual General Meeting Beijing, June 2012 pg 12). The figure 4-3 below depict the overall global airlines performance based on the volume of Freight Tonne Kilometres (FTK) transported worldwide from the year 2007 to 2011 and the Revenue Passenger Kilometers (RPK) travelled by overall global airlines to worldwide destinations. C: Documents and SettingsabuDesktopotal passengers and freight air transport traffic. png

## Figure 3-2 Total passengers and air freight traffic

Source: IATA 2012 annual review. The fastest growing air cargo market in the world is between China and North America with an annual growth rate of more than 10% year on year since 1995. Around 40% of air freight shipped from China to the USA comprises consumer goods and 29% high-tech products, such as computer electronics. China is now the second largest air freight market after the USA, and depends increasingly on air cargo to get its high tech goods to market.

## Figure 3-3China – US domestic passenger market in Millions

Source: IATA 2012

## 3. 2. 1 Revenues expanded to nearly $600 billion.

Airline industry revenues expanded 9. 4% in 2011 to $598 billion, driven in equal part by a rise in volumes and an improvement in yield. Passenger and cargo revenues rose above prerecession levels, but the industry has lost around two years of revenue growth since early 2008. In 2010, the network airlines had a strong boost relative to other airlines in the industry from the robust growth of long haul premium revenues and cargo. During 2011, there was further growth in the premium segment, but there was no longer the marked gain versus other segments. Cargo revenue growth slowed sharply in 2011.

## 3. 2. 2 Net post tax earnings were halved to $7. 9 billion in 2011.

Airline earnings before interest and tax (EBIT) declined from the highs of 2010 to $16. 2 billion (2. 7% of revenues). Although this decline was not as severe as the 2008 experience, at the net post tax level the impact was more marked. After debt interest, tax, and financial transactions, industry profits were more than halved from 2010 to a total of $7. 9 billion, or 1. 3% of revenues. Profits were squeezed by a combination of slower revenue growth and further large fuel cost increases. The regional experience continued to be diverse. Asia-Pacific airlines delivered the largest absolute net profits and the highest EBIT margins for the second consecutive year. But within this region there was much variation, with significant losses in Indian domestic markets and substantial profit in Chinese domestic markets. Next to Africa, the weakest performing region was Europe, where EBIT margins barely exceeded 1% on average. But again there is much variation,

with the large quoted airlines in Europe delivering a similar performance to those in the United States. US airlines saw their profits reduced in 2011, but they continue to generate EBIT margins close to 3% despite little market growth as a result of limited additional Capacity. Profitability in the US domestic market has been particularly robust as a result. Elsewhere, the Latin American airlines continued to show reasonable profit, albeit at margins that were lower than in 2010. The Middle Eastern airlines saw only a minor reduction in profitability in 2011, as structural improvements at some airlines partly offset the rise in fuel costs.

## Figure 3-4 Total net profits in $ billion

Source: IATA

## Figure 3-5 Brent oil price$/barrel

Source: IATA

## 3. 2. 3 The economic benefit of aviation industry

In 2011 Aviation safely carries some 2. 8 billion passengers and 48 million metric tons of cargo and supports 56. 6 million jobs and $2. 2 trillion in economic activity. As such, air transport is a vital component of modern life and integral to sustainable growth. Global business and tourism rely on air transport. Access to international markets and the increasing globalization of production makes worldwide connections essential. The total value of goods transported by air represents 35% of world trade. Beyond this, aviation makes a direct contribution to global GDP greater than most industries, including the pharmaceutical or automotive sectors. In 2010, the $539 billion it contributed would have placed air transport as the 19th largest country in

GDP terms, approximately equivalent to Switzerland or Poland. And the benefit of connectivity goes further than these impressive figures to touch peripheral areas, such as encouraging investment and innovation and allowing companies to attract talent across borders. The numbers do not include tourism, which would not be able to post its impressive figures without support from the airlines. In 2011, tourism generated $1. 8 trillion in global economic activity and provided nearly 100 million jobs. Fully 51% of international tourism relies on air service, according to the World Travel and Tourism Council (WTTC). Air transport plays a major role in developing nations, generating $490 billion in economic activity. Well over half of all the jobs aviation supports globally 35. 9 million are based in developing economies. The industry’s economic impact will continue to grow. By 2030, it is forecast that 82 million jobs and $6. 9 trillion in economic activity will have air transport at their root. The boost to the world’s economy from global aviation’s increased connectivity in the last 20 years. Increasing cross-border travel facilitates ever closer relationships, between countries and between individuals from different nations. Eased restrictions on the flow of goods and people would encourage even further integration. Airlines facilitate a global workforce and keep family members united. For example, research on migrants shows that over nine million Lebanese live abroad. Three million people of Lebanese descent live in the United States and around a million live in the São Paulo area in Brazil. Aviation brings them and their families together. Airlines also provide a means for labour mobility, which in turn lead to remittances, whereby migrant workers are able to send money home. Remittances are an important source of revenue for developing countries. In

the Philippines, more than 10% of the domestic economy relies on remittances. In Tonga and Moldova the percentage is even higher.

## Table 3-1 Some Industries contribution to GDP comparison 2010

Industry$BillionsFood & Drinks1160Chemicals977Air transport539Automotive484Pharmaceutical445Textiles236Source: IATA

## 3. 2. 5 Aviation's global employment and GDP impact

The global air transport industry supports 56. 6 million jobs worldwide and contributes $2. 2 trillion to global GDP, equivalent to 3. 5% of GDP (aviation beyond the border 2012). The aviation industry itself is a major direct generator of employment and economic activity, in airline and airport operations, aircraft maintenance, air traffic management, head offices and activities directly serving air passengers, such as check-in, baggage handling, on-site retail and catering facilities. Direct impacts also include the activities of aerospace manufacturers selling aircraft and components to airlines and related businesses. The world's airlines carry over 2. 6 billion passengers a year and 48 million tonnes of freight. Providing these services generates 8. 4 million direct jobs within the air transport industry and contributes $539 billion to global GDP. Compared with the GDP contribution of other sectors, the global air transport industry is larger than the pharmaceuticals ($445 billion), the textiles ($236 billion) or the automotive industries ($484 billion) and around half as big as the global chemicals ($977 billion) and food and beverage ($1, 162 billion) sectors as seen in the figure 4. 7 below (aviation beyond the border)

## Figure 3-6 Percentage Industry GDP contribution comparison

Source: IATA 2010 pg 16In the year 2010 the records show that about 8. 4 million jobs directly generated by the air transport industry, however air transport also has important ‘ multiplier’ effects, which mean that its overall contribution to global employment and GDP is much larger than its direct impact alone. Indirect impacts includes employment and activities of suppliers to the air transport industry for example, aviation fuel suppliers; construction companies that build airport facilities; suppliers of sub-components used in aircraft; manufacturers of goods sold in airport retail outlets; and a wide variety of activities in the business services sector (such as call centres, information technology and accountancy). Over 9. 3 million indirect jobs globally are supported through the purchase of goods and services by companies in the air transport industry. These indirect jobs contributed approximately $618 billion to global GDP in 2010.

## Table 3-2 Aviation’s global employment and GDP impact

## Employment (Mills)

## GDP ($ Bills)

Aviation Direct8. 4538. 9Indirect17. 71, 156Induced22. 11, 444Tourism catalytic56. 62, 206Source: IATA 2012Induced impacts comprise the spending of those directly or indirectly employed in the air transport sector supports jobs in industries such as retail outlets, companies producing consumer goods and a range of service industries (such as banks and restaurants). Worldwide, nearly 4. 4 million induced jobs globally are supported through employees in the air transport industry (whether direct or

indirect) using their income to purchase goods and services for their own consumption. The induced contribution to global GDP is estimated at $288 billion in 2010. Air transport also stimulates tourism which makes a major contribution to the global economy. It directly contributed $1. 8 trillion to world GDP in 2011 and supported over 99 million direct jobs globally 3. 4% of total employment. By 2021, the World Travel Tourism Council (WTTC) expects direct employment in the tourism industry to be more than 120 million people globally. Aviation plays a central role in supporting tourism, since over 51% of international tourists now travel by air to reach their destinations. Tourism is particularly important in many developing countries, where it is a key part of economic development strategies. In Africa, for example, jobs of an estimated 2. 5 million people directly employed in tourism are supported by overseas visitors arriving by air, representing 34% of all tourism jobs in Africa. Air transport continued to contribute a lot towards global tourism employment and GDP. In 2010 contributed 14. 4 million direct jobs in tourism globally are estimated to be supported by the spending of foreign visitors arriving by air. This includes jobs in industries such as hotels, restaurants, visitor attractions, local transport and car rental, but it does not include air transport industry jobs. Apart from direct, indirect and induced employment; another 13. 2 million indirect jobs in industries supplying the tourism industry are supported by visitors arriving by air and on top of that it also contributed by induction way through the former direct and indirect tourism jobs supported by air transport generate a further 6. 9 million jobs in other parts of the economy, through employees spending their earnings on other goods and services. Air transport supports 34. 5 million jobs within tourism, contributing around $762 billion a year to world GDP. C:

Documents and SettingsabuDesktopemployment in tourism supported by air transport. png

## Figure 3-7. Global employment in tourism supported by air transport, 2010

Source: aviation beyond the border 2012 pg 8

## 3. 3 Competitive Advantage

Business aviation like any other firm plays its role on competition because every firm needs to expand the market share and increase profitability. Sector comes through two main channels: through the effects on domestic firms of increased access to foreign markets and increased foreign competition in the home market; and through the freer movement of investment capital and workers between countries.

## 3. 3. 1 Improved connectivity:

opens up new markets and boosts exports while at the same time increases competition and choice in the home market from foreign-based producers, encouraging firms to specialize in areas where they possess a comparative advantage; can drive down costs and prices for firms that have a comparative advantage (such as innovative products and services), benefiting domestic consumers in the process; opens domestic markets to foreign competitors, which can also be an important driver for reducing unit production costs, either by forcing domestic firms to adopt best international practices in production and management methods or by encouraging innovation; Can benefit domestic customers through competition by reducing the mark-up over cost that firms charge their customers, especially where

domestic firms have hitherto enjoyed some shelter from competition. Improved connectivity can further enhance an economy’s performance by making it easier for firms to invest outside their home country, which is known as foreign direct investment (FDI). FDI necessarily entails some movement of staff; whether for technical know-how, management oversight, or servicing and meeting customers. Increased connectivity also allows firms to exploit the speed and reliability of air transport to ship components between plants in distant locations, without the need to hold expensive stocks of inventory as a buffer. A lesser amount of substantially, but just as important, improved connectivity increases passenger traffic and trade. This, in turn, can lead to a more favorable environment for foreign firms to operate in greater links to the outside world often drive a more conducive global business environment. In a survey of 625 businesses in five countries, respondents considered the absence of good air transport links to be one of the major determining factors in not making an investment. On average, 18% of firms reported that the lack of good air transport links had affected their past investment decisions. Of the investments that were affected, 59% were made in other locations with better air services, 18% went ahead anyway, but with significantly higher costs, while in 23% of cases no investment was made. The table 3-3 below depict the top ten airlines highest flown in the year 2011 both domestically and internationally. All data is according to the IATA records.

## Table 3-3 Airline Rankings 2011 Scheduled Passenger ( in Kilometres Flown)

International FlownDomestic FlownRankAirlineMillionsRankAirlineMillions1Emirates153, 2641Delta Air Lines145, 3092Lufthansa135, 4792Southwest Airlines134, 9183Delta Air Lines124, 4153American Airlines119, 8424Air France123, 1064China Southern Airlines101, 6735British Airways114, 1585United Airlines86, 4506Ryan air93, 8586US Airways72, 5157Cathay Pacific Airways91, 9907Continental Airlines66, 8098Singapore Airlines86, 4008Air China58, 5409American Airlines83, 6439China Eastern Airlines54, 13210KLM82, 04710JetBlue42, 148Source: IATA

## Table 3-4 Airline Rankings 2011 Total Scheduled Passenger (International + Domestic) in (Kilometres Flown)

RankAirlineMillions1Delta Air Lines269, 7242American Airlines203, 4853United Airlines160, 2704Emirates153, 2645Lufthansa140, 9726Southwest Airlines134, 9187Air France133, 0358Continental Airlines131, 5839China Southern Airlines121, 94410British Airways116, 864Source: IATA

## 4. 3. 2 Innovation

Air transport is a technology-advanced industry heavily involved in the production of high-specification products which drives research and development in a number of areas. This focus on research and innovation across the sector not only leads to more efficient aircraft technology and operational practices with associated environmental benefits but also helps build research capacity at universities and skills across society. The benefits

to society of research and development spending by the aerospace industry are estimated to be much higher than in manufacturing as a whole, according to the IATA 2012 annual report mentioned every $100 million of investment into research eventually generates additional $70 million in GDP year-after-year. There is concern from aerospace industry leaders about the future threat of a lack of science, technology, engineering and mathematics graduates entering the labour pool. This is prompting resources to be focused on encouraging the next generation of engineers. Research conducted for the Aerospace Industries Association (AIA) suggests that aerospace contributes almost $100 billion in export sales to the USA's economy and every dollar invested in aerospace yields an extra $1. 50 to $3 in economic activity. The influence that aerospace has on the rest of the USA's high-tech economy is also considerable. This explains why organisations such as AIA actively highlight initiatives to recruit and retain high quality workers, both to create new aerospace-centric jobs and as maintain the current levels of activity.

## 3. 3. 3 Highly-skilled workforce

Jobs in air transport cover a wide range of activities and skills. These include: skilled work by technicians building and maintaining aircraft; a diversity of technical engineering jobs from aircraft and engine design to component production; air traffic c control and airspace design planning; logistics for airlines and airports; complex information technology systems on board aircraft and in areassuch as baggage handling systems design; service industry support jobs such as chefs in catering companies; creative positions in design and marketing; customer services occupations in airline ticketing,

check-in, cabin crew and retail; manual labour on airfields; air traffic controllers and pilots; andemergency response personnel at airports; Leadership, management and executive roles. As this list indicates, many roles in the air transport sector require a highly qualified workforce and a significant amount of training. Value-added per employee in the air transport sector (direct employees, excluding non-airside activity at airports) generates 3. 5 times as much value-added per employee than the economy as a whole indicating a more productive workforce. This is particularly true for the large populations of Asia-Pacific, Africa and Latin America. In addition, growth in the aerospace sector is helping to drive innovation and skills development in countries that have not normally been associated with aircraft manufacturing. In recent years, more than 100 aeronautics companies have chosen to establish aviation manufacturing, service and training facilities in Morocco, where the aeronautics sector currently enjoys annual growth of around 25%. According to the Moroccan Aerospace Industries Association (GIMAS), the country’s strategic position, close to Europe and at the crossroads of transport links between North America and Asia, has persuaded companies to invest in manufacturing sites and creats jobs in the country. Some 8, 000 highly qualified staff are now employed in the centres across Morocco by a number of companies including Aircelle, Boeing, Bombardier, Daher, EADS, Labinal, Le Piston Français, Ratier Figeac, SAFRAN Engineering, SNECMA, Souriau and Zodiac Aerospace. The sector offers a diversified industrial base, ranging from raw materials preparation and sub-structure manufacturing all the way through to avionics assembly and maintenance. Aircraft are manufactured predominantly from aluminum alloys, and Morocco has become an increasingly important centre for the

manufacture of highly complex aluminum alloys, some of which are mixed with other metals such as titanium and nickel. The process involves a wide variety of design, development and manufacturing tasks, promoting skills development and innovation in this northwest African nation. Manufacturing is not the only activity dominating the Moroccan aeronautics sector. The creation of the Institute for Aeronautical Businesses (IMA) has opened the door to training future generations of the sector’s workforce. And GIMAS has an active programme of integrating research and development into an active national strategic partnership with national universities and international aeronautical research centres.

## 3. 4 Air transport employment and GDP in Africa.

The number of jobs created directly by the air transport industry is estimated to have reached 257, 000 in 2010. 113, 000 people (44% of the total) work for airlines or handling agents (e. g. as flight crew, check-in staff, maintenance crew, reservations and head office staff). 21, 000 people (8. 5%) work directly for airport operators (e. g. in airport management, maintenance, security, operations), while 104, 000 (40%) work on-site at airports for government agencies such as customs and security, or provides services in retail outlets, restaurants, hotels, etc. 19, 000 people (7. 5%) are employed in the civil aerospace sector (manufacture of aircraft systems, components, airframes and engines). In total (direct, indirect and induced impacts), air transport supports 688, 000 jobs and over $21 billion to African GDP. In addition, there are nearly six million jobs supported through the catalytic impacts of travel and tourism. Worldwide, Africa represents 12% of the total jobs and 3% of the GDP generated by the air transport industry,

including the catalytic impacts. Recent studies by Oxford Economics have quantified the significant economic impact that aviation generates across some of the major African markets. For example, in South Africa it is estimated that aviation directly contributed 56, 000 jobs (0. 4% of employment) and made a value-added contribution to GDP of ZAR 20. 1 billion (0. 8% of economy GDP) in 2009. In addition, regional economies derive substantial benefits from the spending of tourists travelling by air. Including this catalytic impact and the indirect and induced impacts of aviation activity increases the impact of aviation on GDP in South Africa to ZAR 74. 3 billion (3. 1% of GDP). Forecasts indicate that this impact is set to grow rapidly over the next 20 years. Passenger numbers in Africa are expected to expand from 67. 7 million in 2010 to 150. 3 million in 2030, with RPK growing at an average annual rate of 5. 1%. Meanwhile, cargo volumes are projected to rise at a similar rate of 5. 2% per annum. Such an expansion in activity should generate significant economic returns. Oxford Economics forecast that aviation’s direct contribution to GDP in Africa will increase by 5% per annum in real terms over the next 20 years helping to create an additional 66, 000 jobs across the region by 2030. Moreover, when also accounting for catalytic effects in terms of increased tourism receipts, real GDP growth is projected at 7. 3% per annum with implied job creation of 879, 000. Ensuring that aviation’s growth potential is fulfilled will require policymakers to overcome a number of challenges. Infrastructure investment is not as pressing as elsewhere, although some of the region’s larger airports do appear to be suffering from capacity constraints. However, skills shortages are posing a considerable short-term obstacle to growth with a

lack of adequately trained pilots and other technical staff being a key area for attention.

## Table 3-5 Africa's jobs and GDP generated by air transport, 2010

## Employment (Mills)

## GDP ($ Bills)

Aviation Direct0. 268. 04Indirect0. 5417. 24Induced0. 6921. 49Tourism catalytic6. 6867. 83Source: aviation beyond the border 2012 pg 23Despite of good progress on performance of Africa’s share of global passenger traffic in 2010 remains at very low level compared to the world representing only 3% of the global passenger traffic. Likewise Asia-Pacific represented 34%, Europe 27%, Latin America 6%, Middle East 3% and North America 27% of the global passenger traffic in the same year 2010. However the Projected annual growth rate for international traffic by region, gives good prediction for Africa of better performance compared to Europe and North America such that the projected annual growth rate goes beyond the world average in the near future between the period of 2010 – 2015 ( aviation beyond the border 2012 pg 26). Despite some turbulence in the global economy, the Asia-Pacific region has demonstrated considerable resilience in maintaining a faster pace of economic growth, with aviation playing a leading role in enhancing both regional and international connectivity. Oxford Economics forecast that aviation’s direct contribution to regional GDP will increase by 6. 4% per annum in real terms over the next 20 years, helping to create an additional 1. 4 million jobs across the region by 2030. Moreover, when also accounting for catalytic effects in terms of increased tourism receipts, real

GDP growth is projected at an even more impressive 8. 4% per annum, with implied job creation of 4. 6 million. Key drivers of the robust expansion of the region’s air transport market include steadily rising incomes, and rapid urbanization of the very large populations in China and India, as well as the other dynamic Asian economies. By way of illustration, recent studies by Oxford Economics have quantified the significant economic impact of aviation throughout the region, despite widely differing income levels. For example, in Thailand, in 2009, aviation directly contributed 79, 000 jobs (0. 2% of employment) and made a value-added contribution to GDP of THB 64 billion (0. 7% of GDP). In Singapore, aviation directly contributed 58, 000 jobs (2% of employment) and made a value-added contribution to GDP of S$ 8. 7 billion (3. 3% of GDP). Moreover, in India, aviation directly contributed 276, 000 jobs (0. 1% of employment) and made a value added contribution to GDP of INR 147 billion (0. 2% of GDP). In addition, regional economies derive substantial benefits from the spending of tourists travelling by air. Including this catalytic impact and the indirect and induced impacts of aviation activity increases the impact of aviation on GDP in Thailand to THB 818 billion (8. 9% of GDP), in Singapore to S$ 23. 5 billion (8. 9% of GDP) and in India to INR 912 billion (1. 5% of GDP). The spectacular growth of Asia-Pacific aviation has been underpinned by progressive liberalization of air services, and this trend is expected to continue, with further developments including multilateral agreements within the ASEAN countries, as well as expanding bilateral relations amongst other countries in the region and around the world.

## Figure 3-8 Projected annual growth rate for international traffic by region

Source: aviation beyond the border 2012 pg 23

## 3. 5 Tanzania current status of aviation industry.

The collapse of the EAC in 1977, only 10 years after its creation the main challenge facing the organization was the increasing divergence in the three member governments' ideological and political views. The triggering event was the bankruptcy and liquidation of the joint airline, East African Airways, with Kenya immediately creating its own national carrier in response (Mugomba 1978, p. 264). The EAC collapsed quite swiftly despite its initial recognition by the international community as a promising example of regional cooperation. Air transport has a major role to play in enabling aspired rapid economic growth. There are three major areas of demand for transport that require development of an efficient and affordable or lower cost aviation system:(a) Catering for the hitherto grossly under-exploited horticulture with a large interregional or international trade potential in especially cut flowers/floriculture, vegetables, fruit, meat, fish and other related chilled and frozen products.(b) Access to the many remote areas with under-exploited or even untapped tourism potential.(c) Facilitating time sensitive business and social travel, especially given the size of the country and the grossly inadequate and poor surface transport infrastructure a country is experiencing. In Tanzania the governance of the aviation sector is currently achieved through three sets of institutions; the Tanzania Civil Aviation Authority (TCAA), responsible for safety and economic regulation, the Tanzania Airports Authority (TAA), responsible for development and

management of airports, and the airlines or air transport operators, providing passenger and freight flights. The Ministry of Infrastructure Development has the responsibility of setting sub-sector policy and development strategies, as well as guidance and monitoring for the implementation of the strategies and the Revolutionary Government of Zanzibar is responsible for Zanzibar International Airport and the airport in Pemba under the Zanzibar Airport Authority (ZAA). All airports in Tanzania mainland are currently managed and operated by TAA, with the exception of Kilimanjaro airport, which was leased to Kilimanjaro Airport Development Company (KADCO), a private company with majority shares. Airport handling services at international or major airports are also provided by a private company, Swissport. There are plans to involve the private sector as much as possible, in investment in and operating airports. Air operations or flight services are provided by a state owned designated " national flag carrier, Air Tanzania Company Ltd (ATCL), and Precision Air, the biggest locally based airline, as well as several other smaller companies. International flights are mainly provided by other international airlines, based on Bilateral Air Services agreements (BASAs). However a liberalization process is underway, under the auspices of implementing the Yamoussoukro Decision by African Heads of State and Government, signed in 2000. Currently air transport industry in Tanzania is characterized by unavailability in some remote areas, low frequency, high cost and unreliability at times. An acknowledged suitable strategy to develop the aviation industry is for the Government to develop airports, where possible in partnership with the private sector in PPPs. The airports network should be supported by adequate safety provisions, thereby satisfying the international requirements for various categories of airports. Because a good

airport network will, in turn, attract an increased number of air transport operators/airlines and thereby pave the way for an improved level of service to travelers and freighters. 2008 data shows there are about 180, 000 aircraft movements per year in Tanzania as shown in the figure 3-9 below

## Figure 3-9 Tanzania Aircraft movements record from year 2001 to 2007

Source: TAA 2008Basically Tanzania has a total of 368 airports and aerodromes on the mainland, with an additional airport on each of the islands of Pemba and Zanzibar. The country has a total of 2251 aircraft, helicopters, and balloons on the registry as of December 2008, and a total of 866 licensed pilots, of which 292 are both commercial and instrument rated. Tanzania is part of the East African Community, and contributes to the newly established EAC Civil Aviation Safety and Security Oversight Agency (CASSOA) in Arusha. Geographically the country has an area of about 947 km2, is considered large, and there are substantial areas of land with low population densities and without much transport infrastructure. This set a unique environment, as Tanzania has much of a tourist industry from abroad and has a domestic air transport network in part relying on general aviation type operations. There has been an increase in airlines based in Tanzania. The two predominant fully scheduled carriers are the Government of Tanzania owned Air Tanzania (ATCL) and the privately held Precision Air which is operating in alliance with Nairobi based Kenya airways (KQ). In addition, there are numerous services providers, ranging from pure charter-only operators to airlines flying on schedules, though not found in the more formal reservation systems and databases. Of particular note is Coastal

Aviation, which operates both as a charter carrier as well as on a full-fledged schedule, using general-aviation type aircraft such as the Cessna Caravan. Likewise the Air Tanzania, the government-owned flag carrier continues experiencing trembling like most small flag carriers. The airline currently operates two Dash-8 turboprop aircraft, and has recently lost the ability to operate the one Boeing 737-300 it had under lease due to an accident requiring repairs to the aircraft. In addition, the airline is leasing an Airbus 320 for the sum of over US$ 350, 000 a month that does not fit well into its fleet mix, requires extensive pilot training, and for the last two years has been in repairs. The airline is in the same cycle that many large and small, non-sustainable government-owned carriers find themselves in. Efforts to make the airline attractive for privatization result in ever escalating costs and investments and create distortions in the marketplace that in the end not only end the exercise in failure, but also potentially hurt other operators. This implies that the only way to cut further losses would be receivership and liquidation

## 3. 5. 1 Tanzania overall Traffic

Overall traffic has grown 10. 9% between 2001 and 2008, with international having grown 10. 6% and domestic 11. 0%. Tourism is the main driver for international traffic, accounting for 66% of all travel. The three most important international access points are JNIA, Kilimanjaro International Airport, and Zanzibar International Airport. The most heavily traveled international corridor is between Tanzania and Kenya. There are roughly eight major airlines serving the country. Like in many developing countries Tanzania included domestic travel has been more difficult to study because

of data limitations. Though theoretical it is easy to perform an analysis as to traffic numbers per airport, considerable compromises had to be made to look at the actual routes being traveled by using seat capacities from a commercial database. This leaves out many important data point for example; Coastal Air does not appear in the data. The difficulty in using TAA data lies in the fact that the format of the data does not allow for easy summation based on origin and destination (Tanzania aviation master plan 2010). At the moment the Tanzania's air transport sector is at a critical stage because much of the infrastructure is lacking and in dreadful need of investment. The pressing agenda is payable to the prospect for traffic growth in Tanzania is high in healthy global economic conditions, as it is depicted in the graph below,

## Figure 3-10 Regional comparison of seats per capita

Source: The World Bank report 2009Tanzania overall has the second highest provision of air transport services per capita, as measured in estimated seats per capita. For international services this analysis on data provided by the Seabury SRS data analyzer, seats per capita is calculated by dividing the estimated population of a country gained from the World Bank's World Development Indicators database extracted based on the same year by the sum of all domestic and international seat capacity as provided by Seabury SRS, for the same year (2007).

# Table 3-6 Airlines providing scheduled international service in Tanzania with their International seat capacities.

Airline200120092009 SharePrecision Air Services Ltd. 6, 807456,

24822%Ethiopian Airlines Enterprise65, 028268, 07913%Kenya Airways173,

347214, 04110%Emirates119, 716199, 86410%Swiss European Air Lines Ltd

129, 6406%KLM Royal Dutch Airlines85, 344128, 9436%South African

Airways48, 764118, 2006%Qatar Airways

103, 8685%British Airways187, 67558, 9233%Panair S. p. A.

55, 3893%African Star Airways

46, 9722%Star Air

43, 9152%Egyptair16, 43740, 0482%Air Malawi Limited39, 21239,

2082%Condor Flugdienst GmbH

37, 4112%LAM 28, 084

28, 0841%1Time Airline

20, 7491%Air Zimbabwe (PVT) Ltd. 10, 68619, 0951%Northern Dene Airways

Ltd.

18, 0821%Air Routing International Corp.

17, 6141%Rwandair Express

12, 7821%Tavrey Aircompany

10, 3921%TUI Airlines Belgium

3, 9400%Air Tanzania Company Ltd. 187, 900

Swiss Air UA122, 418

Gulf Air Company G. S. C. 61, 313

Air India Limited43, 646

FlyGlobeSpan22, 239

Air Service16, 904

Yemenia11, 682

Eagle Air Ltd. 2, 182

Source Tanzania aviation master plan 2010The 2009 International Exit Survey was conducted in six major departure points with three airports and road border posts. The survey results revealed that the majority of the visitors departed the country via JNIA (30. 8 percent) and Zanzibar Airport (30. 5 percent). The results further show that, Namanga (a village border between Tanzania and Kenya) was the leading road border departure point and Kasumulo recorded the smallest proportion of all departed visitors. Using the Tourist Expenditure model, it is estimated that Tanzania earned USD 1, 159. 8 million in 2009, out of which Zanzibar earned USD 104. 3 million. These earnings accrued from 714, 367 and 78, 885 international visitor arrivals to Tanzania and Zanzibar, respectivelyVisitor exports are a key component of the direct contribution of travel and tourism industry in the country. In 2011 alone Tanzania generated TZS2, 213. 6bn in visitor exports. In 2012, this is expected to grow by 4. 6%, and the country is expected to attract 872, 000 international tourist arrivals. By 2022, international tourist arrivals are forecast to total 1, 261, 000, generating expenditure of TZS3, 778. 0bn, an increase of 5. 0% per annum. (WTTC 2012)

**Figure 3-11 Revenue generated by the tourist arrived by the air transport in Tanzania 2002-2012**

Source: WTTC 2012 Annual report.

## 3. 5. 2Total contribution of air transport employment in the United Republic of Tanzania

The total contribution of air transport which includes direct, indirect and induced employment including wider effects from investment, the supply chain and induced income impacts was 1, 182, 500 jobs in 2011 which sound to 11. 6% of total employment in Tanzania and that is forecast to rise by 2. 3% in 2013 to 1, 209, 500 jobs. The projection of this trend is forecast to support 1, 466, 000 jobs by 2022, which is 11. 1% of total employment, an increase of 1. 9% pa over the period (WTTC 2012).

## 3. 5. 3 The air traffic projections

Projecting growth in the current climate has become more difficult because of a set of unknowns. The intermediate-term growth rate of the air transport sector globally has been around 5-6 percent between 2001 and 2007, and very long term rates around 10%. However, Tanzania is unique in that it has shown a much higher growth rate, even when compared to Africa. By the same token, new dangers for the air transport industry are emerging. Between 2007 and 2009 two crises have struck in the forms of the oil price spike and the global recession. The speed of the recovery is an overall macro-economic element that could easily disrupt projections, since the airline industry is very dependent on overall economic activity. As a recovery unfolds, however, the effect on oil prices cannot easily be predicted. In addition, environmental concerns and even perhaps pending legislation may

target the airline industry, especially in Europe. Though overall economic activity and fuel prices are more cyclical in nature, they could be regarded as events that could be averaged out over time. However, increased environmental concerns may in fact, for the first time, set a more permanent cap on air transport's growth. A history of growth rates, compared to Tanzania’s overall GNI, is shown in figure 4-13 below. Air transport growth rates appear as a leading indicator to overall economic growth the peaks in passenger growth precede the peaks in GNI growth, as do the valleys. This has shown itself also valid in global air freight statistics. The Tanzania population growth rate has been projected to be 2. 6% annual, the same appeared to be true in the 2012 national population and housing census through which the result has been just announced by the head of state during the end year December 2012.

## Figure 3-12 Tanzania’s passenger growth rate and GNI growth compared

Source: TAA and TCAA.