

Introduction to aircraft manufacturing industry marketing essay

[Environment](#), [Air](#)



The Aircraft Industry is a duopoly industry comprising of Airbus (EU) and Boeing (US). If there are to be viewed from political consensus they are two-party political system. Anthony Downs proposed a classic model in the political science that suits the situation in the perfect way. His proposal reversed the conservative connection between party ideologies and elections. He said that instead of parties achieving victory in the elections on the basis of the appropriateness of their agenda, his findings give elections pre-eminence, with insinuation that all actions taken by the party are aimed at maximising votes. According to Downes, both parties will try to resemble each other as much as possible. Both parties will keep their policies modestly different from each other. Also majority of voters only want to see minor alterations in government functionality. The Market of large and mid size aircrafts works on the same ideology. There is an immense consensus among market players to what an attractive product comprises, that is, an economically efficient and safe aircraft. But there are also some interest factions that have wagered in product design, just as there are much potential groups within a democratic system(Ibsen n. d.).

The Government of the United States and its Federal Aviation Administration (FAA) are considered to be influential as they look upon the largest air transport market in the world. Regulations laid by the European and United states government will prove to be a major driving force for orders of new aircraft in the coming years. In the similar way, the deregulation of European airlines, which begun in 1990's, promises to expand the markets for smaller regional jets(Ibsen n. d.). Trade of large commercial jetliners has been tariff free under the agreement of General Agreement on Tariffs and Trade (GATT).

The high degree of political intervention has effect on the purchase of aircraft. The decision of buyers to buy which aircraft depends on the political reasons because the support and interference from the government could effect the future of buyers. For Example, presently Boeing's biggest market is China and is estimated to be for next twenty years. As a result China's purchase of boeing aircrafts has led to lot of political influence in the United States(Ibsen n. d.).

ECONOMIC FACTORS

Air traffic in US and UK is likely to increase as they have just recovered from the recession. The commercial aircraft is estimated to rise worth US\$ 2 trillion in the coming twenty years, which will result into need of 16, 600 new aircrafts (estimated). The largest demand is expected to come from airlines from China, US and India. Huge amount of growth is expected from the Middle East countries. It is expected that China alone will need 2, 200 new aircrafts to meet its travel needs. Also, international freight sector is estimated to grow by 253% in the next twenty years (Irwin & Pavcnik n. d.).

China being the biggest emerging market and considering its population size, the growth in air passengers is likely to shoot up which would result in increasing demand for new aircrafts (The Economist n. d.).

High Oil prices: towering oil prices have elevated the operating cost of airlines. In the year 2007, the worldwide airline industry had to pay 136 billion US dollars for fuels, its a 300% increase compared to what they had to

pay in 2003. Even in 2008, when crude oil prices fell dramatically, it still accounted for 32% of the operating expenses.

Global GDP- the primary factors in determining the demand of aircraft and growth in the industry is the GDP, which is expected to grow by 3. 2% by 2030

The global recession: The recession which impelled a theatrical drop in load factors in the middle of 2008. In response, airlines have been putting aircrafts out of service and rethinking plans to order replacement for the existing aircrafts. In the third quarter of 2008 24 airlines went bankrupt. The loses during this period were estimated about 4-8 billion US dollars.

The credit crunch: The credit crunch in combination with the above mentioned factors, has made it hard to purchase new aircrafts, airlines are finding difficulties to finance new aircrafts. Despite of the credit crunch, orders for business and commercial jets have seen increase at the beginning of 2008, but the credit crises has resulted in delays and deferrals and failure to take delivery of many aircrafts(Captain n. d.).

SOCIAL FACTORS

Recent changes in society have led to increase in air travel.

Also changes in life style of people and the viewpoint of air journey being a feasible option.

Demand of air travel is driven by convenience. However, the trend is changing as the consumers travel decisions is primarily based on price.

Rising cost and competition produced by low-cost carriers is affecting majority of Airlines. Business travels, once a stable of income, now is a conduct by corporate travel guidelines. As a consequence, airlines are combining their networks to utilize economies of scale, minimize environmental impact and offer smaller markets with new and improved services.

The noise generated and CO2 emission near the airport is also a thing of higher concern as people living near the airport are pressurizing authorities to change their operating style(Ferreri n. d.).

TECHNOLOGICAL FACTORS

In the commercial aviation industry, there are huge amount of costs connected with Research and development for the development of a new aircraft. European Union governments sustain European technology R & D sector, just as the united states government does, though FAA, NASA, Department of Defence (DOD) and programs that reliefs export tax (Colantonio n. d.). Though United states has three times more support than the European union.

The Aircraft industry is very demanding with very high quantity of time and money dedicated to innovations and R&D.

Now a day's carbon fiber is used for the construction of an Aircraft body.
(example: A350 XWB with 50% carbon fiber body)

Concentration on development on making more fuel efficient engines for longer ranges (Szodruch et al. n. d.).

Use of alternative sources of fuel to counteract raising oil prices

The development of supersonic aircraft is also a chance because it will lead to creation of whole new market segment. Commercial carriers will buy these aircrafts to meet customers demand of reaching the destination quickly and on time.

The largest and cost efficient advancement for commercial aircraft industry is the faster designing of planes. The augmented manufacturing time will save aircrafts manufacturers time on labor and help them to better utilize resources. For Example: Boeing 777 used computer to design a prototype, this saved them the cost of building a real prototype(Szodruch et al. n. d.).

In today's competitive world, robots are also considered an effective tool for the manufacturing of aircraft.

LEGAL FACTORS

There are many restrictions when it comes to entering the market but due to globalisation circumstances have changed and also due to US open skies agreement. Open skies agreement has led to smooth flow of national and international flights in and out of US, promoting tours and business activities, improving productivity and creation of job opportunities and economic growth (BBC n. d.).

United state's open skies policy has been proved very effective in airline globalization. It enabled the airline carrier's limitless admittance in the partners market and right to go to all middle and beyond points. This agreement has offered the most operational flexibility for airline coalitions. This agreement has been successful in achieving over hundred partners from every part of the world and every level of economic growth (BBC n. d.).

Also there is IATA (International Air Transport Association). Its aim is to provide assistance to airlines to decrease complexity of their process and increase passenger convenience, decreasing costs and develop efficiency. The pioneering simplifying the business scheme is vital in this area. Moreover, IATA's primary priority is safety and its aims to continuously improve safety standards via IATA's Operational safety audit (IOSA)(Rothman & Rothwell n. d.).

The Boeing company and government have long complained that Airbus has ignored the 1992 bilateral agreement, which is one of the key agreement, which says that launch aid will be available to Airbus till it's in the level of its competitor Boeing, but that is no longer the case with Airbus having 52% of the market share. The US government says that the aid given to Airbus is illegal under the WTO agreement and had also asked for litigation. The case is solved and US won the battle and Airbus was penalised and WTO promised to restore fair trade in the industry (EU Business n. d.).

Major regulatory bodies such as EPA, FAA have a major impact on the industry as they decide on the laws and regulations that various suppliers,

producers and operators have to deal with. The impact is substantial as they are capable of creating major obstacles in the final approval of aircrafts (Barriage n. d.)(Clarke n. d.).

ENVIRONMENTAL FACTORS

Environment factors generally include ecological aspect of climate and weather change, which in turn can influence industries such as insurance, tourism and farming. Today, there is an awareness of climate change in the minds of people, which is becoming a deciding factor on how companies function and what are their offerings, because it can lead to formation of a new market or destruction of the present market.

ACARE is an European group of airports, eurocontrol, airlines, manufacturers, universities and members of EU and EU commission. Its primary challenges are - safety, reasonable, quality, environment and security. Some of their objectives are to reduce air accidents to 80%, 15 minute less wait time on airports for little distance destinations and 50% less time needed to market. One of most popular intention of ACARE was to reduce specific CO₂ discharge by 50%, the discharge of NO_x by 80%, and to decrease the exterior noise of fixed wing aircraft by 10 db per operation. For example- Boeing is a major element of the commercial aviation industry. It is executing some new plans to improve its aircrafts environmental performance. Compared to present It also claims that it will reduce its greenhouse gas emissions by 25% by 2020(Szodruch et al. n. d.).

The purpose of ACARE clearly reflects the demand of society, especially in the area of security and stability of environment. Also, their purpose reflect the requirements of aircraft operators, which are major driver for innovation in technology.

The ACARE objectives reflect requirements which are demanded by society, particularly in the areas of environmental compatibility and security. On the other hand, the ACARE objectives also reflect the needs of aircraft operators, which are an important driver for technological improvement. On the other hand, the mounting pressure from society regarding emissions, noise around airports is affecting airline operations(Szodruch et al. n. d.).

In addition, with increasing pressure from society as a whole, as well as from local communities around airports, noise and local emissions have an impact on airline operations(Clarke n. d.).

CONCLUSION

Commercial Aviation Industry is optimistically connected to the world economy. As a result, with the continuous growth of world economy, this industry is also presenting signs of swift growth. Airbus and Boeing forecasted immense growth in the future and adjusting their strategies accordingly. Boeing and Airbus create a duopoly in the market. However they still face competition from small companies located in Russia. Also China is entering the market with its first home made commercial jetliner “ COMAC C919” coming in 2012. This sector is heavily dependent on outsourcing and external factors. Their operations are carried out around the

world so multiple trade policies of different countries affect their strategies. Rising oil prices is a serious problem for the industry; airlines are forced to shut down their old planes because of increased fuel consumption. After the PESTEL analysis, it can clearly be concluded that the biggest challenges are expected to come from economic, legal and environmental factors in the near future.

PART – B

AIRBUS FUTURE FORECAST

According to Airbus latest Worldwide market forecast, there will be a delivery of 25, 000 new freighter and passenger aircrafts between 2009 to 2028, which are expected to be worth US\$ 3. 1 Trillion.

Rising economies, developing airline networks, extension of low cost airlines and increasing number of big cities as well as growth in traffic and also the also the orders to replace new aircrafts with the new ones which are more efficient are creating more demand for the aircrafts.

In 2009, there was a downfall in Revenue Passenger Kilometres (RPK's) by 2%, it is expected to rise to 4. 6% in 2010.

The forecast also estimates that in next twenty years, passenger traffic RPK's will show resiliency to the repeated effects of the sector and raise itself by 4. 7% per year or double in the coming fifteen years. This will only happen if demand rises to 24, 100 new aircrafts of value US\$2. 9 trillion. When the old 10, 000 aircrafts will be replaced with the new ones, the global

aircraft fleet of hundred seating or more will twofold from some 14, 000 today.

According to the forecast, airfreight tonne kilometres (FTK's) are expected to increase annually by 5. 2%. Pooled with fleet renewal, this will lead to requirement of 3, 440 new freighters. More than 850 of these are new, which are expected to valued more than 210 billion dollar, with the remainder converted from passenger aircraft.

Economics of Oxford predicts that in the next twenty years, this industry will directly employ 8. 5 million people and will add US\$ 1 trillion to the world GDP. Other indirect advantage and tourism are even bigger.

The biggest demand will come from the Asia pacific and the emerging economies. They are China and India (31%), followed by Europe (23%). Also in terms of domestic market China (10%) and India (7. 9%) will be the fastest growing in the next twenty years. But the US will retain its title of being the biggest domestic network.

Not very surprising, Airbus also predicts requirements for Very Large Aircraft (VLA) which can accommodate more than 400 passengers like the A380, at above 1, 700. About 19 percent by value of passenger and freight deliveries, or seven percent aircraft units are valued at over US \$570 billion. Out of these, 1, 318 will be used to link the mega cities of the world, which are continuously increasing in numbers. This implies greater increase in air traffic. Also more than half of the VLA will be operational in Asia-pacific.

In the segment of twin aisle aircraft which can accommodate 250 to 400 passengers, forecast states that there will be a need of 6, 250 new aircrafts in the next twenty years, expected to be valued at US\$ 1, 300 billion, or 25% by units, 42% by value. Out of these 6, 250, 4, 240 will be small twin aisle (250-300 sitting capacity) and about 2, 010 will be twin aisles (350-400). Such sections include members of A330/A340 family. It is also expected that from 2013, A350 XWB will replace the whole twin aisle market requirements.

According to the forecast, in the single aisle section, aircrafts worth US\$ 1, 200 billion or 68% by units, 39% by value will be distributed in the next twenty years. There is comparatively an increase in forecast compared to previous ones due to arrival of low-cost transporters and liberalization in route and increasing requirement of single aisle aircraft in Asia pacific(Leahy)(Airbus n. d.).

BOEING FUTURE FORECAST

Global economic activity revealed that gross domestic product (GDP), is the most powerful driver of development in commercial aircraft and airlines industry and also affects demands of aircraft. The worldwide GDP is anticipated to rise at an average of 3. 2% on a yearly basis for the next twenty years. Revealing on the economic growth, global traveller traffic will rise average 5. 3% and cargo traffic to 5. 9% over the forecasted period. The traveller and cargo traffic growth rates are comparatively higher than prior years due to fall in air traffic. After calculating the twenty year growth rate on the basis of lower base year results into a higher growth rate. If the low starting point is neglected, it is estimated that traveller traffic will increase to

a rate of 4.9 percent and the cargo traffic will also increase to 5.4 percent each year. To meet the current demand of business-related aviation services, the number of aircrafts needed worldwide will increase at an annual rate of 3.2%, doubling-up from 19,000 aircrafts present today to a total of 36,000 aircrafts in 2029. Also airplane deliveries for the purpose of substituting old planes and growth of fleet will total 30,900 over the next twenty years of value US\$ 3.6 trillion.

Diverse demand for air services: Air travel around the world continues to change in response to challenges and opportunities. New airline Business models and energetic growth of air travel in the emerging countries are expanding the demand of airplanes. Despite the downfall in travel in 2009, there were still several business models and markets that experienced growth. In the next twenty years, seventy seven percent of the demand of new aircrafts will arise from outside of north America, with 34% going to Asian region. According to the Boeing forecast the biggest demand form market value point of view will come from United States, followed by china. Amazingly, the United Arab Emirates, with less than five million population, is home to numerous highly competitive airlines, is expected to be the third biggest market by value (Boeing n. d.).

AIRBUS COMPANY PROFILE AND STRATEGIES IMPLEMENTED

Airbus is an aircraft manufacturing company based on France, Toulouse, is presently the world's largest commercial aircraft manufacturer with 52% of the market share in the European market, and has been involved in an

intense competition with Boeing since 1970. Airbus is a supplementary of European Aeronautic defence and space space company (EADS). In 2001, Airbus officially became a solo company, BAE and EADS relocated their assets to newly formed company and became stakeholders of 20% and 80% respectively. A shareholder committee that contains seven members and work as an administrative council, 5 members from EADS and 2 members from BAE administer airbus, they approve the investment and make up three year investment plan.

In the May month of 1974, Airbus successfully made its first delivery, it was an A300B2, to an air operator in France

Airbus has been restructured into “ centres of excellence” and each centre is managing its own policy of buy and make accordingly, making decision to subcontract trying to find out whether they can lower cost, which is the only way to continue profitability.

Airbus has also adapted differentiation strategy for its core activities since it rolled out its first wide bodied twin aircraft which differentiates it from its competitors (UscubaComission n. d.).

Airbus follows an expansion strategy by proving itself expert in the industry and put it in use in the military program A400M program. Airbus has started research on the new engine option (NEO) that could result into reductions of operating costs. Boeing plans to offer a new aircraft in 2020 followed by “ 737NG” in 2011.

The company make use of only prime and properly tested technology to chose its suppliers to assure quality. The company used synergies between its aircrafts, which leads to shorter training time between engineers and pilots, leading to savings in maintenance processes and reduction in spare parts inventory. This leads to monetary gains and competitive advantage for them(Goold n. d.).

Airbus functions on the thinking of foreseeing and listening properly to their customers and employees in building more fuel efficient, less noisy and comfortable aircrafts. Airbus operates on the principles of thinking ahead and listening to their customers, passengers, and employees in building constantly more comfortable and efficient aircrafts. Also Airbus corporate culture and diversity is competitive advantage for the company (Composed n. d.).

The increment in oil prices and journey cost may interfere in the low cost offerings by Airbus, which may put pressure on the firm to switch to more fuel efficient engines(Chapman n. d.).

BOEING COMPANY PROFILE AND STRATEGIES IMPLEMENTED

Till now, Boeing has been conventional leader in the global aviation industry, with Airbus lying behind. Nevertheless, in the last few years Airbus has been ahead Boeing repeatedly because of the large number of orders it's been receiving and surpassing its deliveries in 2003.

Boeing is the key producer of commercial airplanes and the foremost aerospace firm and offer connected support services. Boeing is currently the world's biggest producer of large commercial aircrafts (LCA's)(Composed n. d.).

Boeing has been keeping up with its objective of giving its customer eco friendly products. Boeing has been aggressive in taking over, expanding and putting into practice new technological solutions for reducing aircraft noise, and also maintaining operational effectiveness and customer satisfaction of its products in parallel.

The Boeing capital corporation also invests in commercial apparatus and private airplanes.

The Boeing is also involved in design, growth, sale, production as well support of industrial jetliners, rocket defence, satellites, space flight of human and launch services and systems.

Boeing is one out of the two main producers of 100 plus seat aircrafts for the global commercial airline industry and the second biggest defence constrictor in the United States.

Boeing's major operations are carried out in the United States of America. They depend heavily on their chain of suppliers, subcontractors and partners which are situated around the globe(Arkell n. d.).

Boeing has injected huge amount of capital in the construction of new facilities, equipments to carry out their tests, and to improvise on their noise

control and aero-acoustics research. There are also several research projects that focus on applying the new technology and implementing it to the production. Most of the important research projects are employed to deal with cost, maintenance, production and cross functional design and problems coming in the adaptation of new technology.

NASA - Boeing is also a NASA contractor who has worked vigorously in the operations conducted by it and so that it can gain access into new technologies in the field of aerospace. Boeing also has its full database linked with the NASA. Boeing has been involved with NASA for quite a long time regarding noise problem in commercial planes. This also enables the firm to have a very strong R&D department.

Boeing has made a decision to market in a different way by turning their focus on small and mid-size aircrafts to increase flexibility between airline operations and to cover longer distances. They focus not on increased capacity but to cover longer distances, this differentiates them. This will enable airlines to provide much convenience to travellers, at much less operational costs, leading to combination of lower rates for travellers and profit for airlines.

Their potential success which they foresee is based on three of strategies of running core business values in a healthy way, using strength into new products and opening up new limits (Horton & McKay n. d.).

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SWOT ANALYSIS OF BOEING

This segment analysis the strengths if Boeing, they will use the strength to meet the upcoming future demand to gain competitive edge.

Strength

Customer Satisfaction: The project named “ My Boeing fleet” has implemented web service and XML technology to improvise operations, reduce general work errors and decrease costs.

Enhanced Customer Satisfaction: Boeing uses the latest IT technology to execute tasks from their work locations. They improve their time spent in meeting to learn new things every time they undergo training. These action lead to rise in productivity.

High performing employees: Boeing endeavours to be improve quality continuously and with the help of its workforce benefit programme and maintaining balance between work/life culture. Also, Boeing also recognizes that its competence lies with its employees.

Well Developed Organization: Boeing has several dedicated project teams and subsidiaries to give a hand in improving overall company’s performance. For example, Aero-info is a subsidiary of Boeing focused on providing aircraft maintenance solutions.

New Facility Supply: With the numerous increments in commercial communication satellites, Boeing has decided to build a new construction factory in Alabama and Decatur for the production of newest generation of missiles used to push the satellites into space.

Weakness

Recent suspension of Boeing from the military contracts and re-assignment of those contracts to Lockheed martin, this occurred to ethical lapses.

Columbia Shuttle Tragedy: The name of Boeing suffers drawback every time the tragedy is re-called because Boeing is a very special part of United Space Alliance.

Ongoing controversy linking ex-CFO and ex-CEO: This happened due to hiring of a military regulator while negotiating an important contract.

Change of Aircraft Supporting: Boeing has decided to fold up the production of Boeing 757, while Boeing 717 and 767 are on lifeline. This could have a bad effect on consumer's confidence and interests.

Opportunities:

Government Support: Boeing is the biggest exporter and second biggest weapons manufacturer in the US and primary contractor in many the countries missile programs, it can gain government support anytime they want.

Expected deal from Boeing 7E7 contracts: The program has already started and it has also received orders from All Nippon Airways and also from airlines

from New Zealand and Australia. They expect sales of around 500 at the end of the year.

Threats

Aggressive competition: Boeing is in the middle of a fierce competition, especially from the field of LCA's. It was once leader in LCA but now it's on a very close competition with Airbus, which is the leader in producing commercial aircrafts.

Foreign Barriers: The growing concern for Boeing is the foreign government involvement in the production of LCA. A term suited to this situation is called "Regulatory Nationalism". This can result into refusal of US made aircrafts in some countries(Campbell et al. n. d.).

SWOT ANALYSIS OF AIRBUS

Strength

Diversity in employees: Airbus has been very conscious about its employees, it believes in keeping diversity in their employees.

Ingenuity: The ingenuity of Airbus company has enabled it to survive for the last three decades. Since its commencement in the 1970, the has risen to be the leader surpassing its main competitor Boeing in 2005.

Freezing of Spare parts: Airbus freezes the price of its spare parts for three years. For example, the prices of spare parts in 2009 were same as in 2006. This practice has gained them lot of customer support.

Weakness

The A380: The Airbus company invested almost everything in the A380. Even after that it faced delays in the delivery of A380. This led to a lot of stir with its parent company EADS, so much that its management was changed in 2006. Airbus also made huge amount of cuts by reducing its suppliers from 3000 to 500, resulting into saving of US\$ 2 billion and cut administrative costs by US\$ 446 million. These steps were taken to accommodate growing needs with the launch of A350. When A380 production was delayed for two years, the parent company EADS reportedly lost US\$ 6 billion dollars. After shocks came when FedEx world largest express transportation company, cancelled its ten orders for the double decker and ordered 15 Boeing 777 in place of that.

Also one of the major weakness of Airbus is that it has low R&D investment compared to its competitor Boeing which can prove harmful in a long run.

Opportunities

Airbus is continuously going on a green path. This is a very auspicious position for any company who intends to be in forefront of Greening technology. Development of new aircrafts that significantly lower the carbon footprint on the environment is an opportunity no company would pass. Today, people are concerned about the environment and this act by airbus will gain a lot of public support. Airbus plans on being the industry pioneers when it comes to keep the environment clean. All of its manufacturing sites are kept within the environment standard, all ISO14001 certified.

Threats

Legal actions are inherited in this industry and no one is immune from it. For example, Air France sued the company for the crash occurred in 1992 near Strasbourg.

A major finance risk is also there when there are exchange rate clashes. A major part of the revenues of EADS are generated in US dollars and most of its cost incurred are in euro, this can seriously affect profits (Weidner et al. n. d.).

Conclusion

Airbus strategies are to the point, provide every variety of product available to meet the different requirements of the customers with the latest technology, also maintaining low cost of operations and maintenance expenditure. Airbus implements mixed type of strategies on different types of its products, it follows differentiation strategy on commercial airplane segments for different needs of customers and invent units to operate at lower costs.

Boeing has a very strong Research and Development network, the company uses its innovative technology to gain competitive advantage. They know that they are lagging behind airbus but they put high amount of work to improvise the quality of their products. They are going in a different direction by catering to different set of customers. Both Airbus and Boeing cater to different kind of customers. Airbus makes bigger jets and Boeing makes

smaller jets. Boeing needs to overcome the situation and regain their position in the market.