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Go Air – An Airline Operations Review

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Abstract:

GoAir is an international carrier based in Mumbai, Maharashtra, India. It is a low-cost carrier, owned by Wadia Group. The airline company has 9% market share in the Indian domestic carrier market. GoAir started its operations back in 2005 with the first flight being operated on Mumbai - Ahmedabad sector on 4 - November - 2005. The airline was one of the first in India to operate the Airbus A320 aircraft in an all economy setup. Initially GoAir operated just a single aircraft and was able to cover four destinations across India.

As of January 2019, GoAir owned a fleet of 48 Airbus A320 aircrafts with 114 more on order. The airline operates 230+ daily flights which are spread across 26 destinations (24 domestic and 2 international). This paper is an operations review of the airlines.

Keywords **—GoAir, Airlines, Aviation, Operations, Management, Fleet, Airport, Industry.**

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I. INTRODUCTION

GoAir has a reputation of being Slow, Very Slow in expanding its business. This can also be being called the tortoise operations strategy. While its competitors have been aggressively expanding their reach by adding more domestic and international destinations to the mix, GoAir has been focusing only on the domestic market. Even the rate at which GoAir has been increasing its fleet size, remains very low compared to its competitors, namely Indigo and SpiceJet.

Being a low-cost carrier, the airline operates point to point flights with minimal aircraft park time. Whenever an aircraft lands at an airport, the next set of passengers are ready to board the aircraft for the next destination on the route. This gives a mere 20 minutes to the ground staff to prepare the aircraft for the next flight.

As it is a budget carrier, GoAir charges for all meals served onboard to the passengers. Passengers are given an option to buy their food onboard the flight. GoAir also offers Go Business which is their premium service which comes at a higher fare providing better legroom, meals, more baggage allowance and priority boarding and priority baggage handling.

II. LITERATURE REVIEW

Strategies followed by GoAir: -

1) Aircraft Choice

GoAir since its launch has been using single aircraft i.e. Airbus A320. The Airbus A320 family has been widely accepted as the go to choose for all low-cost carriers across the world. The main reason behind this choice is that having a same aircraft in its inventory GoAir is in a beneficial position considering all its maintenance ground staff i.e. mechanics and the procurement of spare parts will be aligned as per the Aircraft A320 family. The crew onboarding also becomes easy as both cabin and ground crew needs to be trained for only one type of aircraft. GoAir like other low-cost carriers in India, keeps a minimalistic approach while setting up their aircraft. That is, they keep their aircraft equipment as minimal as possible. There are no in-flight entertainment systems available to the passengers. These practices help to reduce the cost of maintenance and overall cost incurred during the service life of the aircraft. Further this keeps the overall weight low thus saving the costly aviation fuel.

2) Focus Cities

Further GoAir like other Low-Cost Carriers have not kept a single operating hub, instead it has four different hubs strategically spread across India. These hubs can also be called focus cities. GoAir has its flight operations strategized around these focus cities and all its flights run point to point routes.

3) Simplicity

GoAir has been on the frontline of charging flat fares to its customers, with point to point flat fares being set as INR 999/-. This flat fare policy is only set for initial set number of seats. As the aircraft is booked, the latter tickets are sold at a premium. This is basically a way to reward the passengers who booked their flights early. GoAir normally keeps one flight per route and day and prefers passengers to travel direct routes as compared to traditional transfer method. GoAir only offers transfer option when the aircraft is flying to or from the focus cities along the flight plan. In all other cases there are no transfers involved. Further this saves luggage transfer costs and airlines can further avoid problems related to lost luggage.

To keep the turnaround time as low as possible, in 90% of GoAir flights the boarding and offloading is done via stairs and not via aerobridges. The flight timings at busy airports are kept at a time when there is a minimal congestion at the terminal while during peak hours the aircraft is in flight or is at a secondary airport where terminal congestion is not an issue. This simplistic approach helps the aircraft to be serviced, offloaded and re-loaded in shorter time frame allowing maximum utilization of the aircraft.

4) Alternate Sources of Revenue

Along with flight-based revenues, GoAir generates revenue by using other activities as well. In flight meal options, seat upgrade options and other premium services are charged by the airlines. Even service like Web Check-In and seat selection is a charged service for GoAir. Also, while operating point to point flights, if there is additional space for cargo, the same is sold to interested companies who send in their cargo in the flight. These additional services help GoAir to generate more non-flight revenue from its operations.

5) Limiting Costs

GoAir tends to cross train its crew and ground staff so that they can work as gate agents and work on other roles if required. The staff is sometimes employed via a third-party employee partner so that direct expenses can be decreased. This practice enables GoAir to keep a high performing staff and offer competitive fares along with other low-cost carriers. One more practice which has been seen in Indian domestic market is introduction of machine-based check-in counters at the airport further reducing ground staff requirement and decreasing cost. Sometimes secondary airports limit the use of such machines but in majority airports where GoAir

operates, they introduce this facility at their own expenses to reduce overall wait time and enhance customer experience.

6) Best principles of operation

As per IATA i.e. International Air Transport Association, a low-cost carrier's primary objective is point to point operations where it operates on short haul routes (less than 5 hours) and is normally between a focus city and secondary city.

GoAir strongly focuses on price sensitive traffic who are leisure travellers. These customers have a very rare chance of entering a loyalty program with the airline.

Thus, the services offered are always limited in option because majority of concentration is keeping the average fare low as the flight operations depend on the price competition. Of course, the lower fares are only applicable if the booking is done well in advance, towards the flight date higher fares get applicable as per dynamic pricing strategy. One major contributing factor in advance bookings is that they are done over the internet.

Optimized aircraft turnaround remains the primary factory in keeping a high aircraft utilization rate. GoAir can achieve this as its management is simple and the strategic decision-making process is lean.

Apart from the above factors, having a standardized fleet, keep away from non-essential features, operating from secondary airports, quick turnaround, online sales of tickets and check in, using stairs for loading and offloading, crossing training the staff, advanced route planning and point to point flights have helped GoAir in keeping itself operationally optimized.

GoAir Capacity Management

GoAir has been around in the Indian domestic sector since 2005 but its expansion has been quite limited in size and scope. With a limited size of 47 aircrafts as on January 2019 with 114 more on order with Airbus. While its competitors have been aggressively concentrating on their mammoth size expansion, GoAir has been consistently increasing the fleet like a tortoise at a rate of 1-2 aircrafts annually. Though as per Indian aviation rules, the airline is eligible to operate International routes, GoAir has not been much inclined towards international routes, rather its top management has stated that they are concentrating more on the domestic sector.

Challenges Faced

The main challenge faced by GoAir is high tax levied on aviation fuel in India. Along with that airports in tier 1 cities like Mumbai, Bangalore, Chennai, Delhi and Hyderabad are running at full capacities with congested terminals and very high aircraft parking rates. If GoAir tries to operate from tier 2 cities the expected demand gets low, cutting out on margins and customer demand. Getting slots for the new aircrafts also is an ongoing issue and getting approvals from Airport Authority of India remains a headache for the airline management.

Another challenge for GoAir and its competitors operating Airbus 320new family of aircrafts is that the engines supplied by Pratt & Whitney are not optimized for Indian standards. Though Airbus A320 aircraft is manufactured by Airbus, there are various suppliers involved in the manufacture of the aircraft. One such supplier is Pratt & Whitney, the supplier of the A320neo engine called the PW1100G. Now this new engine has been successful in the cold European and North American market, with features such as 16% fuel efficient and 75% less noisy as compared to its predecessor. In India the hot and humid weather conditions have been causing an accelerated and premature wear and tear of critical components of the engine causing grounding of the fleet and cancellation of scheduled flights.

Current Capacity

GoAir currently has been using its entire available fleet for proving flights for its 24 domestic and 2 international destinations. Its operating mechanism is such that all aircrafts in domestic sectors fly point to point flights with each crew manning the craft for 8 hours straight. These aircrafts are them replacement with a new / fresh crew which continues to operate the aircraft on the next schedule of point to point routes. This keeps the aircraft air borne and keeps the aircraft parking costs as minimal as the only time GoAir parks an aircraft is when it requires the scheduled check-up / maintenance. In 95% of cases, GoAir tries to keep a turnaround time of 20mins, which includes offloading, loading, cargo, aircraft clean up, aircraft structural check-up and refuelling. Current capacity is being fully utilized but the only problems which are being faced being the terminal congestion causing a delay in the ongoing route. A delay in the incoming aircraft causes and bull whip effect on the entire route planning as all scheduled flights for the aircraft get delayed as well.

Capacity Bottleneck

The capacity bottleneck of GoAir is due to its lower inventory of the aircraft. Due to a lower inventory when the aircraft faces an ongoing issue such as the one faced with Pratt & Whitney engines, (the entire fleet consisting of the similar type of aircraft), majority of the fleet gets grounded. Airbus had recommended all Indian operators the Airbus A320neo aircraft to fly at a lower altitude of 30,000ft instead of the recommended 36,000ft causing all benefits of the new engine to be redundant. The supply of the new engines optimized for Indian standards have been another bottleneck as the requirement has been high as compared to the supply. The high requirement of this engine has been attributed to majority of Indian domestic low-cost carriers operating the Airbus A320neo series of aircraft.

One another issue has been inconsistent supply of new aircrafts from Airbus. With the estimates being 12-15 aircrafts annually and the actuals being just 1-2 aircrafts. This bottleneck has been due to lack of quality engine supply to Airbus from Pratt & Whitney.

Another bottleneck has been unavailability of a consistency at the operating airports. For e.g. If GoAir is supposed to fly from Bangalore airport, the customer can have access to machine-based check in counters and automatic baggage scanning facility. On the other hand, if GoAir is supposed to fly from Pune airport (which is also an Air Force base), there is a restriction on automatic counters and baggage scanning needs to be done manually. This causes a bottle neck for the customers which requires more time to clear and causes delay in the scheduled departure of the aircraft. This being a clear example of running operation from a tier 1 city airport and a tier 2 city airport.

Recommendations

Due to its limited size and high operating requirement of the aircrafts GoAir faces numerous issues mentioned above. My recommendations for the GoAir would be as follows: -

1) Increase fleet size

   This doesn't meet GoAir needs to operate all the aircrafts it has purchased. This is a practice followed by many American and European carriers. As per this strategy airline can buy new aircraft but till the requirement arises it can lease them to the airlines which needs them but can't afford them. This is one of the reasons why sometimes passengers see a plane with markings of a different airlines with a foreign pilot operating on domestic routes.

2) Lease back planes
   To avoid cancellations and schedule delays GoAir can lease back old planes. When an

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airline starts its operations, while route planning a lot of things are factored in. Aircraft maintenance schedules, delivery of new aircraft and availability of crew, all factors are factored in while planning the future routes of the airline. The tickets are also sold keeping all these factors in mind. GoAir can lease back old Airbus A320ceo aircrafts till the new aircrafts arrive and till the problems associated with Airbus A320new aircrafts is resolved. This would ensure there are no cancellations and operating hiccups for GoAir.

3) Differentiation

Not all carriers are willing to use differentiation as a strategy because of the risk associate with it. GoAir already allows it passengers to do web check in for free while all its competitors charge for this service.

Additionally, GoAir can try to add an inflight entertainment system in its medium haul routes (duration ranging from 3hours to 5 hours). This would help them gain customer's loyalty. Adding complementary meals on medium haul flights can also be taken as an option.

In the competitive domestic market, we have been seeing new airlines launching their own operations. As the availability of air travel increases for the customers, having a competitive price point won't be the only criteria to remain profitable in market. Creating a unique brand image would have a huge role for the approaching success of the carriers.

Key Operational parameters and their impact on GoAir's business goals

Low cost carriers are continuously scouting to add more destinations to their network. While adding these new destinations, a lot of evaluations are done to check if the new route is going to beneficial in the long run. There are a lot of third-party companies which do route scouting and route evaluation to get help in their decision. Some of the parameters which they investigate while planning the routes and changing the existing ones have been discussed below: -

1) Forecasting of demand

Whenever an airline is planning to introduce a new route, they tend to evaluate how many people would be interested to travel on that route using their proposed flight. There are numerous aviation intelligence tools available to evaluate and determine such scenarios.

The data used by the tools consists of other airline data, fare trends and routes used. This information helps carriers to determine the expected number of people between the point A and point B.

Using this information, the airline can know about the average flow per day and can check which configuration of the aircraft would be best suited for the route.

GoAir uses forecasting to check for expected demand and introduces new additional routes during peak seasons. Its main competitor is Indigo Airlines. For example, during festive season there is huge flow of passengers from Mumbai – New Delhi sector. Knowing about this expected rise in passenger flow, GoAir normally adds more flights to this route to cater customer demand and generate profit.

2) Hub Connectivity

GoAir like other low-cost carriers doesn't operate from one single hub rather it prefers to operate from multiple focus cities which work as sub-hubs. The focus of airline route planning is to ensure high customer flow between this focus cities so that they can reach their destinations well in time. For example, if a customer is flying from Chandigarh to

Goa, GoAir can provide two different routes to the customer. The first one can be Chandigarh to Delhi and then Delhi to Goa, alternate route can be Chandigarh to Bangalore and then Bangalore to Goa. Both routes are taking the customer to their desired destination but both routes cost different and their pricing remains dynamic based on current and future requirements. By introducing connecting flights customers can reach more destinations and airlines are able to cover more locations in their network.

Airlines can use route mapping to determine expected profit and revenue based on timings and duration. An airline needs to make sure that when a customer is supposed to connect via the hubs, the wait time is low and doesn't cause disturbance to the customer's schedule. The inbound and outbound flights should be perfectly aligned to accommodate security checks, baggage transfer and airport safety requirements.

Also keeping the timings suitable is always a preferable option. For example, corporate travellers tend to take early morning or late evening flights so that it remains business as usual through the day and they can return home before nightfall.

This similar connectivity approach is used by SpiceJet and Indigo in Indian sector.

3) Availability of Aircrafts

GoAir has a small fleet of aircrafts in its inventory. Whenever it puts one of its current aircraft out for maintenance or whenever the delivery of a new aircraft is delayed it causes availability issues for scheduled flights. Sourcing new places and spare engines along with them for new route remains a huge problem for GoAir. For a low budget carrier like GoAir it is beneficial to operate short haul flights as compared to low haul flights as it allows the same aircraft to travel to multiple cities while if operating on longer routes, the same aircraft might only cover one or two cities.

Airport limitations also play a huge role in availability of aircraft and their deployments. There are some airports where night landings remain an issue due to lack of night landing facility. Similarly, bad weather can also cause airlines to halt their operations. Thus, availability of aircrafts is an important operational indicator.

Indigo with its mammoth size ensure availability of aircrafts for all its routes even if part of its fleet goes for maintenance.

4) Matching the opposition but with a difference

Indian domestic airline market has been rapidly filling up, so it is not unusual for competing airlines to fly on the same route at the same time. In Bangalore - Delhi route, there are more than five back to back flights flying on the same route but being operated by different carriers (all being full). This trend is seen in many sectors across India. Following already established routes is an easy strategy for the airline but starting a new route remains a challenge and operational parameter for the airline.

When an airline chose a smaller city where there is no airline competition can be a better option. These smaller cities can connect to focus cities giving the travellers more network access and connectivity. The number of destinations which are uniquely covered by the airline without any competition remains an important operational parameter for the airline.

Indigo has been a part of India's UDAAN scheme and for same it acquired ATR aircrafts so that it could cater to tier 2 and tier 3 cities where other airlines have not been able to provide flight services. Making the first move, Indigo has been able capture a lot of tier 2 and tier 3 cities for being the first domestic carrier to give aerial connectivity to these cities.

Design of GoAir's Service Delivery

Air travel for passengers in modern times is becoming more and more technology driven. There used to be a time when aircrafts were the most advanced pieces of engineering ever designed. Now the technology associated with them has taken its place. Hence it won't be wrong to conclude that new technologies have had a huge impact on services provided to passengers by these modern airliners.

These burgeoning breakthroughs have not only made it easier for airliners to provide services but have also improved client experience while ensuring growth.

Even the emergence of IOT i.e. Internet of Things which connects real world objects with each other via the internet has transformed the aviation industry. It is having huge impact on maintenance and safety, allowing carriers to keep their planes airborne longer with less time required for turnaround. Such technologies allow the maintenance staff to check the aircraft components without disassembling them. With the progress of this technology ground staff would be able to access aircraft performance related data, that too in Realtime. These new technologies will help to reduce aircraft downtime, improve safety and performance.

IOT can also help in baggage management. Making lost baggage a thing of the past. This would ensure better tracking of baggage and equipment by the ground staff.

GoAir is an air travel service provider. Its service starts when a customer books a flight to the time customer has exited the airport happily. Once GoAir has flight schedules in place it starts to list them on its own portal and on third party channels via which customers can book their tickets. Online travel portals like Goibibo, Yatra, Skyscanner etc all operate as 3rd party vendors who help customers to book their flights. Whenever a customer searches for a flight, their algorithm checks for the best suitable options and shows it in the search results. GoAir also has its own channels to sell the tickets.

Under its direct channel it sells via its online website and app, and it also sells tickets via its offline channel i.e. via airport sale counters.

Once the customer has purchased the tickets, a PNR ID is generated which used by the airline to identify the customer. GoAir tracks its customer and keeps them updated by sending them automated text messages, sharing all updates. When the actual day of the flight approaches the customer is sent a reminder text on the number they had used while booking, and they can book their meals, additional baggage and other amenities. Go Business customers are even offered a pick and drop facility from their place of stay. On reaching the airport, customers are supposed to pass through security to reach the check in counter. Once they reach the check in counter, GoAir check in staff might offer the customers upgrade options on their booked seats. In some airports where lounge option is available, business customers get access to the premium lounge facilities for free.

At the terminal gate the customers get sorted into three boarding groups. Priority is given to the business customers, followed by people sitting in row 1 to 15 are boarded from a different line, while people sitting in row 16 to 30 are boarded from a different line. This ensures that there are no long queues in from of the boarding counter.

In aircraft GoAir customers get access to inflight magazine and are also offered fresh meals and beverages which are chargeable. All these facilities are available to all customers of economy class, which for business customers all these facilities are bundled in their tickets.

After landing, GoAir staff shares the baggage belt number from where customers can collect their bags. Once the customers have collected their bags they can move out of the airport building completing their travel. In case of any issues with the flight or baggage collection, customers also have access to GoAir customer care counter which enables the customers to submit their grievances.

This enables GoAir to provide a good and customer friendly service.

Now even in-flight pilots and attendants are moving to paperless ways to log information. By reducing paperwork, airlines can reduce costs making a better way for customers to access information when they need it. This information can vary from arrival times, departure times and even gate changes. Giving all this information in Realtime helps to reduce passenger stress level and making their overall experience better.

The level of connectivity seen in all services involved in GoAir operations when mixed with data analytics allows the airliner to give better experience to travellers based on their preference history. It also enables airlines to innovate new services while improving client experience and increasing profits. All these factors contribute to greater success of the airline and creates opportunities to generate new revenue streams.

Quality tools & Techniques used by GoAir for various Measurements, Analysis, Improvements and Controls

Over the passage of time, the tools and techniques used by airlines have drastically changed. In the past when any problems arise, or an accident took place, concerned department staffs were deployed to deal with the situation. The people deployed lacked the required training on how they could be effective for same. The people staffed in these departments were those pilots who could no longer fly due to medical reasons. The result of this was that the number of accidents due to negligence were high.

To address these accidents, back in 1990's an Airline Safety Summit was done which was attended by representatives from all aspects of airline industry. Many additions such as having a doctor onboard, having a proper training for crew was mandated for all airlines. Further safety norms for data collection, risk management, analysis and corporate safety were established. These new norms enhanced the staff capability. Data collection done for Flight Operations Quality Assurance, Aviation Safety Action Program, Advanced Qualification Program, Air Transport Oversight System, Global Aviation Information Network and others helped the airlines to work closely with the established norms.

Flight Operations Quality Assurance: The data recorded during flight helps in improving the performance of the crew, enhance the training programs, control procedures, aircraft maintenance and design. This implementation gave a lot of cost benefits and developed better organizational strategies for information use. The data collected is same to the data collected by the digital flight recorder aka the black box. This huge cost-effective solution has been widely accepted by GoAir and worldwide.

Aviation Performance Measuring System: With the introduction of FOQA and others, a lot of data started to flow in for analytics. For such kind of data, specialised tools were required to derive meaningful insights from the data. This APMS was introduced. This tool helped to establish technological and scientific basis for the data. This tool looked for more advanced data analysis and tool which helped to interconnect various functions over a software program. The main objective of this tool was to enhance efficiency and safety. This system has been successfully implemented by GoAir as well.

Aviation Safety Action Program: This program is a voluntary reporting program in which airliner operators work together to enhance flight safety. The goal of this program is to detect safety hazards and problems in flight operations before an actual accident occurs. All carriers in India share information to have better and aligned operations.

Advanced Qualification Program: This program seeks to integrate the evaluation and training of skills at all stages of learning. Pilots demonstrate proficiency in scenarios which test crew resource management and technical skills. Airlines which participate in this program design and implement data collection strategies together. While doing this they can implement procedures for curriculum refinement based on quality control data.

Air Transport Oversight System: This system is a new oversight approach that uses system safety principle and systematic processes to assure that air carriers like GoAir have safety built onto their operating systems.

Global Aviation Information Network: It is a network which is used to learn about factors in accident chain by bringing diverse groups together in a voluntary, privately owned and operated network of exchange and data collection system.

The Ground Delay Program (GDP)

This program relies heavily on the capacity of the subject airport. This program enables a joint optimization of key parameters like flight time, end time and the distance travelled. All these factors are factored in the GDP model based on which we can locate the problem where optimization can be introduced. Factors such as Air Traffic Control and Safety norms are also factored in this system. GDP framework has reduced total delay by 14.7%, unnecessary ground delay by 50.8% and unnecessary ground delay flights by 48.3% for GoAir while maintaining the ATC safety risk under an acceptable level.

This program strategies to convert airborne delay into a safer and economic ground delay. While this is implemented across all airports, the effectiveness is seen in airports which have an uncertain capacity. Uncertain capacity here refers to factors such as acceptable aircraft rate per hour, weather condition and ground staff availability.

Main factor leading to high customer dissatisfaction

Unexpected delay of scheduled flights has been attributed for high customer dissatisfaction in the airline industry. Delays are caused by airport congestion, weather, air space block, delay on incoming aircraft, non-availability of crew/pilots. Ontime performance of airlines is the most important Key Performance Indicator. From cost perspective, delays cost more as compared to on time performance. Passengers are informed about delay in last moment, sometimes even after reaching the allocated gate. They are left without refreshments and no representative from airline is available for help. By deploying a more accurate GDP system, GoAir can provide its customer a better heads up regarding the unexpected delays. A more accurate GDP can help GoAir to inform the customers at least 2 hours before they arrive at the airport. Also, if there is a last-minute delay, GoAir can still try to please its customers by serving complimentary tea / coffee. These small gestures can go a long way in building a loyal customer base.

III. CONCLUSIONS

GoAir has established itself as an independent low-cost carrier in the Indian domestic airline market. Operations in airline industry always present a striking dichotomy. GoAir does this by safely moving passengers to their source city to their destination. GoAir in its history has focused on safety, using of best aircraft available in market, on time performance, geographical reach and unique inflight services. Even the unpredictability, which is imposed by regulatory constraints, crew issues, weather and the rapidly shifting demand, GoAir has always remained consistent, growly slowly like tortoise but in the right direction. Even after competition with other low-cost carriers like

Indigo, SpiceJet, AirAsia, etc. the airline has worked through all the challenges delivering high quality with low cost, resulting in satisfied customers. The introduction of lean operations in GoAir has strikingly reduced waste and variability while increasing the overall performance. Strategic outsourcing and insourcing have given its share in the year on year growth. GoAir now is consistently working on its operational choke points such as passenger loading, baggage handling and customer service.

Recently the tortoise airline has also received approvals from the Indian government to start international operations. GoAir has strategically chosen unexplored international destinations like Saudi Arabia, Vietnam, Iran, China, Qatar, Uzbekistan, Kazakhstan and Maldives to start its international expansion.

Thus, we can conclude that by keeping its operations lean and optimized, GoAir can continue to grow, generate profits and slowly build a loyal customer base in the domestic and international market.

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