



**CENTER FOR
INFORMATION
SYSTEMS
RESEARCH**

**Sloan School
of Management**

Massachusetts
Institute of
Technology

Cambridge
Massachusetts

Air Deccan

Jeffrey L. Sampler

November 2006

CISR WP No. 365 and MIT Sloan WP No. 4657-07

© 2006 Massachusetts Institute of Technology. All rights reserved.

- Research Article:** a completed research article drawing on one or more CISR research projects that presents management frameworks, findings and recommendations.
- Research Summary:** a summary of a research project with preliminary findings.
- Research Briefings:** a collection of short executive summaries of key findings from research projects.
- Case Study:** an in-depth description of a firm's approach to an IT management issue (intended for MBA and executive education).
- Technical Research Report:** a traditional academically rigorous research paper with detailed methodology, analysis, findings and references.

Title: Air Deccan

Author: Jeffrey L. Sampler

Date: November 2006

Abstract: Air Deccan is the amazing story of India's first low-cost airline. It has become the nation's largest domestic airline in less than four years. They have done this through a clever combination of innovation and outsourcing. More importantly, from a strategic perspective, it gives powerful evidence to how technology can be a key factor in changing the industry dynamics, even in what were once considered fairly stable or conservative industries.

Keywords: BPO, outsourcing, strategic innovation, industry dynamics.

22 Pages



Massachusetts Institute of Technology
Sloan School of Management

Center for Information Systems Research



Air Deccan

EXECUTIVE SUMMARY

India has a diverse transport sector, comprising rail, road, port and aviation sub-sectors, which caters to the needs of more than 1.1 billion people. Since the last decade, the transport sector has not been able to keep pace with the economy and has proven to be a bottleneck in the country's economic growth. In recent times, the transport sector has experienced a dynamic shift with the entry of low cost airlines. These airlines have targeted upper-class rail passengers, who account for substantial revenues.

The Indian aviation industry has always been highly regulated by the government. In the early nineties, the government initiated measures to deregulate and privatize the aviation industry, which were in line with liberalization of Indian economy. In 1994, the Air Corporations Act of 1953 was repealed, which allowed private carriers to provide scheduled services. This saw the emergence of full-service carriers such as Indian Airlines, Jet Airways and Air Sahara and low-cost carriers such as Air Deccan, Spice Jet, Kingfisher, IndiGo, GoAir and Paramount Airways which predominantly operated domestic routes.

Captain Gopinath, the founder of Air Deccan, pioneered the low-cost carrier model in India.

The carrier scaled its operations from a single aircraft in 2003 to a fleet of 30 aircraft catering to 55 destinations by 2006. In January 2006, Air Deccan became the largest low-cost carrier and the third-largest domestic carrier with a market share of 13.3%. In June 2006, it increased its market share further to 19%, as compared to Indian Air's 21.1% after 53 years of existence. Air Deccan flew one million passengers in its first year of operation, and three million passengers in 2005. Air Deccan was on target to fly about eight million passengers in 2006, which would surpass Indian Air's estimate of 7.2 million passengers. The company owed its success to its 'no-frills, low-cost' business model, where it offered fares which were approximately 30 percent lower than those offered by full-service airlines, and were at par or even lower than upper-class rail fares.

Air Deccan's management was well aware of the challenge to sustain its low-cost business model and proactively designed various strategies to ensure its success over a longer horizon. The carrier's strategies were aimed at generating additional revenues and reducing costs. In order to increase revenues, the airline reduced turn-around time and planned other processes such as aircraft selection, flight scheduling, ground handling and route selection,

This case study was prepared by Jeffrey Sampler for the MIT Sloan Center for Information Systems Research. This case was written for the purposes of class discussion, rather than to illustrate either effective or ineffective handling of a managerial situation. The author would like to acknowledge and thank the executives at Air Deccan for their participation.

© 2006 MIT Sloan Center for Information Systems Research. All rights reserved to the author.

which in turn led to an increase in its utilization rates. In addition, the airline targeted other sources for additional revenues. These sources included credit card fees, sale of food and beverages on flights, and the sale of advertising space on seats, storage bins, headrests, tray tables, baggage tags, boarding passes, the body of the aircraft, websites and in-flight magazines.

The carrier also implemented several innovative measures in order to reduce costs. It followed a point-to-point route strategy, where it did not time its flights to connect with its other flights or with other airlines' flights. This helped to eliminate waiting time between flights, resulting in significant reduction in the carrier's operational and logistics costs. Air Deccan's fleet strategy was unique as it included both ATRs and Airbuses, which were used to cater to its trunk as well as regional routes. Smaller ATR aircraft were economic on the regional routes and were supported by available infrastructure at these airports. In contrast, larger Airbus aircraft offered lower operating costs on the trunk routes and were suitable to accommodate high passenger traffic on these routes. Moreover, the carrier incorporated a unique dynamic pricing model which made a significant contribution toward optimizing the airline's yield management and load factor. The airline also followed a 'lean-and-mean' staffing model, aimed at maintaining a low aircraft-to-employee ratio, thereby further reducing costs.

Air Deccan's distribution initiatives were instrumental in saving costs as distribution costs are one of the key controllable expenditures in an airline's cost structure. Apart from the conventional distribution channel of travel agents, the carrier pioneered ticket sales through several innovative distribution channels such as an Internet reservation system, call center, airport ticketing desks, petrol retail outlets and an Internet services retail outlet. This enabled the airline to reduce its costs and increase its accessibility to the customers.

The carrier's support functions, such as Information Technology (IT) and Human Resources (HR), played a critical role in its success as a

low-cost carrier. It created its Internet-based distribution system with the help of a technology vendor, InterGlobe Technology Quotient, which enabled the airline to extend its reach to customers. The carrier's IT architecture was designed in such a way that it was both scalable as well as robust. The system had adequate inherent backup mechanisms so as to eliminate any possibility of a break down. These IT initiatives helped the airline to reduce its distribution costs by almost 20%.

The airline's HR function saw the airline grow to almost 2600 employees within a span of two years. HR ensured that the organization had a relatively flat structure so that employees were accountable for their actions and were keen to develop an entrepreneurial spirit. It emphasized the personal strengths and skills of employees so that they were well suited for their roles and the organization's work culture. Management also employed several measures to curb attrition, which was a bane in the otherwise booming aviation sector.

Air Deccan has ambitious growth plans in the future as it strives to be the largest airline in the country. In order to meet these plans, the carrier placed an order for 101 aircraft, which will be delivered by December 2012. To fund its fleet expansion, Air Deccan made an Initial Public Offering (IPO) in May 2006 and raised USD 80 million. The regulated aviation sector, inadequate airport infrastructure, unavailability of secondary airports and competition from new low-cost entrants and other full service airlines will ensure a bumpy ride for the carrier in the coming days. Events such as consolidations, price wars and evolving business models will surely change the aviation sector in the future. Air Deccan management felt ready for the challenges.

CASE STUDY—AIR DECCAN

While going through the newspapers on a Monday morning in early February 2006, Captain G.R. Gopinath, the Managing Director of Air Deccan, came across the headline—'Air Deccan files draft prospectus for IPO.' He

smiled, recollecting Air Deccan's brief and uncertain two-year journey. As a pioneer in the low-cost aviation arena, he had redefined the market. As a result, Air Deccan succeeded in establishing itself as the leading low-cost airline. However Captain Gopinath's smile faded as he spotted another headline—'Jet Airways, Air Sahara tie the knot.' He wondered how this new development would affect the industry, resulting in new re-alignments and consolidations. He was also concerned about how these in turn would determine the evolution of Air Deccan's business model.

Air Deccan's success had triggered the entry of many other airlines such as Spicejet, Go Air, Kingfisher and IndiGo, among others. These new entrants were fast gaining access in the low-cost market and simultaneously squeezing the carrier's margins. Captain Gopinath was equally wary of the challenges posed by the regulatory environment and airport infrastructure, which served as major bottlenecks in meeting the demands of the fast-growing aviation market. He realized that it would be an uphill task for the airline to successfully meet its goals while competing with other low-cost and full-service carriers.

Changing Dynamics of the Indian Transport Sector—Air and Railways

The transport sector has played a vital role in the development of the Indian economy. Though the rail and air sectors have exhibited high growth in recent years, the lack of infrastructure remains a major hindrance in their development. The government plays a crucial role in regulating and developing the country's transport sector.

Rail Transport—An Overview

Indian Railways is the largest rail network in Asia and the second largest in the world.¹ It is also the largest government-owned public enterprise. Indian Railways has demonstrated a steady growth in terms of freight and passenger transport. In the year 2000–01, the railways

¹ US Rail network is the largest in the world.

employed 1,545,300 people and transported 473.5 million tons of freight and 4,833 million passengers.² In the same year, railway tracks spanned 108,706 km, connecting approximately 6,853 stations across the country. In 2001, the railways generated freight revenue of INR³ 233 billion and passenger revenue of INR 105.2 billion (see Table 1).

In 2002, 60% of rail passengers were from large cities such as Mumbai, Kolkata, Chennai and Delhi. Long-distance passengers accounted for 27%, and those traveling short distances or from small cities accounted for 13% (see Figure 1). Although rail passengers used nearly 60% of rail resources, their contribution to total rail revenues was only 32%. In fact, upper-class passengers, who constituted less than one percent of passenger traffic, accounted for a significant 20% of total rail passenger revenues.⁴ Today, these upper-class rail passengers are not only the focus of low-cost airlines but are also responsible for changing the dynamics of India's air and rail sectors.

Indian Aviation Sector—A Review

Early Days

In 1953, the government enacted the Air Corporations Act to merge nine existing air companies into two, Indian Airlines, catering to the domestic market, and Air India, servicing the international market. The government controlled all the key operations of these entities for almost 40 years.

However, in the 1970s, the US government pioneered the deregulation of its airline industry, which led to benefits such as lower fares, improved productivity and better asset and capital utilization. The success of the US government's initiative triggered the process of deregulation and privatization of the airline industry in several other countries also.

The Indian aviation industry experienced similar winds of change, which were further fueled by

² Source: [Indian Railways](#).

³ Indian Rupee.

⁴ Source: [Indian Railways](#).

the liberalization of the Indian economy. In 1986, private players were permitted to operate only as air taxi operators.⁵ This led a host of private carriers such as Jet Airways, Air Sahara, Modiluft, Damania Airways, NEPC⁶ Airlines and East West Airlines to start their operations as air taxi operators. In 1994, the Air Corporations Act of 1953 was revoked, allowing private carriers to also provide scheduled services. Six private air taxi operators were granted the status of scheduled carriers. Of these, Jet Airways and Air Sahara⁷ are the only two that continue to operate in the country currently.

Growth Story

Global events such as economic recession, terrorist attacks in several countries, the Gulf war and the spread of epidemics such as SARS⁸ had a negative impact on the Indian aviation industry. However, the domestic aviation sector has successfully overcome these crises, recording substantial growth in recent times. According to the Director General of Civil Aviation (DGCA), the number of domestic passengers increased at a CAGR⁹ of 15.9%, from 12.8 million to 19.9 million during the period 2002–2005. For the year ending 31 March 2005, domestic air traffic registered an increase of 26.8% as compared to 2004 (see Table 2). The number of air passengers is forecast to increase to 90 million by the year 2010.¹⁰

The growth potential of the aviation sector has been further propelled by the government's initiatives for greater involvement of the private sector in aircraft manufacturing, operating and upgrading airports, and providing enhanced ground services.

⁵ Air Taxi Operators own a fleet of small aircraft that make short local flights to areas not serviced by regular airlines.

⁶ Natural Energy Processing Company.

⁷ Note: Jet Airways has signed a deal to acquire Air Sahara.

⁸ Severe Acute Respiratory Syndrome.

⁹ Compound Annual Growth Rate.

¹⁰ Source: [ICFDC](#).

Major Operators

The Indian aviation sector primarily comprises four types of operators—domestic airlines, operating within India and select international destinations; international airlines; chartered air operators; and air cargo service providers, whose services include air transportation of cargo and mail. Scheduled domestic airlines again fall in two categories, full-service carriers and low-cost carriers. Indian Airlines, Jet Airways and Air Sahara operate as full-service carriers whereas Air Deccan, Spice Jet, Kingfisher, IndiGo, GoAir and Paramount Airways operate predominantly on domestic routes.

Indian Airlines started operations in 1953, followed by Jet Airways in 1995 and Air Sahara in 1996. In 2003, Air Deccan commenced operation as a low-cost domestic carrier. Its success attracted many similar players. In January 2006, Jet Airways signed a deal to acquire Air Sahara. If this move is successful, it will make this new entity the largest player in the Indian aviation sector, with a combined market share of 45.7%. However, conflicts over the pricing of the deal have caused delays. At this juncture, the case is subjudice with both parties taking the other to court. As of June 2006, Air Deccan is the leader among low-cost carriers, with a market share of 19% (see Figure 2).

Infrastructure

The lack of adequate infrastructure remains a major bottleneck in the growth of the aviation industry. The phenomenal growth in the number of passengers and aircraft has led to the congestion of terminals and runways, resulting in flight delays and increased costs for the airlines. As per the statistics available in January 2006, there were 450 (approximately) airports in India, which were managed by the Airports Authority of India (AAI), Defense Services, state governments and private parties. The AAI managed 126 airports. Defense Services operated 89 civil domestic airports, 11 international airports and 26 civil enclaves.¹¹ Nearly 40 of the

¹¹ Source: [Air Deccan Prospectus](#).

defense airports were non-operational (see Figure 3).¹²

Recognizing the need for a world-class aviation infrastructure, the government has partnered with the private sector to expand and modernize international airports in New Delhi, Mumbai, Chennai, Kolkata and 32 other regional airports. The privatization plan for Delhi and Mumbai airports experienced a long delay, due to opposition from political parties and non-transparency in the awarding of contracts. However, the construction of two greenfield airports at Bangalore and Hyderabad has commenced and is due for completion by 2008.¹³

Changing Landscape

In July 2003, the Ministry of Civil Aviation set up a committee to review the civil aviation policy and make recommendations for the promotion and development of the civil aviation sector. The committee addressed a diverse range of issues such as affordable air travel, improvement in airport management and infrastructure, restructuring of the aviation sector, and aviation security and safety regulations.

Based on the committee's report, the government initiated various measures to develop and promote the aviation sector. In December 2003, private airlines were permitted to fly to some international destinations in the South Asian Association for Regional Cooperation (SAARC) countries. Subsequently, in January 2004, the government abolished Inland Air Travel Tax (IATT) and Foreign Travel Tax (FTT) and reduced excise on aviation turbine fuel (ATF). This was followed by a substantial reduction in landing charges as well as navigation charges in February 2004. In November 2004, the government increased the foreign investment limit in the aviation sector from 40 to 49%. Domestic airlines that had completed five years of domestic operations were also permitted to fly to select international destinations.

¹² Source: [ICFDC](#).

¹³ Source: Centre for Asia Pacific Aviation.

Air Deccan—The Beginning of a New Era

In 1995, India was in the early phase of reforms, which were gradually re-structuring various sectors. Captain Gopinath firmly believed in the efficacy of these reforms and was exploring various avenues to start a venture. According to Captain Gopinath, "On meeting a colleague, who was a retired pilot and who was not getting a job as a pilot, I realized that there was not a single helicopter service in the country that could employ such retired personnel." Captain Gopinath was also aware that in the wake of economic liberalization there would be an imminent need for helicopter service in sectors such as oil, mining, construction and power. This led to the formation of Deccan Aviation in 1995, which began operations with a single helicopter. Captain Gopinath purchased his first helicopter from Australia and flew it all the way to India, hopping various islands on the way.

From this humble beginning, the fleet of Deccan Aviation gradually grew to 11 aircraft¹⁴ (nine helicopters and two fixed-wing aircraft). Deccan Aviation became a success story largely due to its continued efforts in building a national presence and a good brand image, and offering high-quality services, such as chartered destinations, tourist requirements, medical evacuation purposes, religious pilgrimage and offshore logistics.

Captain Gopinath was encouraged by the developments in the low-cost aviation arena worldwide that had revolutionized the aviation industry. The success of airlines such as Southwest Airlines and JetBlue in the United States and Ryanair and easyJet in Europe had set a trend, inspiring airlines in other countries follow suit. India's open economic environment and its large growing segment of air passengers and retired air force pilots presented an immense opportunity for the entry of an airline.

In recent times, India has emerged as one of the largest consumer bases in the world. The country has a large middle-class population, which had grown to 300 million by April

¹⁴ Note: As of November 30, 2005.

2005.¹⁵ Moreover, the Indian economy has exhibited high growth in recent years, and the GDP is expected to increase at the rate of 8.1% for the year 2005–06.¹⁶ As a synergy has always existed between the transport sector and the country's economy, this sector has progressed steadily along with India's impressive economic growth. At present, 13 million passengers travel by train in India everyday, which highlights the large volume and potential of the transport industry.¹⁷ Captain Gopinath captured, developed and leveraged this potential and launched India's first low-cost airlines—Air Deccan, in August 2003. Air Deccan was incorporated as a unit of Deccan Aviation Private Limited.

The Founder, the Man

Captain Gopinath was born in the remote village of Gorur, located in Karnataka. He graduated from the National Defense Academy and also served the Indian Army for eight years. In 1979, he took voluntary retirement to pursue his interests in diverse areas. He was honored with the prestigious ROLEX award for enterprise in ecological silk farming. In addition, he was awarded Chevalier de la Legion'Honneur conferred by the French President, Galileo & Indian Express Editor's Choice Award and numerous other awards for business and society. Air Deccan was named the "Most Innovative Company of the Year" in October 2006.

Vision and Mission

Captain Gopinath's vision of contributing to the lives of India's masses has been realized through Air Deccan, a pioneering low-cost business model. The airline has played a significant role in making the common man's dream to fly come true. In accordance with Captain Gopinath's vision (see Table 3), the carrier aims to provide a no-frills air travel service, which is safe and economical, and provides on-time service to its customers. Moreover, the airline plans to fly to a larger number of destinations in

¹⁵ Source: [NCAER](#).

¹⁶ Source: [Ministry of Finance, India](#).

¹⁷ Source: [Indian Railways](#).

India, connecting millions of people. Along with serving the 'common man,' the airline strives to be commercially successful by reducing operating costs, improving aircraft utilization and increasing load factor (the percentage of filled seats) and yield (revenue earned per ticket).

Air Deccan: Phenomenal Growth

In August 2003, Air Deccan began its operations with a single ATR¹⁸ aircraft, on the route between Bangalore and Hubli. During the last two years, the carrier has exhibited phenomenal growth:

- Currently, the carrier operates approximately 266 flights on a daily basis.
- The airline has scheduled flights to 55 destinations¹⁹ which provide connectivity across the country (see Figure 4).
- Air Deccan's fleet comprising Airbuses and ATRs has grown to 30 aircraft²⁰ (see Table 5).
- As of May 2006, Air Deccan's market share stood at 19%,²¹ making it the third-largest airline in the country.
- Currently, the carrier employs approximately 2600 employees (apart from employees on a contract basis).
- Within a year into its operations, the airline funded its expansion by raising USD 40 million from ICICI Ventures and Capital International in exchange for a 26% stake.
- As of 30 November 2005, Air Deccan had flown approximately 2.7 million passengers.²² The carrier flew one million passengers in its first year and 3 million passengers in its second year. In its third year of operation, it is expected to fly 8 million passengers.
- The carrier's revenues increased by 376% in the year ending 31 March 2005 as compared to the previous year. In fact, the airline

¹⁸ The ATR 42 (48 seater) and ATR 72 (72 seater) are twin-turboprop air craft. These are respectively 22.7 m and 27.2 m in length.

¹⁹ Source: [Air Deccan](#).

²⁰ As of March 2006.

²¹ Source: Director General of Civil Aviation.

²² Source: [Air Deccan Prospectus](#).

earned a revenue of INR 3,618.3 million (see Table 4) in the six-month period ending 30 September 2005. The carrier's revenue for 2003–4 was 16 million USD, in 04–05 it was 80 million USD and in 05–06 was 225 million USD.

Business Model

Air Deccan was the first Indian airline to follow a 'no-frills, low-cost' business model. Its success lay in the fact that though the model was inspired by successful low-cost airlines in other countries, it was customized to suit Indian conditions.

The airline's target passengers comprised leisure, small business and corporate customers belonging to the middle class and cost-conscious customers of the affluent class. The carrier's airfares were comparable to railways' upper-class fares, and at times were even lower than rail fares for select seats (see Table 6). This helped Air Deccan to capture a vast segment of upper-class train passengers. For example, as of August 2005, the airline had succeeded in attracting approximately 18–20% of upper-class train passengers.²³ This led to an increase in first-time fliers, which in turn resulted in an increase in the market size.

Air Deccan offered fares which were approximately 30% lower than those offered by full-service airlines. In order to provide low-cost fares and remain profitable, the carrier adopted several measures. It reduced its operational costs by simplifying its operations, by using technology, and by outsourcing processes that were not core to the business. The airline did not provide additional services (such as free meals) to its customers. It focused on providing basic transportation services to its customers in an efficient manner. The carrier devised strategies to achieve high aircraft utilization in terms of flying hours. Air Deccan also adopted the concept of 'dynamic pricing' to optimize the load factor and the yield.

²³ Source: [Indian Express](#).

The sale of tickets was not the airline's only means of generating revenues; the sale of food and beverages on flights was one of its alternate revenues.

Air Deccan had a vision to serve even in the remotest corners of the country. As of June 2006, the airline offered its services across 55 airports and 260 flights per day in India. It started nine flights to destinations where no other airlines had a presence. In addition, there were seven other destinations where only one other carrier was providing flight services along with Air Deccan. This helped the carrier to explore new routes where it faced negligible competition. First-time fliers from such areas also tended to develop an abiding loyalty to Air Deccan.

Strategies

As a pioneer in the low-cost aviation sector, Air Deccan was determined to make a mark for itself. A mix of strategies contributed to its success.

High Aircraft Utilization

High aircraft utilization was the first of Air Deccan's strategies as it would directly result in high revenue generation. One of the main avenues for achieving this end was reducing the airline's turn-around time. By doing this, the carrier automatically increased its number of flying hours, which in turn resulted in an increased number of seats available. In addition, Air Deccan meticulously planned other processes such as aircraft selection, flight scheduling, ground handling and route selection to increase utilization rates. As a result, the airline was able to achieve impressive utilization rates of 10.44 hours for the year ending 31 March 2004, as compared to other airlines whose utilization rates ranged between seven and nine hours. However, by September 2005, with the introduction of new aircraft and the addition of new routes and new bases (see Table 7), its utilization rates decreased to 9.19 hours.

Route Planning

Air Deccan also owes its success to the manner in which it planned its operational routes. The carrier operates from six bases, which are located in the metropolitan cities of Mumbai, Delhi, Chennai, Kolkata, Bangalore and Hyderabad and are connected by trunk routes. Further, these bases are connected to other regional locations through regional routes. In addition, there also exist various air routes connecting regional locations with each other.

Air Deccan followed the worldwide low-cost carrier strategy of flying on point-to-point routes. It did not time its flights to connect with its other flights or with other airlines' flights; thereby eliminating waiting time between flights. This strategic move contributed significantly towards reducing the carrier's operational and logistics costs.

As an integral part of its growth strategy, the airline explored new route options on a continuous basis. These new routes comprised those that were either not served by other airlines or those that did not have adequate flights. The airline carried out a feasibility study before finalizing new routes. According to Mohan Kumar, the Director, Finance of Air Deccan, before launching a new route between two destinations, the airline first conducted an extensive traveler survey to identify traveler traffic. If the upper class train traffic between these destinations was in the range of 500–800 passengers per day, the airline recognized it as a lucrative option and began its operations.] However, profitable route selection depended on variable factors, which differed from one route to the other. For example, current air traffic volumes and availability of landing slots were the prime factors determining the finalization of trunk routes. In contrast, the availability of sufficient airport infrastructure was the important factor that determined regional route selection as regional routes had limited infrastructure that could only accommodate smaller aircraft such as ATRs.

Air Deccan's strategy to pursue unexplored routes paid rich dividends as very often these

routes achieved a two-pronged result—high yield and high load factor. The airline's presence on these routes, before other competitors, gave it an additional first-mover advantage. The carrier was aware that its success was dependent to a large extent on its load factor. Therefore, it discontinued a route after an initial four-month period if its load factor was found to be low.

Aircraft Fleet

Air Deccan invested a great deal of time and effort towards making the best use of its fleet. This was another factor that contributed to the airline's success. Therefore, matching different types of aircraft with the requirements of specific routes was yet another significant strategy followed by the carrier. Initially, Air Deccan's fleet comprised only an ATR 42 turboprop—a 48-seat aircraft. The airline later added ATR 72 and Airbus A320 to its fleet. The carrier included both kinds of aircraft—ATRs and Airbuses—in its fleet so as to cater to its trunk as well as regional routes. Smaller ATR aircraft were used because of two reasons—regional routes had lower passenger traffic, and most airports on these routes did not have adequate infrastructure to accommodate larger aircraft. In addition, the costs involved in operating smaller aircraft on regional routes were lower as compared to larger aircraft. Moreover, the flight staff required for these aircraft was lower in comparison to that of larger aircraft. Also, smaller aircraft enjoyed lower sales tax on fuel, lower navigation fees and no landing fees.

The larger Airbus aircraft were used on trunk routes. These aircraft were ideal for accommodating the high passenger traffic on these routes. Also, as compared to ATRs, these aircraft offered low operating costs per passenger for longer distances.

Two features characterized all Air Deccan aircraft—a single class and a narrow seating arrangement. This led to an increase in the number of seats available, thereby increasing revenues.

Dynamic Pricing

Air Deccan's unique pricing model was another strategy which went a long way in optimizing the airline's yield management and load factor. In the dynamic pricing model, seats which were booked well in advance had lower fares, whereas the seats booked closer to the travel date had higher fares. This helped the airline to maximize its revenues from ticket sales as well as maintain high seat occupancy. This balance of load factor and yield enabled the carrier to augment its revenues. This pricing process was continuously monitored on a real-time basis and was governed by a defined set of rules. It also involved checking the prices of its competitor airlines on an on-going basis.

As of 31 March 2004, Air Deccan's load factor stood at 62.64%, which gradually increased to 76.36% by 31 March 2005 (see Table 8). As of 30 November 2005, the carrier's overall average load factor was 80.86%. The yields also increased from INR 2,055 as of 31 March 2004 to INR 2,084 as of September 2005.

Recently, the airline entered into negotiations to implement Navitaire software (used for optimizing load factor and yield management), which is popular among leading low-cost carriers worldwide.

Additional Revenues

Generating additional revenues was a strategy that Air Deccan adopted with great success. Since the airline was a low-cost carrier, it faced continuous challenges to maintain profitability. Therefore, it was aware that the sale of tickets alone would not be adequate to raise the required revenue. Thus, the airline targeted other sources to achieve this end. These sources included credit card fees, the sale of food and beverages on flights, and the sale of advertising space on seats, storage bins, headrests, tray tables, baggage tags, boarding passes, the body of the aircraft, websites and in-flight magazines.

Unlike full-service carriers that generally provided full refunds on ticket cancellations, Air Deccan imposed penalties on the same. These penalties varied from 10% to 100% depending

on the date of travel. This helped the airline to partially recover the costs of empty seats as a result of cancellation.

Commenting on additional revenues, Captain Gopinath states, "With an average passenger spending INR 75 for a quick meal or beverage, Air Deccan could have easily generated additional revenue worth INR 202.5 million from the 2.7 million passengers that had flown on the airline till November 2005."

Cost reduction

Realizing that revenue generation alone would not ensure its long-term success, Air Deccan identified its next strategy—cost reduction. Implementing several cost-reduction measures ensured the profitability and sustainability of the airline's business model. The carrier did not indulge in incurring frivolous expenditure. Therefore, unlike its competitors, Air Deccan refrained from incurring expenditures on fancy offices, lounges and frequent flier program. The airline followed a 'lean-and-mean' staffing model and maintained a low employee-to-aircraft ratio in comparison to others in the business. Its ATRs were serviced by a one-member cabin crew whereas its Airbuses were serviced by a four-member cabin crew. By using the smaller ATR aircraft for shorter flights and for regional destinations, Air Deccan significantly reduced its infrastructure usage fees because the landing fees for smaller aircraft were almost 50% lower than the fees for larger aircraft. The airline also reduced its employee strength by automating some of its processes, thereby reducing costs.

The existence of a single fare system in Air Deccan, unlike those of full-service carriers, was yet another means of implementing cost reduction. The airline opted for a single fare system instead of a multi fare one to avoid the additional costs involved in accounting and auditing processes.

The carrier achieved a turn-around time of 40 minutes (for an Airbus) and 20 minutes (for an ATR), as compared with other airlines that had average turn-around times of 55 minutes. This

resulted in increased aircraft utilization rates, thereby generating higher revenues. In addition, the carrier benefited by paying lower parking rentals for its aircraft.

To further reduce costs, the airline outsourced non-core operations to third parties. Operations, such as airport ground handling, supply of on-board food and beverages, and supply of in-flight magazines, were managed by third-party vendors. Recently, the carrier signed an agreement with Cafe Coffee Day and appointed it as its single-point vendor for supplying food and beverages.

Air Deccan also reduced costs by using unconventional distribution channels (described below) and the airline primarily sold tickets upon receiving advance payments or payments within 24 hours of ticket booking, reducing the carrier's requirement to finance its working capital. This gave Air Deccan a distinct advantage compared to other airlines that had longer payment cycles because the bulk of their reservations were routed through travel agents.

Marketing and Promotion

Air Deccan achieved significant breakthroughs in the low-cost carrier arena through its intelligent marketing and promotion strategies. The airline utilized its marketing and promotional programs effectively to highlight the competitive advantage it enjoyed as a result of its low fares. The carrier also increasingly focused on public relations, advertising, direct marketing and the Internet to promote its offers and increase public awareness about its services.

In order to convey its message to its target segment, i.e., the cost-conscious customer, Air Deccan selected cartoonist R K Laxman's famous mascot 'The Common Man' (see Table 9) as its brand ambassador. The carrier advertised primarily through media such as print, radio and billboards. Though the airline also used television as a media to reach the masses, it did not use it as extensively. The carrier has also entered into various sales and barter exchanges for advertising space, which has provided Air

Deccan with additional advertising slots on television, newspapers and radio.

The airline customized marketing campaigns for its diverse customer segments. For its leisure travelers, the carrier offered a 'Value Flier' package, which provided multiple tickets useable over a fixed period by any four members of a family. In the near future, Air Deccan also plans to offer leisure packages in partnership with hotels.

Sales and Distribution

Air Deccan's sales and distribution strategy was another initiative that revolutionized the industry. By introducing several innovations in its distribution channels, the airline succeeded in reducing its distribution costs substantially. According to Air Deccan's Chief Revenue Officer John Kuruvilla, "Distribution cost is seen as one of the key controllable expenditures in an air carrier's cost structure; thus, an effective and efficient distribution mechanism goes a long way in making an airline successful."²⁴

Most full-service airlines use GDS reservation systems, where their seating inventory is hosted on GDS databases, such as Galileo, Amadeus, Sabre, Abacus and Worldspan. GDS charges these airlines a fixed price, which is approximately three to four percent of ticket sales. In order to reduce its distribution cost by avoiding GDS-related costs, Air Deccan developed an Internet-based Centralized Reservation System (CRS), with the help of InterGlobe Technology Quotient. This system centralized customers' reservations through channels such as the Internet, call centers or travel agents.

Using the CRS, the airline successfully implemented ticket sales through the Internet. Direct Internet bookings accounted for approximately 28.17% of total ticket sales, for the six-month period ending 30 September 2005. Customers only needed printouts of their tickets to generate their boarding cards. This saved the cost of printing tickets, which amounted to INR 4 for

²⁴ Source: *Real CIO World*.

each ticket. In addition, airline paper tickets were bar coded. The bar code reader was used to read these codes, which helped in reducing the time required to generate boarding passes.

The airline set up a 24x7, multilingual call center for customers who did not have access to the Internet or credit cards. As this call center had CRS connectivity, it provided these customers with the facility of booking their tickets over the telephone. The call center sales accounted for 9.94% of Air Deccan's total ticket revenue for the six month-period ending 30 September 2005.

However, the airline sold most of its tickets through travel agents, the aviation industry's conventional distribution channel. This helped the carrier to mitigate the risk of alienating travel agents by introducing several alternative channels. These travel agents accounted for 49.16% of the carrier's total ticket sales for the six-month period ending 30 September 2005. Other airlines operated through their travel agents who booked tickets through GDS and collected payments from customers, which were then passed on to the airline. However, Air Deccan modified the existing model to one in which travel agents used the CRS to book tickets. Agents collected payments from customers and purchased tickets either against pre-paid deposits or credit/debit cards. Unlike other airlines, this model enabled Air Deccan to receive payments in advance, thereby reducing its cash cycle. By using this model, the carrier extended its reach to include non-traditional agents such as merchants, retail outlets and cyber cafes for ticket booking.

In addition to the major sales and distribution initiatives listed above, the airline also pursued some more strategies to bolster its distribution channel. It sold tickets through airport ticketing desks, which were connected to CRS. Sales from these ticketing desks accounted for 11.15% for the six-month period ending 30 September 2005. In order to reach out to a larger customer base, Air Deccan partnered with approximately 160 HPCL petrol retail outlets and 240 Reliance Web World retail outlets.

Through these outlets, customers booked Air Deccan tickets for an added handling fee. These sales were also connected through CRS. Recently, Air Deccan has introduced a new facility for its customers—they can use their mobile phones to book tickets through SMS. Customers can also use SMS to reschedule their flights. The carrier is now planning to offer its customers ticket booking using General Packet Radio Service (GPRS) over mobile phones.

Thus, Air Deccan effectively used several distribution channels to substantially reduce distribution costs and significantly increase customer accessibility.

Support Functions

Air Deccan's two support functions, Information Technology (IT) and Human Resources (HR), have played a crucial role in the airline's growth path and have also been major contributory factors in its success.

Information Technology (IT)²⁵

The manner in which Air Deccan utilized technology to its advantage was instrumental to its success. The carrier not only used technology as a medium to reduce costs, but also used it to enhance operational efficiency and increase revenues.

As noted, Air Deccan opted out of the third-party GDS reservation systems used by other airlines. In doing so, the carrier required rapid implementation of its own customer reservation systems (CRS). Since Air Deccan did not have adequate skills and competencies to develop such a system on its own, it made the strategic decision to outsource it to a third party. According to Air Deccan's Chief Information Officer Arvind Saksena, outsourcing offered Air Deccan a distinct advantage. As the third party had domain expertise, the airline would be able to affect speedy implementation of the new system, thereby leading to quicker revenue generation.²⁶

²⁵ Source: [Air Deccan Prospectus](#).

²⁶ Source: *Real CIO World*.

The most critical step in this process was the selection of an ideal vendor for developing Air Deccan's Internet-based reservation system. This was because the online booking channel was expected to become one of the carrier's major revenue earners, owing to increasing Internet penetration in India. Therefore, when selecting a vendor, the company's prime concerns were stability and reliability as only a vendor that met these requirements would be able to provide efficient support. Moreover, the vendor had to possess sufficient internal capacity to absorb large orders and sustain the development process, even when payments were delayed. It was also imperative that the vendor deliver as per the deadlines. InterGlobe Technology Quotient met all of the airline's criteria, and was chosen by Air Deccan to develop an efficient distribution/reservation solution.

InterGlobe developed the CRS, a system that was based on a combination of both .Net and J2EE technologies. This new solution handled a variety of activities ranging from reservations, schedules, fares, payment gateway integration, departure control system and document production. According to Arvind, "Our focus was to build IT architecture and infrastructure which were both scalable and robust. We wished to have a foolproof system in place that would eliminate all possibilities of any breakdown. This was because an IT breakdown had critical consequences—operations could come to a grinding halt." To meet such an eventuality, the IT infrastructure required multiple alternatives, wherein the infrastructure would provide for system failures to be automatically remedied and addressed.

The IT solution comprised three significant parts—the reservation engine, the inventory engine and the departure control system. The reservation engine facilitated transactions with online customers, corporate customers, call centers, travel agents, and city and airport offices, on a real-time basis. The inventory engine managed inventory flight schedules, fares, sales and flight departures. Through the departure control system, passengers were issued boarding passes with ticket printouts that

indicated PNR²⁷ numbers. The departure control system interfaced with the reservation engine to track passengers who boarded an aircraft.²⁸

The entire IT solution developed by InterGlobe was up and running in a short span of 40 days—no mean feat by any standards. The CRS deployed by Air Deccan enabled the airline to:

- Save approximately 20% in distribution costs
- Monitor yield management through available seat occupancy data
- Connect different geographies
- Improve cash flow via pre-payments
- Reduce collection and administrative costs
- Optimize booking levels
- Sell tickets 24x7

In addition to InterGlobe, Air Deccan also partnered with Sheorey Digital Systems to develop an Airline Resource Management System (ARMS), which tracked logistics, maintenance, training and crew rotation.

Air Deccan's IT infrastructure also ensured that its website, which could be accessed by all customers, maintained CRS connectivity at all times. As a security measure for e-commerce, the website was certified by Verisign. In addition, the infrastructure comprised two online payment gateways and data links to provide security and continuity for online customers.

The airline's IT infrastructure also provided web connectivity for various points of sales. Thus, the carrier was not dependent on SITA's²⁹ (third-party vendor) communication links, which offered limited connectivity and were also far more expensive. Therefore, Air Deccan had far greater market reach as compared to other airlines. This was because these airlines were dependent on SITA, which did not have a presence in smaller cities.

²⁷ Passenger Name Record.

²⁸ Source: *Real CIO World*.

²⁹ SITA is a provider of IT business solutions and communications services to the air transport industry. It serves approximately 1,800 customers in over 220 countries and territories.

Though partnering with its technology vendors helped Air Deccan implement its IT systems, these vendors required continuous monitoring. According to Arvind, “It was extremely important to monitor vendors by having service level agreements (SLAs) in place. This was because replacing vendors would require the entire process to be begun all over again, involving significant time and expenses.” Moreover, the carrier had a dedicated team at the vendor’s site, which enabled the carrier to have flexibility to accommodate changes in the system.

Air Deccan also multi-tasked its bandwidth, thereby reducing bandwidth wastage. The airline used open-source software for firewalls and e-mail servers, which ensured the customization of applications in diverse environments. The carrier used voice over Internet protocol (VOIP) and other technologies to reduce its telephone costs.

The airline undertook several measures to ensure that its IT systems operated efficiently. Its CRS was based on servers, which were hosted at InterGlobe’s data center located in Gurgaon (an IT hub near Delhi), India. This provided effective alternatives for power breakdowns, controlling fires and optimizing network connectivity and security. To maximize network availability and provide continuous connectivity, these servers were connected through the Internet with telecom service providers such as BSNL and Bharti,³⁰ and wireless loop from HCL³¹ (third-party vendors). A 24x7 support team was also established at InterGlobe, Air Deccan and HCL to eliminate any downtime. To further strengthen security, these servers were isolated from other networks and were continuously updated with new operating systems, databases and anti-virus patches. The airline also had backup procedures such as routine databases, transaction logs, and website and server log backups. All important links, ‘last-

mile’³² applications and Air Deccan’s data servers were provided double or triple protection by HCL. The entire facility had a 24x7 dual power backup. Finally, various security measures, such as video surveillance and security clearance, were established to monitor the data center sites.

Human Resources (HR)

Air Deccan recorded an impressive employee growth rate that touched the 2000-mark within a comparatively brief 30-month period. This achievement was a clear indication of the efficient support that the airline received from its HR division. The carrier was incorporated in August 2003. Its employee strength was approximately 2600 in June 2006. According to management estimates, the head count is expected to grow to 5000–6000 by 2010. Though Air Deccan favored a ‘lean-and-mean’ approach to recruiting and staffing employees in various departments, its head count has increased proportionally to match its exponential growth. As of January 2006, security personnel accounted for 21.7% of the carrier’s employees followed by its cabin crew and engineers, who accounted for 20.4% and 19%, respectively (see Figure 6).

The Indian aviation industry, like other industries, is facing the constant challenge of dealing with employee attrition. As of January 2006, Air Deccan had an annual attrition rate of 15–20%. Recently, the DGCA passed a new rule, which required pilots to give a six-month notice before leaving an airline. This has resulted in a significant decrease in pilot attrition.

Air Deccan’s HR division focuses on recruiting young professionals with little work experience straight from their university campuses. They screen all prospective employees’ resumes thoroughly, conducting in-depth interviews to ensure that candidates’ academic qualifications and personal strengths and skills are a good fit with their job profiles. This initiative paid off as

³⁰ Bharat Sanchar Nigam Ltd (BSNL) and Bharti are the leading telecommunication service providers in India.

³¹ HCL is a leading technology solution provider in India.

³² ‘Last mile’ is the final step of delivering communications connectivity to a resident or customer, which is an expensive and an extensive exercise.

it substantially reduced attrition. Thus, the airline had a committed and enthusiastic youthful work force, which accepted challenges cheerfully and delivered. Another HR initiative was to reward meritorious employees through promotions to supervisory and base management positions or as trainers.

The airline has a relatively flat organizational structure, which encourages employees to be accountable and develop a sense of ownership and pride in their work. Air Deccan also values and fosters an entrepreneurial spirit among its employees. It also promotes transparency across the organization, with positive results. The airline is particular that its employees value their customers and vendors and are fair to them at all times. Air Deccan's efforts in being sensitive to its employee needs resulted in a win-win situation for both its employees and the airline itself, with both experiencing exponential growth.

For skilled employees such as pilots and cabin crew, Air Deccan offers salaries as per industry standards. As Air Deccan's Chief Human Resources Manager Maclean S. Raphael puts it, "Offering competitive salaries for these skilled employees is imperative as we cannot operate without them." The airline focuses on identifying diverse sets of skills and attitudes in its potential hires. According to Maclean, it is important that the cabin crew is equipped with selling skills as they are the ones who are involved in in-flight retail sales. Similarly, it is important that the cabin crew hails from modest backgrounds and has no inhibitions in engaging in aircraft-cleaning activities. The crew also needs superior interpersonal skills to enable them to interact pleasantly with customers from various backgrounds.

The management employs several measures to motivate its employees. There are performance incentives for employees, which motivate them to perform well. For the convenience of employees, a helpdesk has been set up that takes care of activities such as payment of utility bills, buying movie tickets, etc. There are monthly birthday parties for employees, which inculcates a sense of belonging among them. These and

various other measures have contributed significantly towards each Air Deccan employee identifying with the airline's mission and vision.

Expansion Plans

Air Deccan has aggressive growth plans to further strengthen its position in the Indian low-cost airline market. To further penetrate existing markets and explore new ones, the carrier intends to increase the frequency of its flights on existing routes, introduce services for cities that are already being served by other airlines, and explore and finalize new flight destinations.

To meet its extensive growth plans, Air Deccan plans to expand its aircraft fleet. According to Captain Gopinath, "The new acquisition will expedite our growth plans and take us closer to fulfilling our vision of taking low-cost air connectivity across the length and breadth of the country." The airline has placed an order for 101 aircraft to meet the anticipated demand, which comprises 69 Airbus A320, 30 ATR 72 and two ATR 42 aircraft. These are scheduled to be delivered by December 2012. As per its proposed schedule, the carrier expects to take delivery of one aircraft every month.

To fund its expansion plans, Air Deccan filed its draft prospectus for an Initial Public Offer (IPO) with the Securities Exchange Board of India (SEBI) in January 2006. Through its IPO, the airline plans to raise USD 250–300 million. Some of the objectives of its IPO include setting up a training center and a hangar facility, developing airport infrastructure, developing new markets and repaying debts. The training center is proposed to be located at Bangalore and will be used to train pilots, cabin crew and security personnel. Currently, aircraft maintenance is carried out at leased hangars. The establishment of a new hangar is aimed at reducing maintenance expenses and enhancing the availability of hangar space. In order to develop new markets, the airline plans to invest INR 75 million to develop 50 ticketing offices. In addition, the carrier plans to allocate INR 377.2 million to its advertising budget.

Challenges Ahead

Though Air Deccan has emerged as the third largest airline in India in a remarkably short time and will soon be the second largest airline, it faces many challenges ahead. Only by meeting and surmounting these challenges will the airline establish itself as a true leader of India's low-cost aviation sector.

Despite the various reforms that have been recently introduced, India's aviation sector faces several limitations because of the highly regulated environment in which it operates. Fixed costs, such as fuel and airport-related costs, constitute a major part of an airline's operating expenses, all of which are under government control. It is only recently that the government permitted Air India to hedge its fuel prices. Though this is not currently applicable to other carriers, there is a possibility that the government may soon also permit other airlines to hedge their fuel prices. Air Deccan, being a domestic carrier, also faces the additional disadvantage of paying higher fuel prices as compared to international carriers. This is because international airlines are exempt from excise duty and sales tax.

Further, domestic airlines in India have to comply with the route dispersal guidelines set by the government. These carriers have to operate a minimum number of flights to unprofitable rural and smaller urban destinations, which leads to a reduced load factor and yield.

Another challenge faced by the country's low-cost carriers is that they do not have the choice as yet of operating from secondary airports, unlike the low-cost airlines in other countries. Using secondary airports is beneficial as these charge lower parking and landing fees. The absence of secondary airports in India has forced the country's low-cost carriers to use primary airports, incurring avoidable expenditures this sector can ill afford. To combat this disadvantage, the Naresh Chandra Committee has recommended a lower landing and parking fees for low-cost airlines in primary airports.

Apart from coping with the inconveniences caused by the unavailability of secondary airports, the Indian aviation industry is also dealing with problems posed by inadequate infrastructure such as airport facilities, take off and landing slots, parking bays, air traffic control facilities, etc.

Another challenge that Air Deccan faces is competition from its peers. Its success has triggered the entry of other low-cost carriers such as Spice Jet, Kingfisher, GoAir, Paramount Airways and IndiGo, which may imitate its low cost strategies. Though Air Deccan enjoys the first-mover advantage in this arena, it will be difficult for the airline to sustain its competitive advantage unless it devises new strategies to successfully defend its market share. There is also an increase in competition from other full-service carriers such as Jet Airways, Indian Airlines and Air Sahara. These airlines have also reduced their fares to match the competitive pricing of Air Deccan, which will further increase pressure on the carrier.

Since Air Deccan's success is closely linked to the Internet reservation system, the current limited Internet penetration in the country is acting as a major bottleneck in its growth plans. The Internet is crucial for Air Deccan as it contributes significantly in reducing its distribution costs.

Future – What Next?

In the coming years, both full-service and low-cost carriers will have to face many unanswered questions and explore many novel horizons. However, amidst all these uncertainties, there is one certainty—the Indian aviation sector has immense untapped potential. As the middle class population constitutes the majority of its market, the prospects for low-cost airlines seem bright. "By 2010, the low-cost carrier's market share will be 50%," predicts Kapil Kaul, CEO, Center for Asia Pacific Aviation (CAPA). These low-cost carriers have changed the dynamics of the aviation sector. Full-service airlines have also reduced their fares significantly. Full-service carriers may initiate price wars by

further reducing their prices to compete with low-cost carriers. However, it would be interesting to see whether the larger carriers will be able to sustain this over a long period. Also, with the arrival of several other low-cost entrants, the present players certainly have a daunting task ahead.

With the steady increase in the number of low-cost players in the aviation industry, an imminent paradigm shift is in the cards. The acquisition of Sahara Airlines by Jet Airways is indicative of such a development. Air Deccan admits that it too is not averse to such acquisitions in the future.

In order to lower costs, airlines' distribution models will evolve further to remove interme-

diaries, such as travel agents, and will focus on direct selling (Internet reservations) and other alternative channels such as retail stores, etc. The progressive growth of the aviation sector will lead to enhanced salaries, thereby raising airline budgets.

Captain Gopinath realized that Air Deccan had pioneered the low-cost air carrier business model in India, and that many innovations contributed to its success. At the same time, because of its success, Captain Gopinath realized that he had many new competitors and many more potentially waiting to enter with even more innovations. He wondered about how to continue to innovate to keep Air Deccan ahead of the competition.

Appendix

Table 1: Indian Railways 2000–01

Track (km)	1,08,706
Route (km)	63,028
Electrified Route Kilometres	14,856
Locomotives	7,566
Wagons	222,147
Coaches	42,570
No. of Stations	6,853
No. of Passenger Trains	8,520
Revenues	INR 233 billions of freight revenue INR 105.2 billions of passenger revenue

Source: [Indian Railways](#)

Table 2: Domestic Sector Passengers Annual Growth³³

Year Ended March 31	Domestic Sector Passengers (millions)	Year-on-Year Growth (%)
1996	10.4	–
1997	11.2	7.7
1998	11.6	-1.3
1999	12.0	4.3
2000	12.7	5.8
2001	13.7	7.9
2002	12.8	-6.6
2003	13.9	8.6
2004	15.7	12.9
2005	19.9	26.8

Source: *DGCA, CMIE Monthly Economic Indicator, November 2005*

Table 3: Air Deccan – Vision and Mission

Vision
To be the preferred airline of air traveler in India.
Mission
To demystify air travel in India by providing reliable, low-cost air travel to the common man by constantly driving down the airfares as an ongoing mission.

Source: [Air Deccan](#)

³³ Note: Information does not include air taxi operators.

Table 4: Revenues – Deccan Aviation Private Limited

	Six Months ended September 30	Year ended March 31		
	2005	2005	2004	2003
Sources of Income	INR (millions)	INR (millions)	INR (millions)	INR (millions)
Sale of airline tickets and related income	3,085.69	2,669.46	314.18	-
Helicopter charter and other services	202.97	386.08	315.21	234.15
Other income	329.61	147.29	44.18	0.77
Total income	3,618.27	3,202.83	673.57	234.92
Net Profit/Loss as per audited accounts	(725.01)	(195.32)	5.6	6.24

Source: [Air Deccan Prospectus](#)**Table 5: Air Deccan Fleet – March 2006**

Aircraft	Fleet Size
Airbus A320	11
ATR 42	14
ATR 72	5

Source: [Wikipedia](#)**Table 6: Comparison of Fares**

Route (One-way)	Air Deccan	Jet Airways	Rail I AC	Rail II AC	Journey Time (hrs)	
	Fares (INR)	Fares (INR)	Fares (INR)	Fares (INR)	Rail	Air
Chennai-Bangalore	721-1500	1370-2970	990-1402	614-747	7-8	1
Delhi-Mumbai	1999-5499	3120-5610	3303-4135	1775-2210	17-24	2-3

Source: [Indian Railways](#), [Air Deccan](#), [Jet Airways](#)**Table 7: Aircraft Utilization**

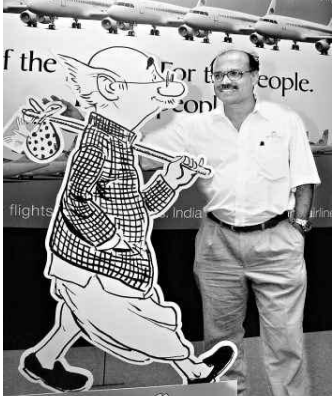
Aircraft	Year ended March 31		Six Months ended September 30
	2004 (hours)	2005 (hours)	2005 (hours)
ATR 42	10.44	9.87	8.71
ATR 72	-	-	13.19
Airbus A320	-	9.25	10.60
Average for all aircrafts	10.44	9.74	9.19

Source: [Air Deccan Prospectus](#)**Table 8: Load Factors and Yields**

Aircraft	Year ended March 31		Six Months ended September 30
	2004	2005	2005
Passenger Load Factor (%)	62.64	76.36	71.47
Revenues per Passenger (INR)	2,055	2,704	2,884

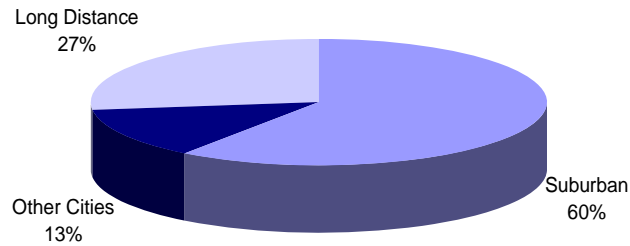
Source: [Air Deccan Prospectus](#)

Table 9: The Common Man – Air Deccan’s Mascot

Description	Picture
<p>'The Common Man' was created by author and cartoonist R K Laxman. For nearly 50 years, the Common Man has represented the average Indian, through a daily cartoon strip in the daily 'The Times of India'. In 1988, the Common Man featured in a postage stamp by Indian Postal Service on the 150th anniversary of the Times of India. The picture shows, Air Deccan's mascot 'The Common Man' and Captain Gopinath, the founder of Air Deccan.</p>	

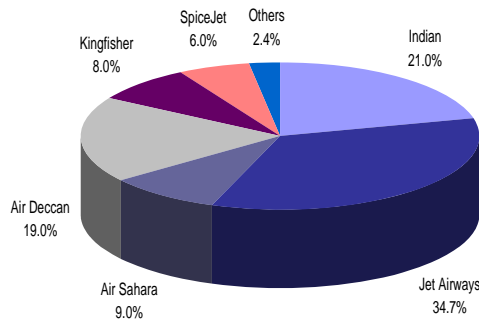
Source: Wikipedia

Figure 1: Rail Passenger Traffic 2002



Source: Indian Railways

Figure 2: Market Share—Airlines—January, 2006



Source: *Director General of Civil Aviation*

Figure 3: Airports – India



Source: [Airports Authority of India](http://airportsauthorityofindia.gov.in)

Figure 4: Air Deccan – Destinations



Source: [Air Deccan](#)

Figure 5: Savings Breakup – Distribution Costs

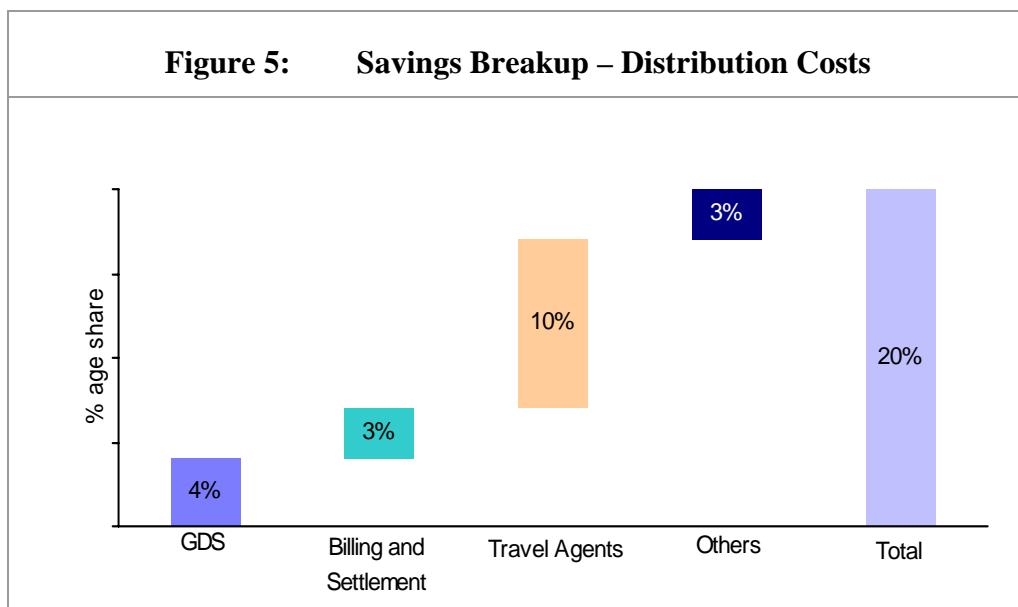
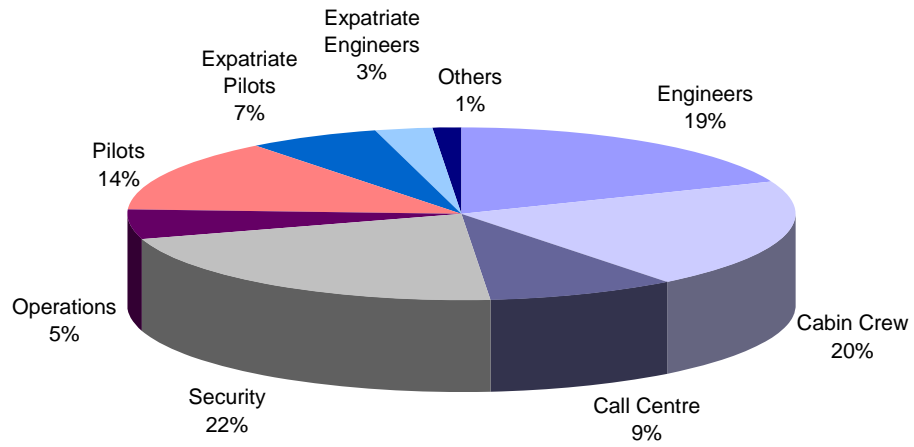


Figure 6: Employee Break-up – January 2006



Source: [Indian Railways](#)

CISR MISSION

CISR was founded in 1974 and has a strong track record of practice based research on the management of information technology. As we enter the twenty-first century, CISR's mission is to perform practical empirical research on how firms generate business value from IT. CISR disseminates this research via electronic research briefings, working papers, research workshops and executive education. Our research portfolio includes:

- Effective IT Oversight
- The Future of the IT Organization
- An IT Manifesto for Business Agility
- Business Models and IT Investment & Capabilities
- IT-Enabling Business Innovation
- Effective Governance Outsourcing
- IT Engagement Models and Business Performance
- Effective IT Governance
- Enterprise Architecture as Strategy
- IT Portfolio Investment Benchmarks & Links to Firm Performance
- IT-Related Risk
- IT-Enabled Business Change

Since July 2000, CISR has been directed by Peter Weill, formerly of the Melbourne Business School. Drs. Jeanne Ross, George Westerman and Nils Fonstad are full time CISR researchers. CISR is co-located with MIT Sloan's Center for e-Business and Center for Coordination Science to facilitate collaboration between faculty and researchers.

CISR is funded in part by Research Patrons and Sponsors and we gratefully acknowledge the support and contributions of its current Research Patrons and Sponsors.

CONTACT INFORMATION

Center for Information Systems Research
MIT Sloan School of Management
3 Cambridge Center, NE20-336
Cambridge, MA 02142
Telephone: 617/253-2348
Facsimile: 617/253-4424
<http://web.mit.edu/cisr/www>

Peter Weill, Director	pweill@mit.edu
David Fitzgerald, Asst. to the Director	dfitz@mit.edu
Jeanne Ross, Principal Res. Scientist	jross@mit.edu
George Westerman, Res. Scientist	georgew@mit.edu
Nils Fonstad, Research Scientist	nilsfonstad@mit.edu
Jack Rockart, Sr. Lecturer Emeritus	jrockart@mit.edu
Chuck Gibson, Sr. Lecturer	cgibson@mit.edu
Chris Foglia, Center Manager	cfoglia@mit.edu
Administrative Assistant	cisr-aa@mit.edu

CISR RESEARCH PATRONS

BT Group
The Boston Consulting Group, Inc.
Diamond Management & Technology Consultants
Gartner
Hewlett-Packard Company
IBM Corporation
Microsoft Corporation
Tata Consultancy Services—America

CISR SPONSORS

Aetna Inc.
Allstate Insurance Co.
American Express Corp.
AstraZeneca Pharmaceuticals, LP
Banco ABN Amro Real S.A.
Biogen Idec
Campbell Soup Company
CareFirst BlueCross BlueShield
Care USA
Celanese
Chevron Corporation
Det Norske Veritas (Norway)
Direct Energy
eFunds Corporation
EMC Corporation
Family Dollar Stores, Inc.
The Guardian Life Insurance Company of America
Information Services International
ING Groep N.V.
Intel Corporation
International Finance Corp.
Merrill Lynch & Co., Inc.
MetLife
Mohegan Sun
News Corporation
Nissan North America, Inc.
Nomura Research Institute, Ltd.
Northrop Grumman Corp.
Owens Corning
PepsiAmericas, Inc.
Pfizer, Inc.
PFPC, Inc.
Quest Diagnostics
Raytheon Company
Standard & Poor's
State Street Corporation
TD Banknorth
Telenor ASA (Norway)
Time Warner Cable
Trinity Health
TRW Automotive, Inc.
Unibanco S/A
United Nations — DESA
US Federal Aviation Administration
The Walt Disney Company

