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INDIGO AIRLINES: MONOPOLIZING INDIAN SKIES[1]

Ramakrushna Panigrahi wrote this case solely to provide material for class discussion. The author does not intend to illustrate either effective or ineffective handling of a managerial situation. The author may have disguised certain names and other identifying information to protect confidentiality.

On May 2, 2018, InterGlobe Aviation Ltd., owner of IndiGo, India's largest airline, reported a 73 per cent decline in its fourth-quarter profits, following which its share price fell by 18 per cent.[2] Exactly two years earlier, the company had reported a net profit of ₹19.9 billion,[3] while all other airlines had reported huge losses.[4] IndiGo had completed more than a decade of operations and had consistently done well by introducing a series of small innovations.[5] After the airline's entry into the aviation sector in 2006, the global economy had witnessed one of the most severe recessions since the 1970s, and Indian markets experienced their share of the global impact for a prolonged period.[6] Throughout the past 12 years, globally, all airlines in the aviation sector had battled to keep their operations going in the face of high turbine fuel prices. In the Indian aviation market, many of IndiGo's competitors had struggled to even recover their operational costs, and continued to operate under losses. Despite the aviation industry in India being in a financial mess, IndiGo had consistently managed to emerge as the sole profit-making airline, which it achieved by introducing unique and innovative strategies, thereby winning the confidence of all stakeholders including the regulatory authorities. While its competitors were grappling with losses, IndiGo had experienced a dream run since it commenced operations, taking the largest market share in the civil aviation industry in India.[7]

However, despite its success in an otherwise loss-making aviation industry, the airline struggled to meet market expectations. In April 2016, even though the company had reported a record profit and had announced a dividend of ₹15 per share, its stock price dropped by 4.83 per cent following the announcement.[8] IndiGo had little control over pricing, given the fierce competition in the sector. Also, the rise of new entrants in Indian skies, such as Vistara, had raised consumers' expectations, and the ensuing competition made operations difficult for all.[9] IndiGo's top management faced two critical questions. First, how could IndiGo sustain its market leader position in the Indian civil aviation industry over the long term? Second, would the company be able to innovate to such an extent that it could replicate its success in its domestic operations and continue to post higher profits in line with market expectations?

OVERVIEW OF THE INDIAN CIVIL AVIATION MARKET

The Indian civil aviation industry was opened in 1991 with the introduction of the Open Skies Policy. Previously, the Indian government had owned Indian Airlines, and Air India had enjoyed a monopoly in the Indian market, which was highly regulated.[10] Subsequent to the liberalization, many players had

attempted to enter the aviation market, but until 2002, Indian Airlines had enjoyed a near monopoly status in the domestic aviation market. In 2018, the Indian aviation market was the seventh-largest in the world in terms of passengers carried (see Exhibit 1). However, it was a mere one-ninth the size of the US aviation market, although India's population was more than four times greater. In India, the domestic aviation sector had been the fastest growing in the world, driven by its population of 1.3 billion and the aviation market's low penetration in India—fewer than 62 air passengers per 1,000 people (see Exhibit 1). A rising per capita income was a major reason why the aviation market had grown more than 10 times in terms of passenger volumes since the mid-1980s (see Exhibit 2). Due to its very low fares,[11] Air Deccan, a low-cost carrier (LCC), contributed significantly to the air traffic in India. Apart from Air Deccan, Kingfisher Airlines (now grounded), SpiceJet, GoAir, Paramount Airways, and IndiGo all started operations in the early 2000s. The competitive pricing strategy of LCCs and full-service carriers such as Jet Airways, Indian Airlines, Kingfisher Airlines, and Paramount Airways seemed to have significantly reduced the cost of air travel and enabled India's lower middle class to take the aerial route to reach their destinations.

Despite such phenomenal growth in the aviation sector, most airlines in India continued to see losses. In 2011, a financial audit conducted by the Directorate General of Civil Aviation indicated that many airlines, with the exception of IndiGo, were suffering from significant financial problems. The combined loss of all Airlines was estimated to be US$2.5 billion–US$3 billion, with the state-run Air India accounting for close to US$2 billion in losses.[12] The airlines in India faced some unique challenges, which further dampened profitability. First, due to government regulations, airlines had to fly financially unattractive routes. Second, a lack of onward connectivity and an erratic occupancy rate posed major challenges to achieving operational efficiency for most players.[13]

MAJOR PLAYERS IN INDIAN AVIATION MARKET

There were many players in India's civil aviation market after 2005. The industry included major full-service companies such as Jet Airways, Air India, Kingfisher Airlines, Paramount Airways, Air Sahara, and Vistara. Air Sahara was grounded in 2006, and Kingfisher Airlines had an unceremonious exit in 2013. However, the Indian aviation market was dominated by the LCCs, due to the extreme price-sensitivity of Indian consumers. The dominant players in the segment were IndiGo, SpiceJet, GoAir, Simplifly Deccan (later Kingfisher Red), Jetconnect, and AirAsia. While Kingfisher Red and Jetconnect were grounded in 2013 and 2014, respectively, the remaining LCCs shared more than 67 per cent of the domestic market share (see Exhibit 3 for trends in the market share of IndiGo and its competitors). Although many players had started operations around 2005, IndiGo had grown from its modest 5 per cent market share in 2006 to emerge as the largest player in the aviation market with a 40 per cent market share in 2018.

INDIGO: THE COMPANY

Founded in 2006, IndiGo made a modest entry into the Indian civil aviation market after taking delivery of just a single aircraft. As of 2016, the company had headquarters in Delhi and operating bases in Chennai, Delhi, Bangalore, Mumbai, Nagpur, Kolkata, and Hyderabad. Over the years, IndiGo had developed a fleet of 161 aircrafts. In 2015, it operated 818 daily flights across 40 Indian cities and five international destinations. Since its entry, IndiGo had used a single-class configuration[14] aircraft—the 180-seat Airbus A320-200.[15] The company's unique selling proposition was to offer the lowest airfares, professional customer service, and honesty in dealing with delays and cancellations.[16] IndiGo believed in product homogeneity and focused on one type of airplane, which decreased ambiguity and inefficiency in a fiercely competitive service sector. IndiGo emphasized its tag line, "On time is a wonderful thing"[17] and ensured it had more than 95 per cent[18] on-time performance in arrival and departures, making the company a market

leader. IndiGo also boasted the lowest flight cancellation rate (just 0.38 per cent) among all of its competitors. In 2015, IndiGo was awarded "Low Cost Airline of the Year" by the Centre for Asia Pacific Aviation as part of its Aviation Awards for Excellence.[19]

IndiGo focused on four key strategies to achieve profitability. First and foremost, its pricing strategy was very competitive. Due to a dynamic pricing (DP) model and the dominance of ticketing aggregators[20] such as cleartrip.com, yatra.com, and goibibo.com, the differences in price for any given route varied a great deal depending on the time of booking and how many days in advance the ticket was booked. For example, for the Delhi–Mumbai sector (route), an IndiGo ticket purchased seven days in advance sold for much higher than a ticket from Air India, which was a full-service carrier (see Exhibit 4). However, in all dominant sectors, IndiGo tickets were most often priced 1–20 per cent lower than other airlines, including LCCs (see Exhibit 4). Second, IndiGo had innovated its aircraft management strategy. The company operated on a leaseback model that ensured it would receive a new fleet every three to four years and that until 2032, its fleet's average age would be four years,[21] which was significantly lower than other airlines. Also, maintaining a single-configuration aircraft helped IndiGo reduce its training and maintenance costs. Third, IndiGo had a unique expansion strategy. While other airlines ordered aircraft in bulk to connect many cities in one go, IndiGo started with just one aircraft and then added one more to its fleet every six weeks.[22] IndiGo first tested one route for operational and financial viability, and having established a foothold in that route, expanded to other sectors. However, to take advantage of the lower prices in bulk purchase ordering, IndiGo made history by ordering 100 Airbus 320 aircraft, which were gradually delivered in a phased manner. Fourth, IndiGo realized the importance of punctuality, good connectivity, and consistent services in making customers loyal to an airline in the aviation sector. IndiGo focused on these parameters and gained publicity by word of mouth. IndiGo slowly but steadily earned a reputation for on-time performance. To ensure transparency, IndiGo used the Aircraft Communications Addressing and Reporting System, which automatically monitored the arrival and departure times of IndiGo aircraft.[23] In the Indian aviation market, the only service that distinguished LCCs from full-service airlines' economy class was in-flight meals. Since most of IndiGo's routes were short-haul flights,[24] customers did not mind paying extra for food. For Indian travellers, who were very price-sensitive, IndiGo became the preferred choice of airline because of its reputation of on-time performance and the great psychological boost it gave to their self-esteem with its offer of classless yet efficient services during boarding and off-boarding.[25]

DYNAMIC PRICING AND INTENSE COMPETITION

DP allowed prices for the same service to change according to customer, time, aggregate demand, and other situation-specific parameters such as occupied seats in the aircraft for a particular route. The airlines used the posted prices[26] that customers could see prior to deciding to purchase a ticket. In the civil aviation industry, customer loyalty was minimal due to product homogeneity; thus, dynamic price discrimination was primarily driven by customer dynamics, where even a ticket cheaper by just a few cents attracted customers from competitors. The most important factor of price discrimination through DP was not to extract more money from the consumer, but to address the ever-shifting loyalty of customers in order to attain a higher occupancy rate in advance.[27] Airlines all over the world used DP,[28] given the large number of customers and the number of real-time online transactions, which was essential for using such a pricing mechanism. For most products and services, because of higher customer involvement in purchases with heterogeneity in perceived valuation for the same service, the firm could use DP to reallocate and manage demand for various routes in the aviation market. As was evident to most players in the Indian aviation market, the higher a company's need to sell excess or reassigned inventory, the greater the potential role for DP.[29]

Like most usages of DP, airlines in India focused on price acceptance specifically in economy-class services.[30] Despite increasing price transparency brought about by access to the Internet, customers were

willing to pay different prices for the same product for several reasons, including prior experience in the category, their personal tastes (in the case of products), situational exigencies, and differing levels of price-consciousness.[31] IndiGo leveraged the benefits of DP to take advantage of highly price-conscious customers in the Indian aviation market, where demand was still inelastic given the low penetration rates.[32] IndiGo aimed to offer competitive prices to attract more customers and attain a larger market share.[33] IndiGo's ability and efficacy in executing efficient DP models[34] had resulted in an increase of 68 per cent in its operating revenue per 1,000 passenger kilometres since 2007–08 (see Exhibit 5). During the same period, all other airlines had adopted similar DP models.[35] While SpiceJet and GoAir attained increases of 61.7 and 48 per cent, respectively, Jet Airways and Air India achieved an increase of less than 10 per cent in operating revenue per 1,000 passenger kilometres since 2007–08. IndiGo's average revenue hovered around ₹3,600 per 1,000 kilometres until 2011, and increased in 2012–13 to ₹4,600 because of a hike in ticket prices, which was necessitated by a stiff rise in costs over those years (see Exhibit 5). All of the airlines in India, including the state-run Air India, increased ticket prices by 20–30 per cent across sectors, despite the stiff competition (see Exhibit 5). The efficacy of IndiGo's DP contributed to its rising market share and average operating revenue per passenger kilometre. These increases helped IndiGo to post huge profits while its competitors struggled to minimize their losses.

INPUT COSTS

The prices of all inputs in the aviation sector had been steadily increasing for the past 10 years (see Exhibit 6). In the Indian domestic aviation sector, fuel accounted for 48 per cent of the total operational cost and labour for 35 per cent.[36] The remaining factors essential for operation included maintenance, passenger services, promotion, and airport charges. Although the prices of all inputs had increased significantly over those 10 years, as evident from Exhibit 6, aviation turbine fuel (ATF) prices had risen only marginally, which helped all airlines remain in operation. The cost of logistics had also risen, by 40 per cent over the last 12 years. However, owing to the stickiness of ticket prices, average prices for all routes for all airlines, including IndiGo, had remained stagnant since 2006–07.[37]

Personnel Costs

The civil aviation industry in India had witnessed a steep rise in personnel costs soon after the entry of Kingfisher Airlines; even though all airlines in India were experiencing significant losses, the hiring costs of personnel, including ground staff, were not deterred. The expansion plans of the airlines and the intense competition in this sector had ensured a significant increase in salaries, especially for commercial pilots and cabin crews. The high retail inflation rate (i.e., the consumer price index) and the rising cost of living had led to an increase in salaries across the board, and personnel costs constituted approximately 35 per cent of airlines' total costs.[38]

KEEPING COSTS DOWN

The aviation industry in India was in a difficult situation with the cost of inputs and personnel continuing to increase substantially without a corresponding increase in the price of flight tickets.[39] For many companies in this sector, it was very difficult to meet operational costs, let alone sustain profit levels to meet the expectations of stakeholders and the market.[40] The solution seemed to lie in the implementation of more efficient operations by achieving the highest possible occupancy rate in each sector. IndiGo and its competitors had seen significant gains from a fall in crude prices since 2013 (see Exhibit 6), but the personnel and overhead costs continued rising due to inflation. As prices remained sticky for an extended period and costs kept rising,

companies needed to innovate to bring costs down. Most airlines continued to add new features to their services, and in the process discovered cost-cutting measures. IndiGo had been successfully following this strategy for the past 12 years, by modifying its services to cut down on costs yet still keeping customers loyal and happy. However, amid rising costs, the company faced major challenges, as it lacked a cushion that would allow it to pass the burden on to consumers. Any attempt on IndiGo's part to raise prices was met with instantaneous price cuts by its rivals, since all of them followed DP. Yet, the rival firms were facing the same challenges; in fact, the challenges were worse for them than for IndiGo, as they also faced increasing losses. The airlines' only alternative was to keep their operation costs down through increased efficiency. Because increasing the price of tickets was out of the question for most routes, the only solution was to achieve technical efficiency and economies of scale. The gap between the average cost and the ticket price was quickly shrinking for each route operated by IndiGo. Therefore, to remain relevant in the financial market, IndiGo needed to constantly innovate to cut costs and achieve the right mix of operational schedules on all routes.[41]

COMPETITION FROM SURFACE TRANSPORT

The introduction of Air Deccan, with its very low prices, attracted train passengers to the aviation sector.[42] In fact, a typical ticket for a 24- to 30-hour air-conditioned (AC) train journey (2nd class AC) was priced only 5–10 per cent lower than the flight price offered by Air Deccan. Consumers quickly shifted to the aerial route for their travel to save time and to enjoy the flying experience. This trend boosted the aviation sector—the number of passengers rose many times after 2003. Air Deccan's pricing strategy forced all other operators to reduce their fares, and the aviation sector witnessed a price war after 2003. The airlines faced stiff competition from unexpected quarters (i.e., stagnant prices in Indian Railways for a prolonged period, from 2002 to 2014.) The populist government policy[43] ensured that train ticket prices never rose; rather, prices fell by 2–5 per cent for brief periods. This situation, along with a rise in the price of crude oil, had not helped the aviation sector in India. The price of ATF was deregulated in India and was linked to crude oil prices. Apart from the rise in crude oil prices, local taxes on petroleum products were very high in India, which further raised prices. After 2007, all of the airlines linked their fares to ATF prices by imposing a dynamic fuel surcharge to combat their losses; however, this strategy raised fares significantly and greatly affected the aggregate demand for air travel.[44]

PROFITABILITY

IndiGo had been able to maintain a steady increase in profits despite challenges that were beyond its control, such as the increased costs and fuel prices that had affected the entire aviation sector. In 2008, which was considered to be the worst year for the Indian civil aviation industry, the company posted a net profit of ₹80 million while its competitors reported losses.[45] In 2018, IndiGo's net profits rose to ₹22.4 billion[46] and it had a 40 per cent market share (see Exhibit 3). However, a fall in profits for the last quarter of 2017–18 resulted in a drop in its stock price on the Indian stock exchanges.[47] Despite IndiGo reporting such huge profits, with each passing year its financial results had not exceeded market expectations (which were reflected by the response of financial markets soon after the company published its quarterly reports).[48] Could Rahul Bhatia, IndiGo's chief executive officer, find a way to increase prices to achieve higher profitability, without compromising the airline's position as domestic market leader in India? Would the company be able to sufficiently innovate and strengthen its domestic operations to replicate its success from domestic operations and meet stakeholders' expectations? Should IndiGo buy the state-run Air India to further expand its market share, monopolize the Indian sky, and enjoy further economies of scale to sustain its profits?

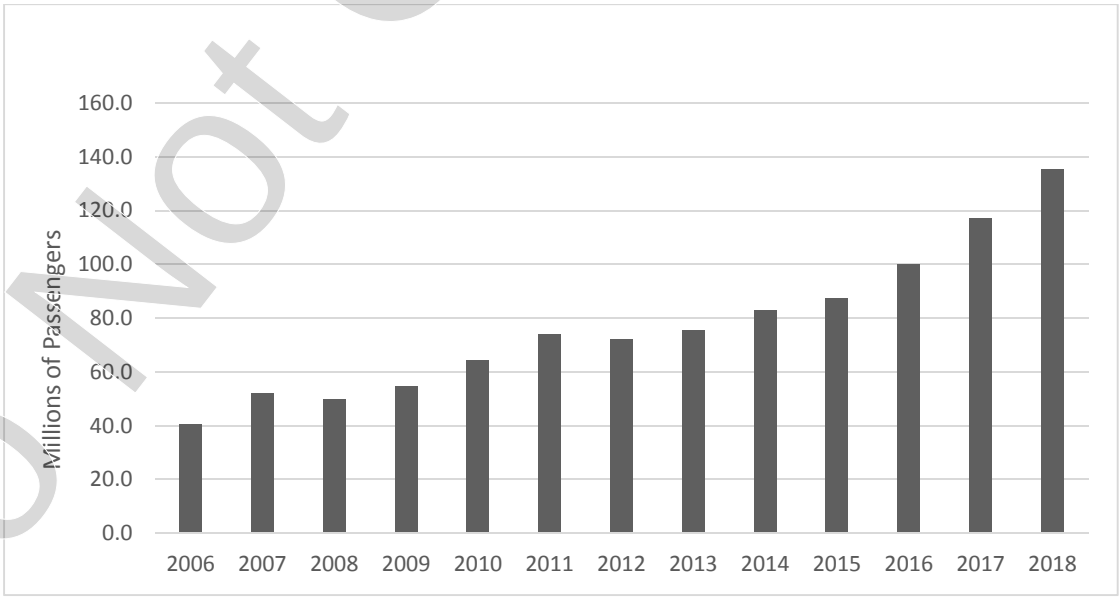
EXHIBIT 1: CIVIL AVIATION MARKET, AIR CONNECTIVITY, AND PER CAPITA INCOME OF SELECTED COUNTRIES

Country	Size of Aviation Market (Passengers Carried)	Geographical Area (in Square Kilometres)	Number of Cities with a Population of 500,000+	Per Capita Income in US$PPP 2017–18	Population (Thousands)
United States	762,560,000	9,526,468	34	$62,152	328,434
China	390,878,784	9,572,900	197	$18,066	1,396,982
United Kingdom	125,068,988	242,495	13	$45,565	66,466
Japan	110,544,000	377,930	28	$44,426	126,491
Germany	107,587,503	357,114	12	$52,801	82,838
Brazil	100,403,628	8,515,767	40	$16,199	209,205
India	82,751,555	3,287,263	93	$7,783	1,334,221
Russia	72,189,961	17,098,246	37	$28,957	143,965
France	63,434,263	640,679	3	$45,473	65,098

Note: PPP = purchasing power parity; *Per Capita Income US$PPP refers to the number of US dollars required to buy a predefined basket of commodities in different countries. It differs both from the official exchange rate conversion of per capita income and from country to country, based on the purchasing power of a currency in the domestic economy. For example, if US$100 is required to buy a predefined basket of commodities in the United States and the same basket can be purchased in India for ₹4,000, then the PPP exchange rate is ₹40/US$1, whereas the official exchange rate is approximately ₹60/US$1. Per capita income in US$PPP is a better indicator of the affordability of air travel than nominal per capita income. Population figures are as on May 14, 2018

Source: "World Economic and Financial Surveys: World Economic Outlook Database," International Monetary Fund, accessed May 14, 2018, www.imf.org/external/pubs/ft/weo/2018/01/weodata/weorept.aspx?sy=2018&ey=2018&scsm; International Civil Aviation Organization, Civil Aviation Statistics of the World and ICAO Staff Estimates, "Air Transport, Passengers Carried," The World Bank, accessed May 16, 2016, http://data.worldbank.org/indicator/IS.AIR.PSGR

EXHIBIT 2: GROWTH IN DOMESTIC PASSENGER TRAFFIC IN INDIA, 2006–2018



Source: "Yearly Statistics," Directorate General of Civil Aviation India, accessed May 23, 2019, http://dgca.gov.in/reports/stat-ind.htm.

EXHIBIT 3: TRENDS IN MARKET SHARE OF INDIGO AND ITS COMPETITORS, 2006–2018 (% MARKET SHARE FROM DOMESTIC OPERATIONS)

Year	IndiGo	Jet Airways	SpiceJet	Air India	Kingfisher Airlines	GoAir	Others
2006	5	34	6	21	8	2	24*
2007	9	24	8	19	27	4	9
2008	13	18	13	17	26	3	10
2009	17	16	15	17	20	5	10
2010	20	17	16	16	17	6	8
2011	23	17	17	15	14	6	8
2012	30	17	20	17	2	7	7
2013	33	16	19	19	0	9	4
2014	30	14	19	18	0	9	10
2015	36	21	13	16	0	8	6
2016	39	19	13	15	0	8	6
2017	40	18	13	13	0	9	7
2018**	40	17	13	13	0	9	8

Note: Figures have been rounded. *Air Deccan (later acquired by Kingfisher Airlines) was a major player, with a 19 per cent market share in 2006; **March 2018 data.
Source: Compiled by the case author using CRISIL Report, accessed May 16, 2016, www.crisilresearch.com/CuttingEdge/Content/Economy/HeadLinePDF/Airlines.pdf; the market shares for 2016, 2017, and 2018 are from "Domestic Traffic Reports (as on 24-10-2018)," Directorate General of Civil Aviation India, accessed May 14, 2018, http://dgca.nic.in/reports/Traffic-ind.htm.

EXHIBIT 4: SECTOR-WISE PRICES OF INDIGO AND ITS COMPETITORS (₹)

Sectors	IndiGo	Jet Airways	SpiceJet	Air India	GoAir
Delhi–Mumbai	4,742 3,983	4,821 4,091	3,649 3,649	4,482 4,280	4,651 4,249
Delhi–Bangalore	5,578 5,049	6,673 5,228	5,799 4,499	6,291 6,291	5,584 5,246
Delhi–Chennai	5,062 5,062	6,144 6,144	4,040 5,399	5,155 5,155	10,765 9,283
Delhi–Kolkata	3,937 3,409	4,450 3,652	3,895 2,840	4,250 4,250	3,835 8,253
Delhi–Hyderabad	3,964 3,345	5,297 4,610	4,079 4,079	3,878 3,299	* *
Mumbai–Bangalore	5,203 4,057	4,552 3,917	4,299 2,849	4,672 4,069	5,047 4,192
Mumbai–Chennai	4,885 3,797	4,657 3,494	5,299 2,950	5,777 3,667	5,891 3,748
Mumbai–Kolkata	8,164 6,155	7,408 5,504	5,899 4,249	6,983 5,677	13,511 12,453
Mumbai–Hyderabad	2,240 2,240	2,044 2,044	1,100 1,100	2,243 2,243	* *
Bangalore–Chennai	1,400 1,461	1,511 1,511	1,290 785	1,451 1,451	* *
Bangalore–Kolkata	6,001 5,155	5,293 5,293	3,749 3,491	5,074 5,074	* *
Bangalore–Hyderabad	2,087 1,769	3,781 3,252	1,197 1,197	2,361 2,361	* *
Chennai–Kolkata	5,360 3,885	5,472 4,732	4,949 4,249	8,231 4,709	* *
Chennai–Hyderabad	1,716 1,716	5,271 4,108	1,799 1,799	1,965 1,965	* *
Kolkata–Hyderabad	4,515 4,515	7,380 8,143	2,900 2,900	5,841 5,038	* *

Note: ₹ = INR = Indian rupee; ₹1 = US$0.0149 on May 2, 2018; * = No service by the airlines in this sector. Kingfisher Airlines prices are not reported, as the airline was grounded in 2013. The first line represents the lowest one-way price on offer when the ticket is booked seven days in advance; the second line represents the lowest one-way price on offer when the ticket is booked 14 days in advance.

Source: The ticket prices were collected on May 13, 2016, from the official websites of all airlines for May 20 and May 27, 2016. The airfare data for May 2018 were accessed May 2018, as reported in the main text.

EXHIBIT 5: INDIGO AND COMPETITORS—OPERATING REVENUE PER THOUSAND PASSENGER KILOMETRES, 2007–08 TO 2017–18 (IN ₹ THOUSAND)

Year	IndiGo	Jet Airways	SpiceJet	Air India	GoAir
2007–08	2.93	5.21	2.98	5.11	3.33
2008–09	3.72	5.92	3.55	5.19	N/A
2009–10	3.50	4.58	3.25	4.62	3.74
2010–11	3.60	4.71	3.39	4.72	4.14
2011–12	3.74	4.82	3.86	4.56	4.34
2012–13	4.54	5.79	4.65	5.51	5.35
2013–14	4.81	5.79	4.72	5.74	5.05
2014–15	4.94	5.68	4.40	5.74	4.93
2015–16	4.49	5.39	4.40	5.19	4.26
2016–17	4.01	5.18	4.11	5.28	4.49
2017–18*	4.92	5.50	4.82	5.54	4.93

Note: ₹ = INR = Indian rupee; ₹1 = US$0.0149 on May 2, 2018; N/A = not available; *projected figures; Kingfisher Airlines prices are not reported, as the airline was grounded in 2013.
Source: "Domestic Traffic Reports (as on 24-10-2018)," Directorate General of Civil Aviation India, accessed May 14, 2018, http://dgca.nic.in/reports/Traffic-ind.htmhttp://dgca.nic.in/reports/Traffic-ind.htm.

EXHIBIT 6: TRENDS IN THE AVIATION SECTOR'S INPUT PRICES, 2006–2018

Year	Brent Crude Prices US$/Barrel	Jet Fuel Spot Price FOB US$/Gallon	ATF Prices in Delhi US$/Kl	₹/US$	ATF Prices in Delhi ₹/Kl	Logistics Cost (Index of Road Freight)	Personnel Cost/CPI
2006	65.14	1.92	834.30	45.31	37,793.70	140	125
2007	72.52	2.13	905.01	41.35	37,420.80	165	133
2008	96.99	2.96	1,042.36	43.50	45,347.70	167	145
2009	61.51	1.66	592.38	48.40	28,674.10	171	163
2010	79.47	2.15	702.92	45.73	32,137.50	172	180
2011	111.27	3.00	975.41	46.67	45,337.90	174	195
2012	111.63	3.06	971.30	53.44	51,896.50	175	215
2013	108.56	2.92	939.11	58.60	55,029.70	176	236
2014	99.03	2.70	897.42	61.03	54,769.10	179	251
2015	52.35	1.52	584.02	64.15	37,402.50	182	261
2016	43.55	1.27	544.03	67.20	52,540.60	193	277
2017	54.25	1.42	517.02	65.12	47,013.40	194	285
2018*	66.81	2.02	708.00	65.16	65,340.00	196	294

Note: ₹ = INR = Indian rupee; ₹1 = US$0.0149 on May 2, 2018; FOB = free on board; ATF = aviation turbine fuel; CPI = consumer price index; Kl = Kilolitre; *2018 figures were until April 2018. The ATF prices in Delhi are taken for the month of May 2018 (both ₹ and US$). The yearly exchange rate is taken for the average five months of 2018. In the case of CPI, data are considered for the month of November 2016. The Index of Road Freight for 2016 is estimated by the author based on the CPI.
Source: Data on Crude Prices were obtained from "Average Annual Brent Crude Oil Price from 1976 to 2018 (in US Dollars per Barrel)," Statista, accessed May 21, 2016, www.statista.com/statistics/262860/uk-brent-crude-oil-price-changes-since-1976/; data on ATF prices were obtained from "Aviation Fuel," Indian Oil, accessed May 14, 2018, www.iocl.com/Products/AviationTurbineFuel.aspx; data on Index of Road Freight rates were obtained from "Indian Road Freight Index," TCI, accessed March 9, 2017, at 1.15 p.m., www.tcil.com/tcil/indian-road-freight-index.html. (For 2016, 2017, and 2018, the data were extrapolated from the CPI.)

ENDNOTES

[1] This case has been written on the basis of published sources only. Consequently, the interpretation and perspectives presented in this case are not necessarily those of IndiGo or any of its employees.
[2] "IndiGo's Parent InterGlobe Aviation Stock Falls 18% as Higher Fuel Costs, Lower Yields Take Toll on Q4 Net Profit," *Business Today*, May 3, 2018, accessed May 5, 2018, www.businesstoday.in/markets/company-stock/interglobe-aviation-stock-falls-higher-fuel-costs-lower-yields-q4-net-profit/story/276133.html.
[3] ₹ = INR = Indian rupee; all currency amounts are in ₹ unless otherwise specified; ₹1 = US$0.0150 on May 2, 2016.
[4] Anshul Dhamija, "IndiGo Reports Its 8th Year of Consecutive Profit," *Forbes India*, April 29, 2016, accessed May 3, 2016, www.forbesindia.com/article/special/indigo-reports-its-8th-year-of-consecutive-profit/43141/1.
[5] "List of Scheduled Operators as on 31.10.2018," Directorate General of Civil Aviation, accessed January 30, 2019, http://dgca.nic.in/operator/sch-ind.htm.
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[21] Sunny Sen, "With Avg Fleet Age of 4 Years, IndiGo 'Will Have 330 Aircraft at its Peak,'" *Financial Express*, accessed July 27, 2016, www.financialexpress.com/industry/companies/with-avg-fleet-age-of-4-years-indigo-will-have-330-aircraft-at-its-peak/164556/.
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[23] This automated system added credibility to IndiGo's claim of punctuality, as it was impossible to manipulate the timings related to arrival and departure.
[24] Most of the domestic routes in India could be covered in less than two hours.

[25] Mishra, op. cit.
[26] The other broad category of dynamic pricing was the price discovery mechanism, in which customers determined prices through their own actions during the transaction. The airlines in India did not use this mechanism.
[27] Peter McCafee and Vera te Velde, *Dynamic Pricing in the Airline Industry*, California Institute of Technology, accessed April 4, 2016, http://mcafee.cc/Papers/PDF/DynamicPriceDiscrimination.pdf.
[28] Ibid.
[29] Specifically, in reverse auctions, where the final price had little relation to cost, and the product could be viewed and evaluated at a distance, DP methods could be used to determine a price range. The DP method was also useful when money needed to be recovered quickly for improved cash flow. In implementing DP to its full advantage, it was important that the customers accepted the practice and not view it as iniquitous. DP could not be perceived to be inequitable, as that perception could be deadly for the company in the age of communication.
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[40] "Indian Airlines Struggle in Turbulent Aviation Market," DW.com, accessed January 31, 2019, www.dw.com/en/top-stories/s-9097.
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