



INDIA'S AIR TRANSPORT SECTOR

THE FUTURE IS BRIGHT . . .
BUT NOT WITHOUT ITS CHALLENGES



Preface

In a country where train travel has long been the dominant mode of transport, India's aviation sector has increasingly established itself as a safe, affordable and credible alternative. The number of passengers flown by Indian airlines has more than doubled over the past seven years, compared with just a 6% rise in railway passengers¹.

Moreover, as the world's largest democracy with a population of more than 1.3 billion citizens, India's potential for further growth and industry development is very clear. Indeed, we expect air passenger numbers to, from and within India to increase by 3.3x over the next 20 years, to more than 500 million passenger journeys per year.

This significant expansion is expected to be underpinned by a trebling in the proportion of middle-class households and further increases in time-saving options for air passengers. This highlights the important role aviation can play in connecting the country – both internally and with the rest of the world.

This strong growth outlook for air passenger demand will see India overtake Germany, Japan, Spain, and the UK within the next 10 years to become the world's third largest air passenger market.

These are exciting times for the air transport industry in India.

Of course, the future will not be without challenges – for those in the industry and policy-makers and regulators alike. These challenges will include making sure that the right type of infrastructure is put into place, at the right time and in the right location to ensure that the demand can be met, as well as ensuring that the regulatory environment is one which successfully fosters a competitive and healthy airline transport sector that will continue to make a major contribution to the Indian economy in the years to come. A robust and financially sound industry is critical to delivering the benefits that aviation can bring – creating jobs, bringing families together, facilitating business, and supporting trade, investment and economic growth.

Events such as this *International Aviation Summit* show that the importance of the industry is well-understood in India and underscores the initiatives that are already being taken to position the country for the key role it will increasingly have in global aviation leadership. It is my pleasure to contribute this assessment to the Summit.

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Geneva
August 2018

¹ http://www.indianrailways.gov.in/railwayboard/uploads/directorate/stat_econ/IRSP_2016-17/Facts_Figure/Fact_Figures%20English%202016-17.pdf

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India's air transport industry; a global perspective

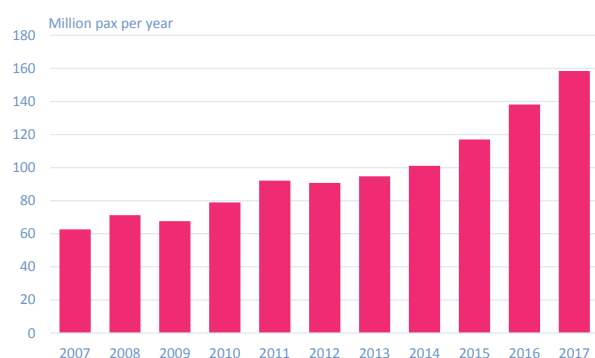
- The Indian air transport sector has shown very strong growth in recent years – particularly on the domestic market segment.
- In June 2018, the domestic India market recorded its 46th consecutive months of double-digit year-on-year growth; an outstanding performance and one which is showing no signs of ending anytime soon.
- The air transport market in India employs more than 390,000 people and supports another 570,000 more in the supply chain. Overall the industry contributes some US\$30 billion annually to India's GDP.
- The fundamental drivers of air passenger demand – including population and demographics and increasing incomes – are favorable and supportive of ongoing growth over the longer-term.
- Over the next 20 years IATA forecasts growth of 6.1% per year on average – the number of annual air passenger journeys is forecast to increase by more than 350 million over the period, moving to almost 520 million journeys in 2037.
- The industry must continue to work constructively with its key stakeholders – including the government and policy-makers – to ensure that this sizeable increase in demand can be met and to realise the full benefits that the air transport industry can deliver to India.

Recent developments

In 2017, more than 158 million passengers flew on routes to, from and within India (Figure 1). This represents an increase of almost 15% over 2016 and is the third consecutive year of growth in the order of 15-20% per year (Figure 2).

The figures for the 2018 year-to-date suggest that India is on track to record a fourth straight year of double-digit passenger growth.

Figure 1: Total air passenger journeys to, from & within India (annual)²



Source: IATA

Figure 2: Annual growth in India's O-D air passenger journeys



Source: IATA

The strong performance of air passenger demand growth in India has not been confined to just the past few years, however; the total number of air passengers has more than doubled over the past seven years, from a level of 79 million journeys undertaken in 2010.

Indeed, utilising data from the World Bank and ICAO, which measures the number of passengers carried by airlines based in the particular country, we can see the growth of the Indian market in a longer-term perspective (Figure 3, over).

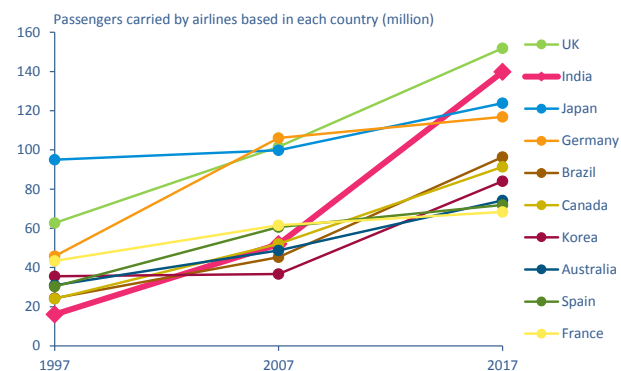
From flying just 16 million passengers 20 years ago, Indian airlines have seen their passenger

² Unless stated otherwise, all data in this report are calculated on an origin-destination (O-D) basis.

volumes increase more than 8-fold in the period since. Along the way, India has overtaken a host of countries, including Germany and Japan, in the process.

Placed in this longer-term context, the relative performance of the air transport industry in India is stark.

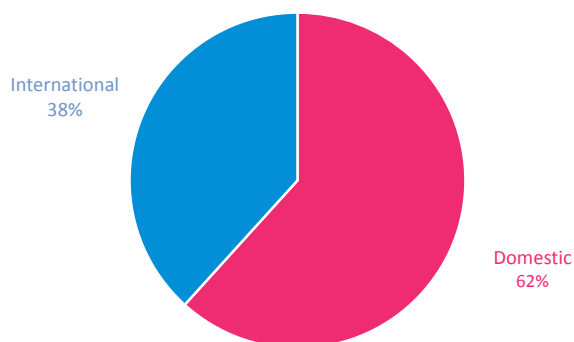
Figure 3: Increases in air passenger demand, 1997-2017, selected countries



Source: World Bank, ICAO

Returning to more recent outcomes, it is unsurprising to note that the bulk of the flights taken in 2017 were domestic in nature, accounting for around 62% of the total (Figure 4).

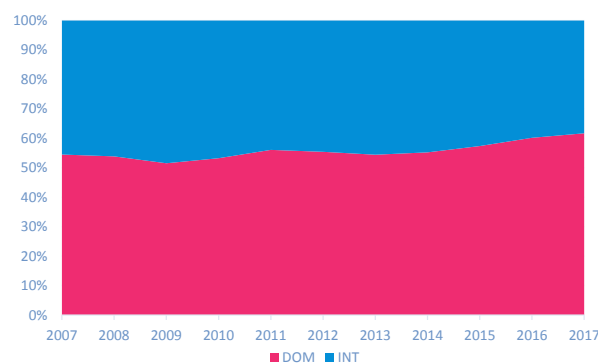
Figure 4: Composition of 2017 air travel: Domestic vs International



Source: IATA

Indeed, the domestic share of total traffic has been generally increasing gradually over the past decade. From 54.5% in 2007, and notwithstanding some bumps along the way, the domestic share has gradually risen to the 61.7% level of 2017 (Figure 5).

Figure 5: Evolution of market share: Domestic vs International

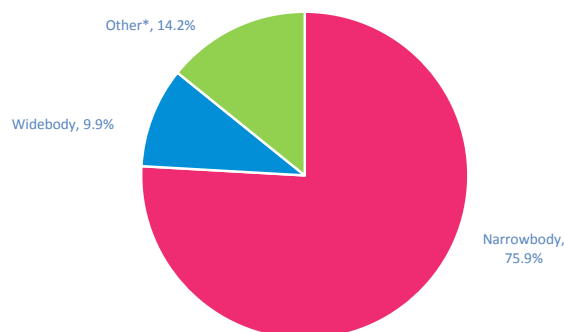


Source: IATA

Reflecting the relative size of the domestic and international markets, the composition of the current in-service fleet is heavily tilted towards narrowbody aircraft.

Narrowbodies account for ¾ of the total current fleet, with widebodies contributing a further 10%. The remainder consists primarily of turboprops and regional jet aircraft (Figure 6).

Figure 6: Composition of India's current aircraft fleet



Source: CAPA * incl turboprops and regional jets

The following sections investigate the recent performance and key developments for the domestic and international market segments in turn.

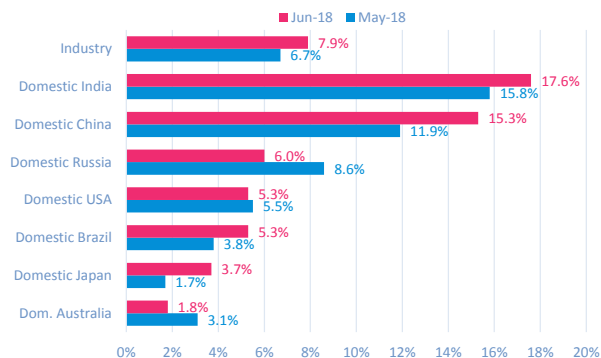
India's Domestic air transport market

The India domestic market is currently the fastest growing (measured in terms of revenue passenger kilometres³) of the main domestic markets that IATA consistently track around the world.

³ Revenue passenger kilometres (RPKs) is a measure of the volume of passengers carried by an airline. An RPK is flown when a revenue (paying) passenger is carried one kilometre.

Over the year to June 2018, the India domestic market has grown by a very strong 17.6%, well above the industry-wide (domestic markets) pace of 7.9% (Figure 7).

Figure 7: Comparison of key global domestic market RPK growth

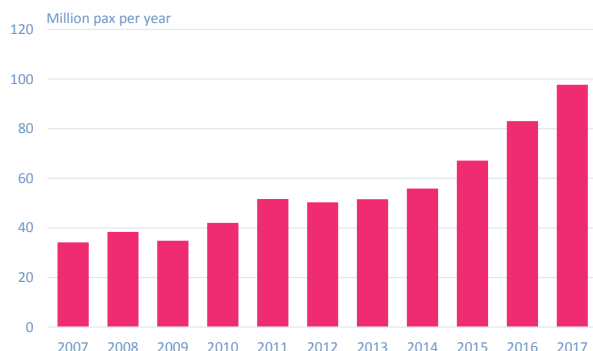


Source: IATA

June 2018 was the 46th consecutive month of double-digit growth in India domestic passenger volumes, fast closing in on the four year milestone.

In 2017, there were a total of 97.7 million domestic passenger journeys, up almost 15 million from 83 million in 2016 (Figure 8).

Figure 8: Number of origin-destination air passenger journeys per year – India Domestic



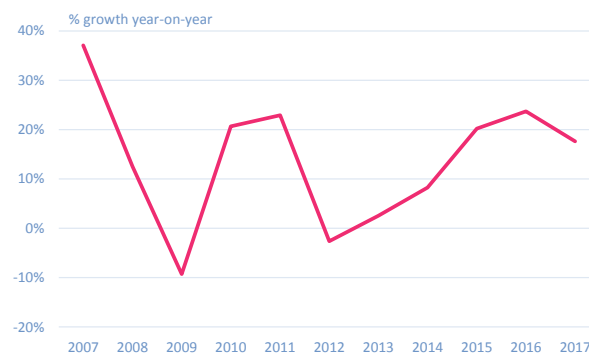
Source: IATA

Growth in the India domestic market has been faster than that of the total market depicted previously in Figure 2.

Following two lean years in 2012 and 2013 (in part reflecting the demise of Kingfisher), growth has recovered strongly.

In both 2015 and 2016, India domestic RPKs grew by more than 20% and in 2017, although the pace of growth eased moderately, it still recorded a very strong 17.6% rate (Figure 9).

Figure 9: Annual growth in origin-destination passenger journeys – India Domestic



Source: IATA

While such rapid growth cannot continue indefinitely, equally, there are no indications that the performance is likely to come to an abrupt end anytime soon.

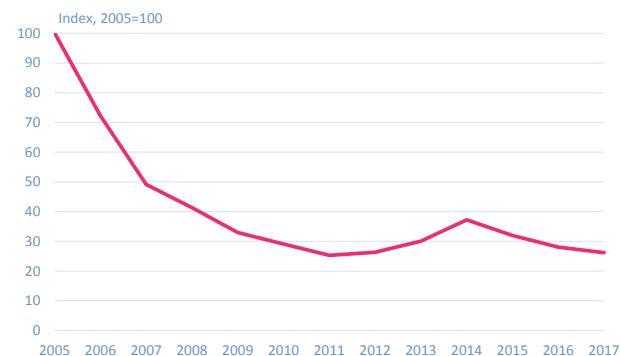
Highlighting this point, and the magnitude of the potential growth in the India domestic market, the number of domestic journeys undertaken in 2017 represents just 7.3% of India's total population.

The strong demand outcomes over recent years have been partly due to the stimulus of lower airfares.

In real (inflation-adjusted) terms, the average cost of an India domestic airfare has been trending lower for more than a decade.

After rising in 2013 and 2014 which, again, in large part reflects the impact of the market disruption associated with the demise of Kingfisher, the downwards trend has since resumed.

Figure 10: Average India Domestic airfare, adjusted for inflation



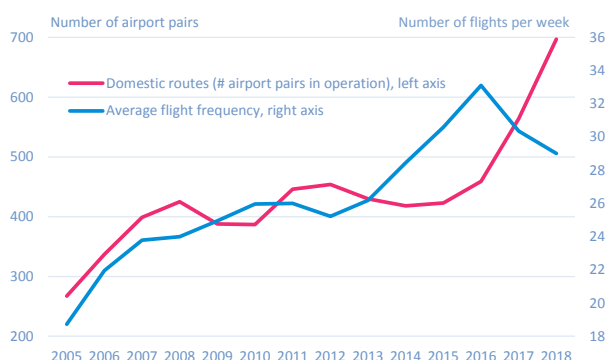
Source: IATA

India domestic passenger demand is also being driven in part by rapid expansion in the domestic air network.

This is evident both in terms of a strong rise in the number of airport pairs in operation within India – these have risen by more than 50% since 2015 – as well as increases in the average frequency of flights on each route (Figure 11).

Both of these factors ultimately translate into time savings for passengers and therefore have similar stimulatory impacts on demand as reductions in air fares.

Figure 11: Components of India's domestic air network growth: new routes vs increased frequency*

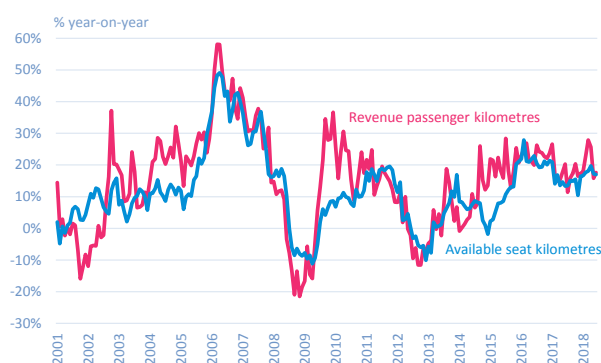


Source: SRS Analyser * aircraft >19 seats, at least 1 flight per week on average

Overall, India domestic demand (measured by RPKs) have grown faster than the corresponding rate of capacity growth (measured by available seat kilometers or ASKs) in recent years.

While the degree of outperformance has moderated from that seen in late-2014 and early-2015, annual RPK growth has still exceeded that of ASK growth by 3 percentage points on average each month over the past two years (Figure 12).

Figure 12: India Domestic – passenger demand (RPKs) and capacity (ASKs)

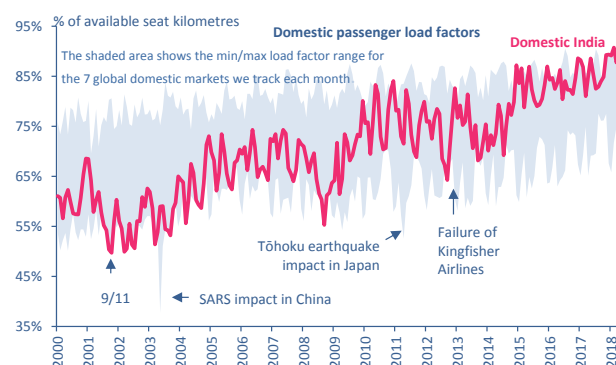


Source: IATA

Against this backdrop of developments in demand and capacity, the India domestic passenger load factor remains elevated.

Indeed, in February 2018, it exceeded 90% for the first time ever, hitting an all-time high for the seven global domestic markets⁴ that we track each month (Figure 13).

Figure 13: Domestic India – passenger load factor performance



Source: IATA

The bigger picture is that the current load factor performance represents a significant turnaround from the early-2000s when India regularly posted the lowest domestic passenger load factor amongst our group of countries, even dipping below 50% on occasion.

The evolution and maturity of India's domestic air transport market can be illustrated by comparing the experiences around the time of 9/11 with that of late 2014.

In the former, domestic capacity continued to increase even as demand slumped, while in late-2014 Indian airlines slowed capacity growth to support the load factor even as demand was growing strongly.

In part this appears to reflect the increasing influence of competitive (market) pressures over time via a mix of policy, regulatory and industry developments.

Such forces have instilled a greater focus on airlines to achieve the load factor levels needed to generate adequate returns for their investors.

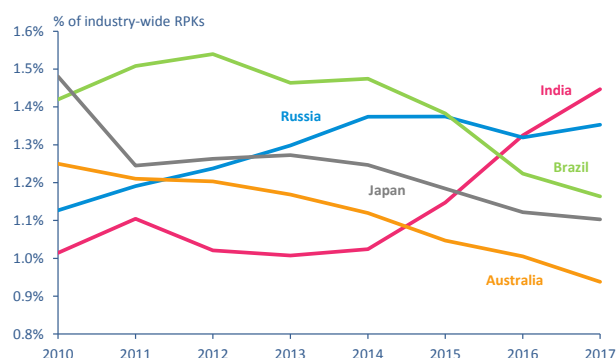
⁴ India, China, the US, Brazil, Russia, Japan and Australia.

Figure 14 puts the strong and sustained growth performance of the India domestic market into a global perspective.

Since 2014, in terms of RPKs flown India has overtaken Australia, Japan, Brazil, and Russia – all of the main domestic markets that we follow, with the exception of China.

The India domestic market now accounts for around 1.5% of total industry-wide RPKs and is larger than all of the domestic markets that we follow, with the exception of China and the US.

Figure 14: Main global domestic air transport markets, share of industry-wide RPKs



Source: IATA

Furthermore, of the 100 largest domestic city pair routes in the world in 2017, ten can be found in India (Figure 15).

Figure 15: Largest city-pair routes Within India & their 2017 global ranking

	#pax 2017	YoY growth	Global rank
1 Mumbai-Delhi	5,566,510	1.9%	7
2 Bangalore-Delhi	3,492,889	-1.5%	20
3 Bangalore-Mumbai	2,716,801	3.0%	35
4 Kolkata-Delhi	2,153,297	5.6%	52
5 Delhi-Pune	1,997,165	17.5%	63
6 Delhi-Hyderabad	1,891,240	3.8%	75
7 Delhi-Chennai	1,836,447	-5.4%	80
8 Mumbai-Goa	1,748,145	-0.2%	89
9 Mumbai-Chennai	1,717,468	5.1%	91
10 Delhi-Goa	1,692,230	23.6%	96

Source: IATA WATS

In a similar way, of the top 10 growth airports in terms of passengers handled in 2017, two are located in India, namely Delhi and Bangalore (Figure 16).

In terms of global rankings, Delhi is #16 globally in terms of passengers handled and Mumbai is #29.

Figure 16: World's top ten growth airports 2017 – passengers handled

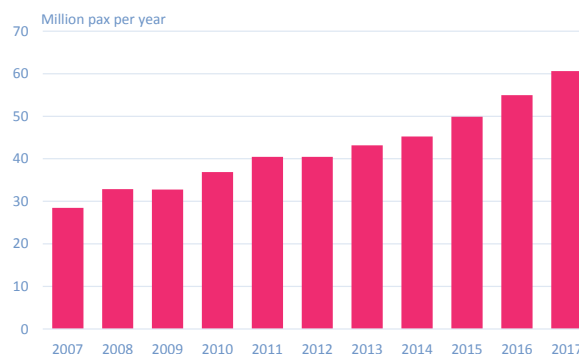


Source: ACI, IATA WATS

India's International air transport market

In 2017, around 60 million international passengers flew to/from India, up from 55 million in 2016 (Figure 17).

Figure 17: Number of origin-destination air passenger journeys per year – India International

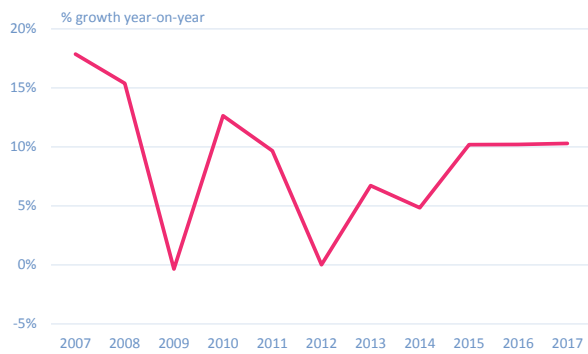


Source: IATA

While the international market has not grown as fast as its domestic counterpart, the sustained period of robust growth, over a number of years, is still readily evident.

The 2017 outcomes represents an increase of 10.3% on 2016 and is the third consecutive year of double-digit international passenger growth (Figure 18).

Figure 18: Annual growth in origin-destination passenger journeys – India International

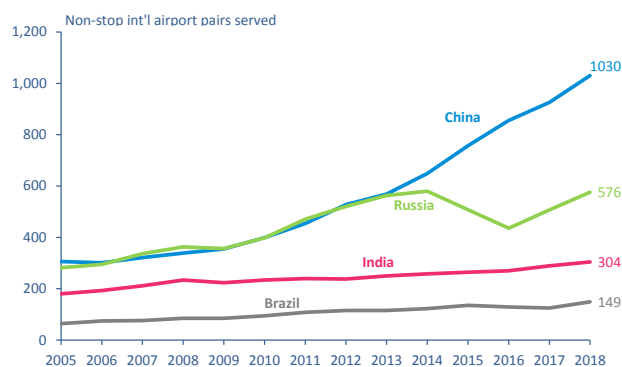


Source: IATA

Contributing to this growth performance, India has steadily increased the number of overseas city pairs served by a non-stop service from the country over time (Figure 19).

In 2018, there are 304 such international pairs, up from around 230 ten years ago.

Figure 19: Non-stop international airport pairs served, selected countries



Source: IATA, SRS Analyser

In relative terms, the India market appears to have considerably less international city pairs served than either China or Russia.

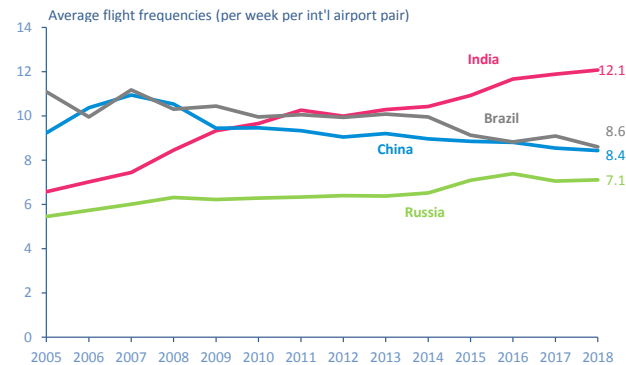
However, Indian travelers have ready access (via the geographic proximity) to the Middle East super-connector hubs – Dubai, Abu Dhabi and Doha – that China and Russia do not.

This increases the size of the network significantly for Indian travelers, as well as making India more accessible for international visitors. As such, it may go some way to explaining the relatively lower number of international city pairs for India relative to China and Russia.

As was the case for the India domestic market, at the same time as the number of international city

pairs has been increasing, so too have the average number of flights on the international city pair routes (Figure 20).

Figure 20: Average flight frequencies on international airport pairs served, selected countries



Source: IATA, SRS Analyser

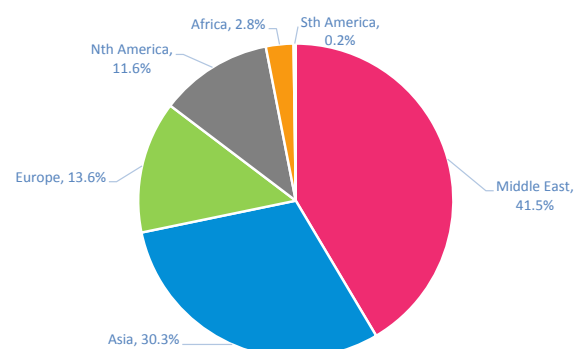
In contrast to both China and Russia, India is well served by the frequency of flights on the international markets served.

India has almost four additional frequencies per week on average between the airport pairs compared with both Russia and China.

A choice of flight times is particularly important for business travelers who value the flexibility the additional frequencies provide.

The bulk of international traffic is to the Middle East and Asian destinations, with these two markets accounting for around 70% of the total share of international traffic from India in 2017 (Figure 21).

Figure 21: Share of international traffic by continent, 2017



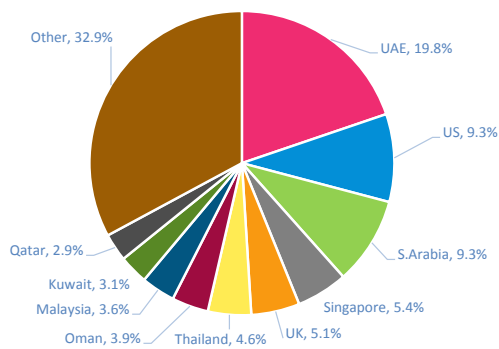
Source: IATA

Looking more closely at the composition of international travel, at the country-level, the top

10 international markets account for two-thirds of the total (Figure 22).

The United Arab Emirates (UAE) leads the way, with almost 20% of the total, followed by Saudi Arabia and the United States each with just over 9% market share.

Figure 22: Share of international traffic by country, 2017



Source: IATA

India's air cargo market

While the focus of this paper to date has been on the air passenger market, it would be remiss to overlook the air cargo segment.

This is particularly the case given India's integration into the global pharmaceutical value chains – a strong growth performer for the air cargo segment over recent years.

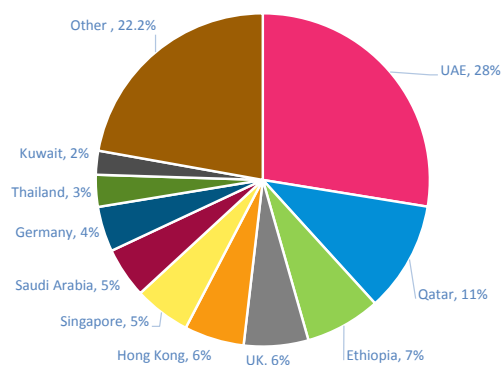
Nonetheless, 2017 was also an impressive year of growth for the Indian air cargo market.

The total cargo tonnage flown from India crossed the one million tonne threshold in 2017, with a strong, double-digit growth rate of 16.9%⁵.

The top ten trading partner countries for Indian air cargo account for almost 78% of the total (Figure 23).

The UAE leads the way with almost a 30% market share, followed by Qatar with 11%.

Figure 23: Top freight country pairs from India, 2017



Source: IATA

Figure 24 depicts the relative market size (in tonnes) and the annual growth rate of India's top 10 air cargo trading partners.

While the UAE is clearly the largest market by some margin, the fastest growing market was Ethiopia, which more than doubled its cargo tonnage with India in 2017. Kuwait and Thailand also deserve a mention with growth exceeding 30% for the year for both countries.

Of the top ten markets, Hong Kong was the only one to see a fall in its cargo tonnage with India in 2017, down a modest 0.3% compared with its 2016 volume.

Figure 24: Top freight country pairs from India, tonnes & annual growth, 2017

	tonnes	%ch
UAE	292,556	4.7%
Qatar	113,652	18.2%
Ethiopia	77,626	114.4%
UK	66,275	16.0%
Hong Kong	61,460	-0.3%
Singapore	58,146	5.4%
Saudi Arabia	52,041	25.6%
Germany	46,583	6.3%
Thailand	32,872	34.2%
Kuwait	24,576	30.2%

Source: IATA WATS

As was the case on the passenger side, India has two airports ranked in the global top 10 fastest growing in 2017, namely Mumbai and Chennai.

These two airports recorded very strong growth of 18.1% and 17.2%, respectively in 2017 (Figure 25).

⁵ The top freight country pairs cover all scheduled traffic, excl. integrators. The data are uni-directional in nature.

In terms of global rankings, Dehli and Mumbai appear in the list of the top 50 airports for freight handled, at #29 and #31, respectively.

Figure 25: The top 10 growth airports 2017 – cargo handled



Source: ACI, IATA WATS

Business models & industry structures continue to evolve

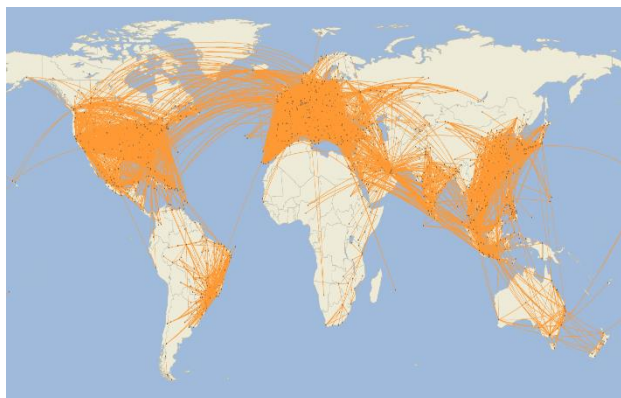
Globally, air transport is a highly dynamic industry and in this regard, the industry in India is no different.

As markets evolve and customer demands change, airlines must constantly review and update their operations and product offering to ensure that they continue to meet the market need.

One important part of this story is the evolution in business models and market structures observed in the industry, notably the rise of the so-called Low Cost Carrier (LCC) business model (Figure 26).

All told, at the global level, LCCs account for around 28% of the total number of seats flown.

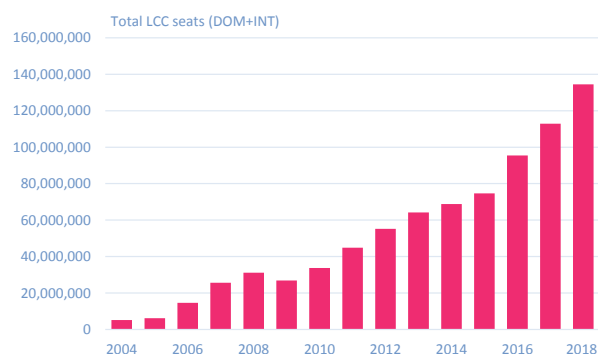
Figure 26: Proliferation of the LCC model globally



Source: SRS Analyser

For India the growth of the LCC market has been significant. In 2004 there were just over 5 million total LCC seats offered. Incorporating the schedules data for the remaining months of 2018, this figure has risen to almost 135 million seats – an increase of 27x in the 14-year period (Figure 27).

Figure 27: Increase in the number of LCC seats in the Indian air transport market



Source: SRS Analyser

Even if you consider just the past five year period, the number of LCC seats in the Indian market has more than doubled, from 64 million in 2013.

One of the key competitors for airlines domestically is the extensive train network in India. The train system carries more than 8 billion passengers per year. Many of these will be commuter trips over relatively short distances, for which air travel is not a viable substitute.

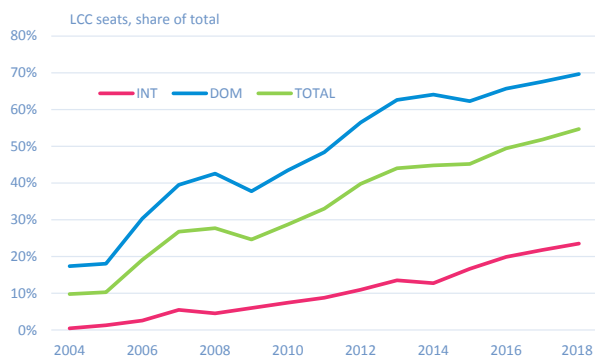
However, a proportion of these train journeys could potentially be taken by air; the market opportunity for an affordable airline alternative is clear.

Looking at the share of LCC seats in the Indian market brings to light a number of interesting observations.

Firstly, around 55% of all seats in the market are offered by low cost carriers (Figure 28). Focusing on the domestic market alone, the LCC share of total seats is almost 70%.

While the share of LCC seats offered on India's international routes is much smaller, at just under 25%, this share has risen from essentially zero in 2004.

Figure 28: Share of LCC seats in the Indian air transport market



Source: SRS Analyser

Arguably, the emergence of LCCs has facilitated the democratization of air travel and fueled aviation growth, albeit in various ways across different markets.

In emerging markets LLCs have broadened the market and allowed more people the opportunity to fly for the very first time. In more mature markets, LCCs have deepened the market allowing people to fly more often.

Given its prevalence, the LCC model cannot be ignored in any assessment of India's air transport market. However, LCCs aren't the only way in which the industry is evolving.

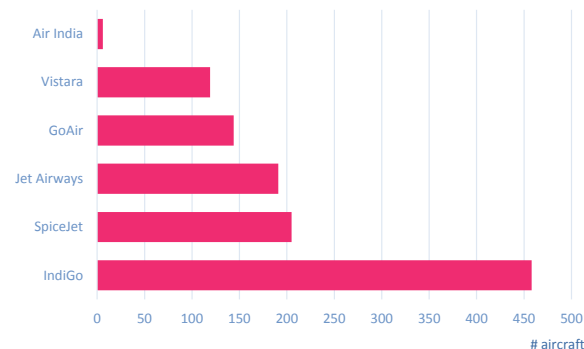
Increasingly, we are seeing a blurring of the traditional distinction between full service airlines and LCCs as each are increasingly adopting practices typically the domain of the other, resulting in a so-called 'hybrid' business model.

More broadly, there are range of new and alternative investment and alliance or partnership structures emerging globally which add a new dimension to the industry, as airlines try to find new and innovative ways to expand their networks and their product offering. In some global markets, the changing industry structure is one of consolidation rather than expansion.

These developments can apply to both the international and domestic markets. Indeed, some of these new structures and arrangements are evident in the Indian air transport industry, having been supported by changes in the regulatory and policy environment.

Amongst Indian airlines, there are currently around 600 aircraft in service. Evidencing the optimism and positive outlook for the sector, and providing some insights as to the near-term evolution of the market, some 1123 aircraft are currently on order for India. The bulk of these deliveries are currently slated for delivery to IndiGo – a major low cost carrier (Figure 29).

Figure 29: Aircraft currently on order – Indian airlines



Source: CAPA

Financial performance

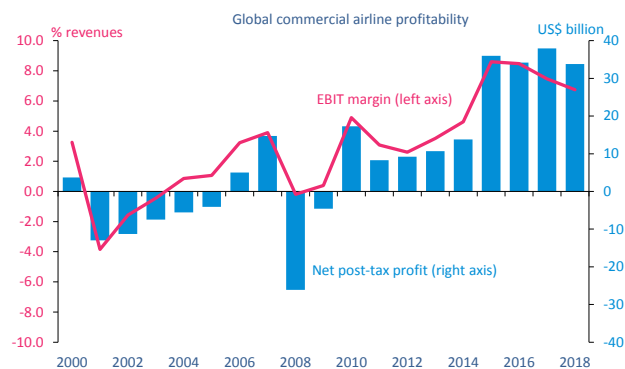
Historically, the global air transport industry has struggled to generate consistent profits. Even in periods of strong demand, profitability has, historically, proven to be elusive.

While, as a rule, airlines have been able to pay their debts, equity investors typically have not been adequately compensated for risking their capital in the sector.

The last three years – and we expect 2018 to be the fourth – have seen a turnaround in this situation at the global, industry-wide level.

The industry is now generating returns which exceed its cost of capital, and delivering a net profit figure of around US\$30 billion per year (Figure 30).

Figure 30: Global airline industry financial performance

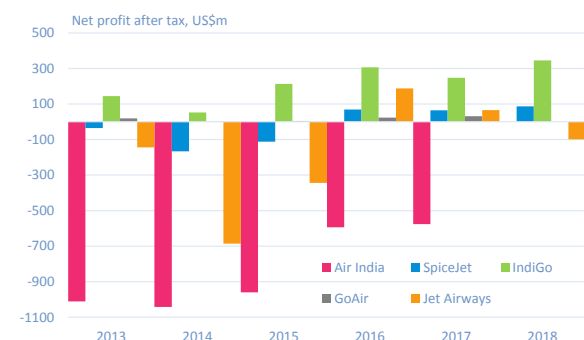


Source: IATA

Unfortunately, for the most part, the airlines in India have not yet been able to match this recent improvement in the industry-wide financial performance (Figure 31).

Over the period shown, most airlines have struggled to consistently generate a net profit after tax; the main exception being IndiGo who, along with GoAir, are the only airlines to have generated profits in each year of the period shown. The recent financial performance of Air India has been well-documented elsewhere.

Figure 31: Financial performance of selected Indian airlines, Net profit after tax 2013-2018*

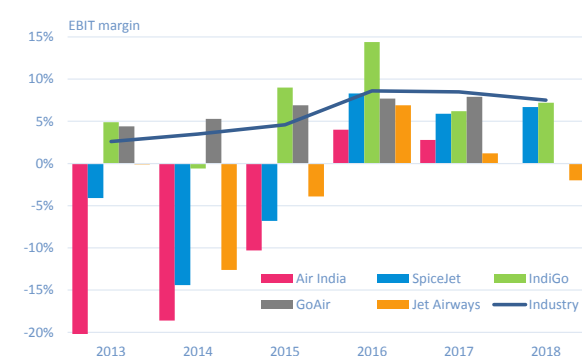


Source: Airline Analyst * data relate to year-ended 31 March

In a similar way, many Indian airlines have been unable to match the global industry performance in terms of operating (EBIT) margin either.

The performance of GoAir and IndiGo are again notable over the period, as is the improved financial results of SpiceJet in more recent years.

Figure 32: Financial performance of selected Indian airlines vs the global industry, EBIT margin 2013-2018*



Source: Airline Analyst *data for Indian airlines related to year-ended 31 March, industry data relate to the calendar year prior

It is clear that the overall industry in India is not yet on a sound financial footing and this remains a work-in-progress for the industry and its key stakeholders, including policy-makers.

While the industry has demonstrated resilience in the face of various shocks and disruption (including the global financial crisis and airline exits), financial stability is a key factor for the industry to be able to successfully develop and grow.

The value of air transport to India

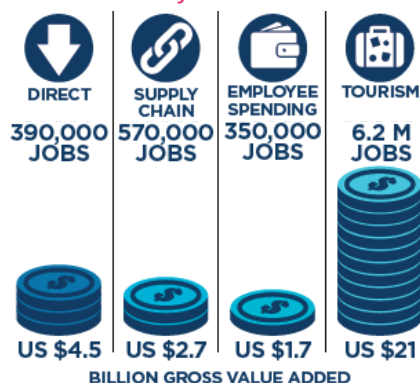
7.5m jobs and a \$30bn contribution to GDP

The air transport sector makes a significant contribution to the Indian economy (Figure 33).

Analysis undertaken by Oxford Economics shows that the air transport sector directly contributes 390,000 jobs in India. This includes airlines, airport operators, airport on-site enterprises such as restaurants and retail, aircraft manufacturers and air navigation service providers.

In addition, by buying goods and services from local suppliers the sector supported another 570,000 jobs across the supply chain.

Figure 33: The value of aviation in India



Source: Oxford Economics, IATA

On top of this, the sector is estimated to have supported a further 350,000 jobs by paying wages to its employees, some or all of which are subsequently spent on consumer goods and services and create employment in other sectors of the economy.

Air transport brings tourists and investment into India, and helps businesses trade their goods and services around the world. Foreign tourists arriving by air to India, who spend their money in the local economy, are estimated to have supported an additional 6.2 million jobs.

But it's not all just about employment.

The air transport industry (directly and indirectly) is estimated to have supported an \$8.9 billion gross value added contribution to GDP in India while spending by foreign tourists supported a further \$21.2 billion gross value added contribution to GDP.

Furthermore, the air transport jobs tend to be highly productive – not just for their airline employers but for the economies in which they are employed.

The average air transport services employee in India generates nearly INR1.3 million in Gross Value Added annually, which is around 10 times more than the economy-wide average.

Looking forward

Sound fundamentals point to a bright future

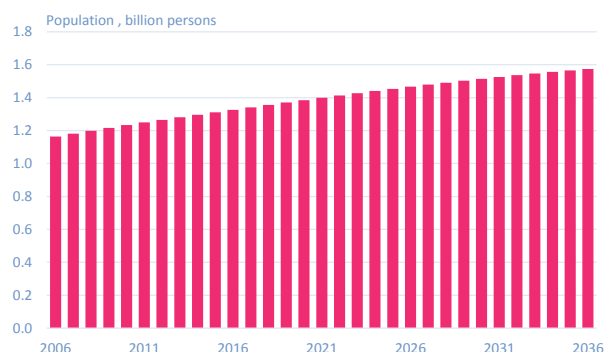
IATA's long-term passenger forecasts for India highlight the potential for significant growth in air transport demand over the next twenty years.

A favorable population and demographic profile – notably a relatively young population – along with the expected continuation of economic development and growth in household incomes underpins this very positive long-term outlook.

India's population is expected to increase further over the forecast horizon, rising from 1.3 billion persons currently to 1.6 billion by the end of our forecast horizon (Figure 34).

This ongoing population increase is expected to see India overtake China as the world's most populous country within the next decade. Of itself, a growing population will typically have a positive impact on the demand for air transport services.

Figure 34: India's population forecast

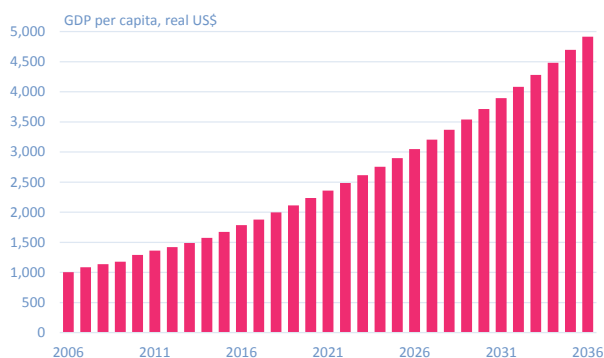


Source: Oxford Economics, IATA

In addition to the expected increase in population, India is also forecast to become a richer country over the next 20 years.

After adjusting for inflation, per capita incomes are expected to increase to almost US\$5,000 per year in 2036, up five-fold since 2006 and more than double the current level (Figure 35).

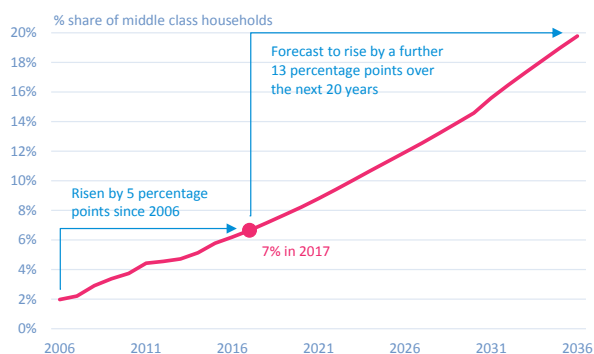
Figure 35: India's rising incomes – GDP per capita



Source: Oxford Economics

At the same time, the number of middle-class households in India is expected to continue to increase over the coming decades, to around 20% by 2036, compared with just 2% in 2006 (Figure 36).

Figure 36: Increase in the share of middle class households in India



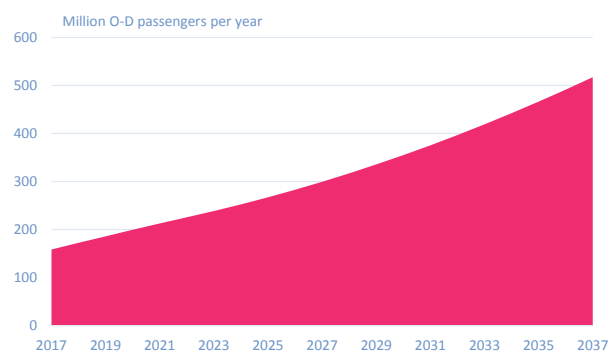
Source: Oxford Economics

The latest IATA/Tourism Economics (TE) forecasts suggest the demand for air travel to, from and within India – on an Origin-Destination basis – will increase at an average rate of 6.1% per year over the next twenty years.

India is forecast to gain an additional 359 million passengers by 2037, compared to 2017 (Figure 37); an increase of 3.3x the current level.

This means that, by 2037, there will be almost 520 million passengers flying to/from and within India each year.

Figure 37: India's forecast air passenger demand, 2017-37



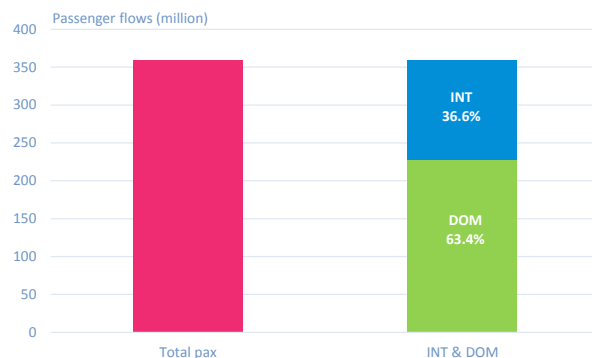
Source: IATA/TE

The additional 359 million passengers will not be sourced evenly from the domestic and international segments.

Domestic passengers will account for around 63% of the total growth over this period, or 228 million additional passengers.

Foreign passengers will contribute less to overall growth, representing 37% of the total market growth, equal to 131 million additional passengers (Figure 38).

Figure 38: Expected increase in Indian air passenger demand 2017-37, and DOM vs INT contributions



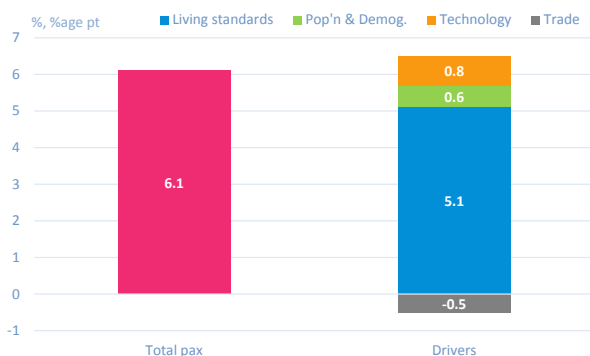
Source: IATA/TE

Of the 6.1% average annual growth in Indian air passenger demand over the next 20 years, improvements in living standards (via higher incomes) are expected to contribute the major share, at 5.1 percentage points.

Favourable population and demographic factors are forecast to contribute 0.6 percentage points to annual growth. Other factors, mainly future technological gains, will contribute 0.8 percentage points per year.

The modest subtraction from growth (0.5 percentage points) from trade mainly reflects the Oxford Economics view that the economy will become slightly less trade intensive over the forecast horizon (Figure 39).

Figure 39: Sources of growth in India's air passenger demand, 2017-37

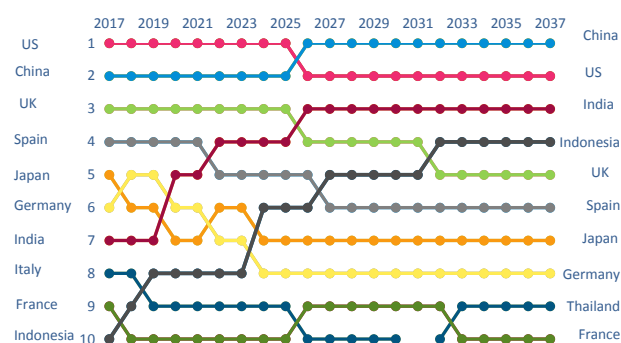


Source: IATA/TE

Putting this performance into a global context, the positive outlook will see India move up from the #7 ranked largest air passenger market in the world currently to #3 (behind China and the United States) within the next decade. India will hold this position through to the end of our forecast horizon in 2037.

Along the way, India will overtake Germany, Japan, Spain and the United Kingdom (Figure 40).

Figure 40: Top 10 global air transport markets, 2017-37



Source: IATA/TE

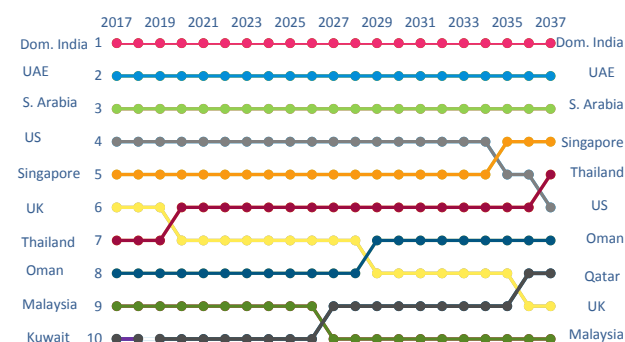
The composition of the top ten air transport markets for India show relatively little change over the 20-year forecasting horizon.

Kuwait is set to drop out of the top 10, to be replaced by Qatar as the only compositional change expected. The top 3 markets (Domestic India, the UAE and Saudi Arabia) are all expected

to maintain their ranking over the forecast period (Figure 41).

The mature air transport markets of the UK and US are expected to see the largest decline in rankings, losing 3 places and 2 places to #9 and #6, respectively.

Figure 41: Top 10 Indian air transport markets, 2017-37



Source: IATA/TE

The policy environment matters

It is important to note that while the fundamental drivers of air passenger demand provide a favorable tailwind to growth in the sector, these outcomes are not guaranteed.

Demand forecasts can be impacted – either positively or negatively – by a range of other factors, including the availability of infrastructure and broader government policy decisions around market regulation and liberalization, for example.

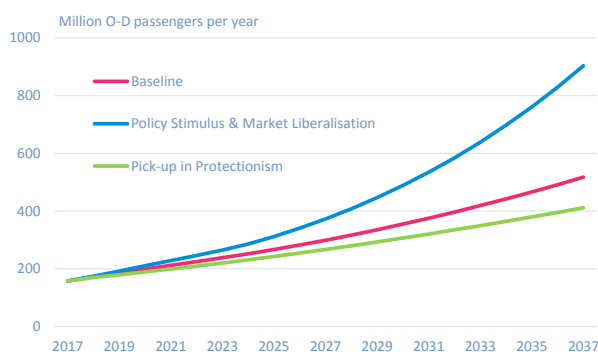
Air passenger forecast scenarios

As part of the forecast process, we prepare two generic global scenarios.

The scenarios are designed to demonstrate the possible impacts on air passenger demand of both a more favorable future outcome (where there is policy stimulus and further air transport market liberalization) and a less favorable future outcome where policies are more restrictive and there is a pick-up in protectionism.

The effect of these two broad scenarios on India's air passenger demand forecasts are depicted in Figure 42.

Figure 42: India's air passenger demand outlook under three scenarios, 2017-37



Source: IATA/TE

Under the less favorable scenario, India's air passenger market will still grow, albeit at a slower pace, of 4.9% per year. While this difference doesn't seem significant, it translates to more than 100 million less passengers per year in 2037 than under the 'constant policies' scenario.

On the upside, a more favorable policy backdrop could see air passenger demand for India growing at a near-double digit annual pace of 9.1%, generating an additional 385 million passengers in 2037 compared with the constant policies scenario. This would take the number of passengers travelling to, from and within India by air to just over 900 million in 2037.

National Civil Aviation Policy

In the Indian context, no consideration of the policy environment could overlook the recent National Civil Aviation Policy (NCAP).

The 2016 introduction of the NCAP brought a number of important initiatives and developments to India's air transport industry.

The policy addresses a range of key areas for civil aviation including airline operations, safety and security, international traffic rights and maintenance, repair and overhaul (MRO) operations.

The NCAP aims to make flying more affordable and convenient to the general population, including by establishing a regional air connectivity scheme, the UDAN initiative.

More recently, a new draft scheme has been announced seeking to extend the UDAN framework to international routes.

Travel & Tourism Competitiveness

The World Economic Forum's (WEF) *Travel and Tourism Competitiveness Index* provides a framework to assess and benchmark the factors and policies which impact a country's T&T sector competitiveness.

In its latest report, India ranks #40 out of the 136 countries assessed, a strong improvement of 12 places over the previous survey (Figure 43).

India's strengths include its vast cultural and natural resources (ranked 9th and 24th, respectively), and its price competitiveness advantage (10th).

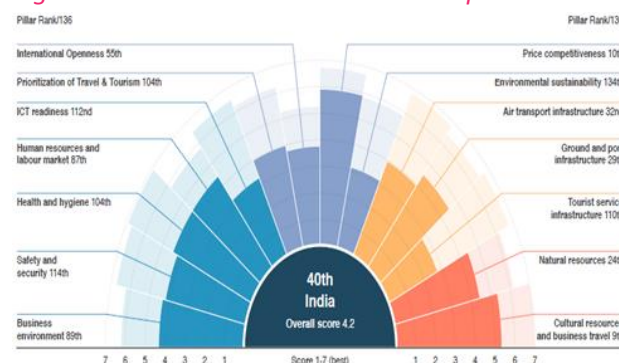
The WEF notes that India continues to enrich its cultural resources, protecting more cultural sites and intangible expressions through UNESCO World Heritage lists, and via a greater digital presence.

International openness (55th, up 14 places), through stronger visa policies implementing both visas on arrival and e-visas, has enabled India to rise up through the global ranking.

The travel and tourism sector benefited from improvements in India's transport infrastructure, which the WEF notes has traditionally been a challenging area.

In this regard, it is notable, that the air transport infrastructure sub-component places India 32nd currently in the global ranking.

Figure 43: India's travel & tourism competitiveness



Source: WEF

Nonetheless, there is always room for improvement which could lift India's ranking into the top quartile of countries.

Within the air transport infrastructure category, India ranks relatively low (133rd) in terms of airport density (the number of airports per million of population) and 108th for the number of departures per 1000 population.

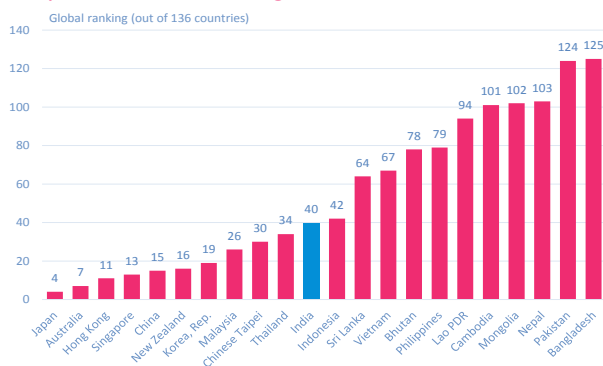
While health conditions in the country continue to improve, the WEF includes India towards the lower end of its global rankings for this indicator (104th).

Similarly, the WEF notes that while India's ICT readiness (112th), security concerns (114th), tourist service infrastructure (110th) and human resources (87th) are slowly improving, further work is required across these dimensions to lift India's overall global ranking.

Importantly, the WEF are clear that steps are already being taken in the right direction to address the shortcomings and conclude that "the Indian transport and tourism sector presents significant opportunities that are yet to be reaped".

India's travel and tourism competitiveness ranking relative to its Asia Pacific peers is shown in Figure 44.

Figure 44: Asia Pacific travel & tourism competitiveness rankings



Source: WEF

Ease of Doing Business

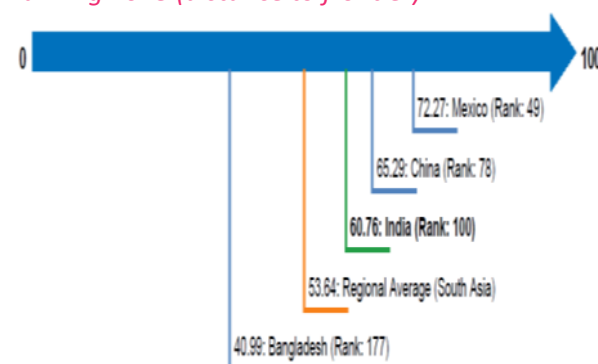
The robustness and efficiency of the broader business environment is also important – not just for air transport sector and related parts of the industry supply chain.

A strong and vibrant business environment stimulates employment opportunities, investment and trade which the air transport sector can both help to enhance and benefit from.

The World Bank's *Ease of Doing Business Index* is designed to provide objective data for use by governments in designing sound business regulatory policies.

The latest index ranks India mid-range, at #100 of 190 countries, slightly ahead of the South Asia regional average (Figure 45).

Figure 45: World Bank Ease of Doing Business ranking 2018 (distance to frontier)⁶



Source: World Bank

Key challenges for India highlighted by the World Bank include dealing with construction permits (ranked #181), enforcing contracts (#164) and trading across borders (#146).

Importantly, and as was the case with the WEF measure discussed above, improvements in the broader business environment in India are underway; India's ease of doing business ranking has risen from #132 just five years ago, clearly moving in the right direction.

⁶ The distance to frontier measure shows the gap to the best performance observed on each of the indicators. A scale

from 0 to 100 is used, where 0 is the lowest performance and 100 is the frontier.

Concluding comments

Air transport is the business of freedom. It is so much more than just moving people and cargo from one destination to another.

Air transport helps to bring families together, it supports and enhances business and investment decisions, it promotes the transfer of knowledge and innovation, and provides opportunities to study abroad and experience different cultures.

As this paper has made clear, the future of India's air transport industry is bright.

However, this does not mean that the future flightpath will be without turbulence.

The significant growth potential of the industry in India will also create challenges – for the airlines, its industry partners and policy-makers alike – to ensure that this growth potential can be met.

For example, this will require the right type of infrastructure to be put into place, at the right time and in the right place. Infrastructure is not just airports, it includes investment and

supporting services, both on the ground and in the air.

Equally, the broader business and policy environment should not place unnecessary hurdles before the industry which inhibit its growth and development and, in turn, reduce the level of benefits that aviation can deliver to the nation.

There is no doubt that this is an exciting period for air transport in India.

And there is a clear mandate for the industry, its supply chain partners and the government and policy-makers to all work in a collaborative manner, towards the common goal of ensuring that the benefits that the air transport industry can bring to India are fulfilled.

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