

OXFORD ECONOMICS

Shaping the Future of Travel

Macro trends driving industry growth over the next decade

Commissioned by

AMADEUS



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Foreword



At Amadeus we are fortunate to sit at the heart of the global travel industry. Our people, our technology and our innovation are dedicated to helping our customers and partners to shape the future of travel. It is this genuine desire to understand the future of our industry which leads us to commission leading experts such as Oxford Economics to help us examine what the coming years will hold.

Since the beginning of the global financial crisis the travel industry has faced significant challenges, many of which are only now beginning to abate. As the global economy

emerges from the grip of recession the time is right to reflect on what the next 10 years are likely to bring and importantly, where pockets of opportunity and growth exist for our industry.

The travel industry, more than many others, is intrinsically linked to global GDP. Travel companies tend to prosper as the economy grows and suffers during times of economic difficulty. However we hope this report makes for positive reading as forecasts suggest that the key metric of global overnight visitor flows is likely to grow at a healthy rate of 5.4% per annum during the next decade, outstripping GDP growth of 3.4%. But of course not all will benefit equally.

The challenge for our industry now is to decide which markets to pursue, where to channel investment and how to ensure that travel companies are positioned to benefit from the expected upturn in demand for global travel.

It is evident that despite the healthy projections for travel, not all sectors, not all geographic markets and not all companies will thrive. Growth will in large part be driven by a number of rapidly developing economies, those companies that are pioneers of successful new business models and those segments that embrace innovation.

In Shaping the Future of Travel: Macro trends driving industry growth over the next decade, we explore macro-economic forecasts; the impact of emerging and frontier markets; the dichotomy of fortunes in business travel and whether the vision of a more connected travel industry is within reach.

This report is in no way designed to be definitive. Rather, the objective is to encourage thinking about the future, to stimulate and facilitate debate, discourse and discussion, so that we are all better placed to shape our industry in the years that lie ahead.

Holger Taubmann, Senior Vice President Distribution, Amadeus

Executive Summary

Amadeus has commissioned Oxford Economics to undertake a study exploring the trends shaping the future of travel, and examining a range of factors including global trends in travel growth, travel in emerging and frontier markets, business travel and seamless travel. This report follows on from, and updates, Oxford Economics' previous work on global travel trends for Amadeus, *The Travel Gold Rush 2020*, released in 2010.

Global travel rebounded rapidly from the 2009 financial crisis and is forecast to grow robustly over the next decade. We expect global overnight visitor flows to grow at 5.4% per annum over the next decade, significantly faster than GDP growth of 3.4% and more in line with the expected expansion in global trade flows of 5.8%.

In terms of regional overnight visitor flows, we predict that Asia Pacific, the Middle East and Africa will be the fastest growing regions over the next 10 years, with Asia growing at nearly double the rate of the 2002-2012 period. Despite this, Europe's share of visitor flows will remain dominant out to 2023. For outbound travel spend, however, the Asia Pacific region will be the growth leader over the next ten years, overtaking Europe to dominate global outbound travel spend by 2023. According to our model, North East Asia alone will account for 42% of the growth in global outbound business travel expenditure over the next decade, with South East Asia accounting for a further 13%.

Non-OECD countries accounted for 44% of global air traffic in 2013 and we forecast this to rise to 51% in the next ten years, driven primarily by the expansion of large emerging markets, especially China. Non-OECD air traffic is increasingly independent of mature Western markets, with "South-South" journeys accounting for 40% of global air traffic in the past five years. Our model suggests that China may overtake the US as the largest source of outbound travel spend in the world in 2014, with China's share of global outbound travel expenditure set to rise from 1% in 2005 to 20% in 2023. China may also surpass the US as the world's largest domestic travel market by 2017. In fact, our modelling suggests the potential market for outbound Chinese tourism could more than double to 220 million households in the next decade.

A key input to this report is the contribution of expert interviewees. These included participants from major airlines, airport operators, rail operators, travel industry experts, hotel operators, online travel agents, information developers and participants drawn from Amadeus itself. These interviews, combined with macroeconomic forecasts and research from Oxford Economics, provided insights into how industry participants themselves see the industry developing in future years.

Emerging market travel sectors are not only growing, but also innovating to meet the demands of rapidly expanding and maturing domestic markets, with lessons for Western providers. Technologically, emerging markets are often more open to change and local agents are more experimental than their advanced market counterparts.

Western business travellers have been slow to recover old spending habits. North American and European short-haul markets are still yet to recover 2008 levels. Premium air traffic data from IATA shows that whilst long-haul (intercontinental) premium traffic recovered quickly and robustly from the financial crisis - particularly that connecting advanced to emerging markets - short-haul travel demand has been much more sluggish.

The business models of Low Cost Carriers and traditional carriers have converged in recent years, but remain distinctive. Structural factors will continue to set the LCCs and traditional carriers apart and they will continue to compete along the familiar lines of their comparative advantages – price versus service.

The more important trend in the next decade is the further expansion of LCC market share. LCCs are outgrowing general traffic in every continent of the world. Europe remains the most active market for LCC business, with 250 million passenger trips per year. North America is next largest with 173m, but Asia is fast catching up, recording over 117m passenger trips on average in the past five years and growing more than 150% in that period. The introduction to the market of large numbers of new middle class travellers from emerging economies in the next 10 years will pose great opportunities for LCCs. LCCs, however, are yet to demonstrate a viable model for capturing longer-haul market share to date. The more successful LCCs become the more likely they are to outgrow their original business model and be forced to adapt.

Seamless travel has two main aspects: technology and infrastructure. Infrastructure provides the different modalities of transportation, and technologies connect the different modes of transportation. Seamless travel exists in many forms but an “ideal” case would be booking a single “door to door” service which took a traveller from their home to and through an airport, onto and off a plane and to their destination hotel. In practice, much seamless travel currently exists in selective “bubbles” because the businesses required to provide the infrastructure and the technology are very different. In addition, there is a “market failure” at work that makes the provision of truly global seamless travel solutions very difficult.

The development of internet based and mobile technologies would appear to provide more opportunity than ever before for a potential facilitator, given that they might help overcome many of the past issues that helped forestall seamless travel. At present, however, because many providers appear to be focused on improving their own offerings, seamless travel is effectively left for “someone else” to worry about.

As the world’s mobile users and mobile broadband users have increased, so have the applications and uses of mobiles for travel. The number of mobile device users in developing countries has been rapidly increasing since 2005, with an average annual growth rate of 36.8% over the 2005-2013 period, meaning they now by far outnumber users in developed countries. Mobile broadband user numbers in developing countries have also been growing at a rapid rate and are expected to have eclipsed user numbers in developed countries in 2013 for the first time, with 1.2 billion users.

As a result of this growing trend of using mobile devices for travel, travel providers are developing applications to further facilitate information provision, reservations, and payments. If economic history is any guide it is likely that the spread of mobile technologies will produce major changes in the travel industry – as well as major financial opportunities – however these may take many years to fully develop and their shape is only dimly grasped at present.

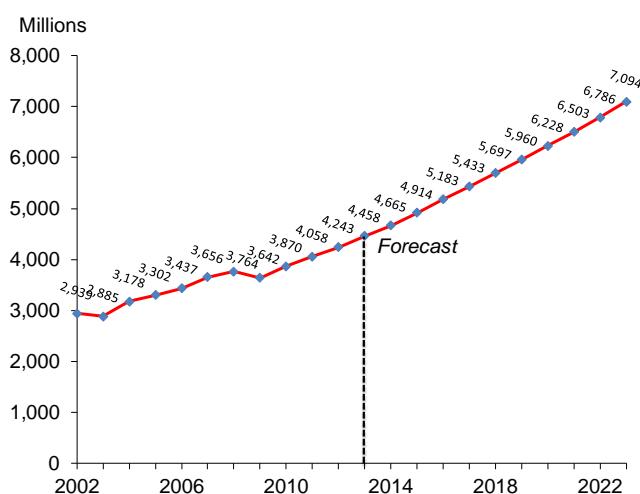
1 Global Travel Trends

1.1 Worldwide Trends

Global travel rebounded rapidly from the 2009 financial crisis and is forecast to grow robustly over the next decade. Global overnight visitor flows are comparable with global trade flows. We expect global overnight visitor flows to grow at 5.4% per annum over the next decade, significantly faster than GDP growth of 3.4% and more in line with the expected expansion in global trade flows of 5.8%.

Although global overnight tourist flows dipped briefly at the peak of the financial crisis in 2009, they have since rebounded and continued to increase at a healthy rate of 16.5% from 2009 through 2012. This is slightly higher than the 15% growth rate experienced before the financial crisis from 2004 to 2007.

Chart 1.1: Global overnight visitor flows, 2002-2023



Source: Oxford Economics

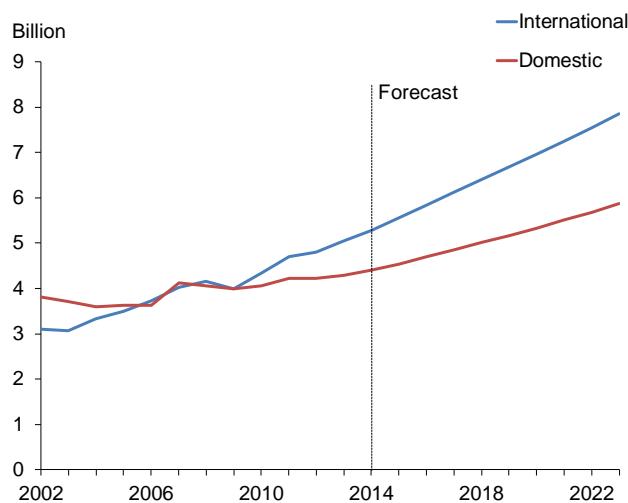
The Oxford Economics Tourism Decision Metrics (TDM) model forecasts visitor flows as a derivative of outbound visitor spending. As the global economy continues to recover, and given our forecasts for personal income and business spend growth, we forecast an average annual growth rate for visitor flows of 5.4% over the next decade. This is an acceleration of the 4.1% growth rate experienced over the 2009-2012 period. Outbound global travel spending¹ follows a broadly similar trend to that of overnight tourism flows, with predicted average annual growth of 5.4% from 2013 through 2023.

¹ Defined as spending by residents on travel in foreign countries (exports).

International accommodation nights are outpacing domestic accommodation nights since the financial crisis, potentially showing a drop off in demand for accommodation on domestic trips.

The financial crisis resulted in a temporary flattening of nights spent in accommodation by all travellers, both domestic and international. Chart 1.2 shows global accommodation nights, broken down by international travellers and domestic travellers.

Chart 1.2: Global accommodation nights, international and domestic, 2002-2023



Source: Oxford Economics

This chart shows the flip between international and domestic accommodation nights. Before 2006, the volume of accommodation nights by domestic travellers was higher than for international travellers. Around the financial crisis, the two were at roughly the same level, but from 2009, the two began to diverge.

From 2009 to 2012, international accommodation nights grew by 20% but domestic accommodation nights only grew by 5.8%. The reason for this divergence is unclear. The differing growth rates may reflect both the generally slow pace of domestic demand in Western economies (restraining domestic tourism) as well as the growth of emerging markets, with new tourists increasingly interested in exploring the outside world (if only, at first, within their local region).

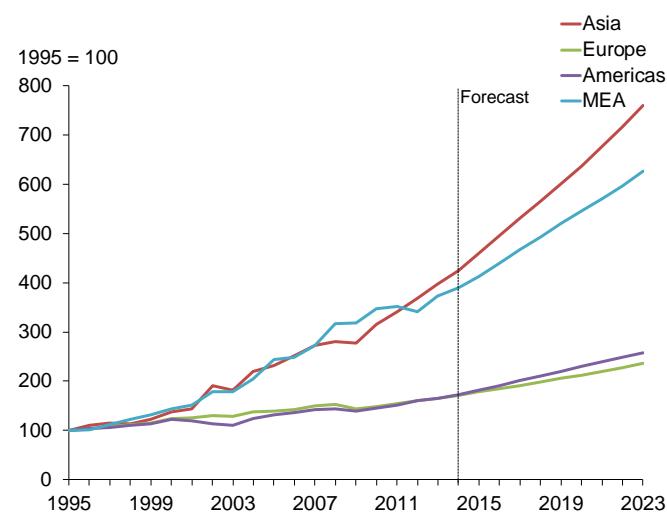
Based on current trends, domestic and international accommodation nights are forecast to continue to diverge from 2013 to 2023, with international accommodation nights growing at an annual average rate of 5.1% compared to 3.4% in domestic accommodation nights.

1.2 Regional Trends

In terms of overnight visitor flows, we predict that the Asia Pacific and the Middle East and Africa regions will be the fastest growing regions over the next 10 years, with Asia growing at nearly double the rate of the 2002-2012 period. Despite this, Europe's share of visitor flows will remain dominant out to 2023.

Chart 1.3 below shows how the growth in overnight visitor flows for those regions compares to the growth for Europe and the Americas since 1995². The divergence in growth rates between the high growth regions (Asia, MEA) and the lower-growth regions is clear (Europe, Americas).

Chart 1.3 Indexed overnight visitor flows by region, 1995-2023



Source: Oxford Economics

Over the 2013 to 2023 period, visitor flows for Asia are forecast to grow at an annual average rate of 15.1%, nearly double the prior ten-year period. Over this same period, visitor flows from the Middle East and Africa will grow at an annual rate of 11.9%, a few percentage points above the 8.4% growth registered over the prior ten-year period. In comparison, arrivals from Europe and the Americas will have growth rates that are approximately half or less than Asia and the Middle East and Africa over the forecast period (but still higher than the prior ten-year performance). Table 1.1 below summarises the growth rates Oxford Economics' TDM model forecasts for the next decade as well as providing results for the last decade.

² This chart shows the indexed growth trend, therefore setting 1995 as the common base year for all tourism flows and calculating the growth per region from that base year. ³ Connecting passengers are assigned to the points of their origin and destination, not to the point(s) of transfer.

Table 1.1: Growth in overnight visitor flows by region

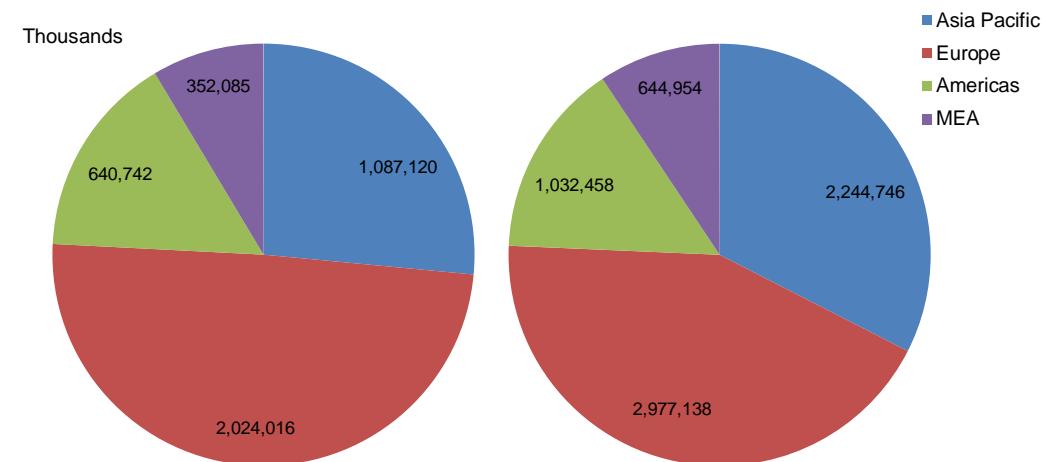
Region	Average Annual Growth (%) 2002-2012	Average Annual Growth (%) 2013-2023
Asia	8.5%	15.1%
MEA	8.4%	11.9%
Europe	2.1%	3.9%
Americas	3.7%	6.4%

Source: Oxford Economics

By way of comparison, Chart 1.4 displays the volume of overnight visitor flows for 2012 per region. In volume terms, Europe has the lion's share of tourism flows, with the Asia Pacific region in second place, the Americas third, and the Middle East and Africa in fourth.

Chart 1.4: Overnight tourism flows by region, 2012 (Left-Hand Side)

Chart 1.5: Overnight tourism flows by region, 2023 (Right-Hand Side)



Source: Oxford Economics

Chart 1.5 shows the same overnight visitor flows, but for the 2023 forecast year. The Asia Pacific and the Middle East and Africa region, despite high growth, will still retain the same regional rankings in 2023.

Examining airline travel between regions gives further insights into passenger flows. Table 1.2 below shows the growth in origin and destination passenger traffic between world regions³ for the past few years, sorted by the highest annual percent change for the year 2013.

³ Connecting passengers are assigned to the points of their origin and destination, not to the point(s) of transfer.

Table 1.2: Growth in airline passenger traffic between regions, 2009-2013

Region Pair	Change in Passengers				
	2010	2011	2012	2013	2009-2013
Middle East Africa-Asia Pacific	11.53%	6.40%	1.70%	10.27%	33.09%
Asia Pacific-Asia Pacific	11.09%	5.38%	8.58%	9.00%	38.54%
Middle East Africa-Europe	7.76%	1.00%	3.85%	7.63%	21.66%
Asia Pacific-Americas	6.85%	9.03%	4.87%	6.24%	29.79%
Asia Pacific-Europe	9.50%	8.97%	7.12%	5.38%	34.69%
Middle East Africa-Middle East Africa	9.10%	6.39%	1.82%	3.12%	21.86%
Europe-Europe	4.70%	5.25%	3.68%	3.06%	17.75%
Americas-Americas	4.11%	1.38%	3.01%	2.39%	11.33%
Middle East Africa-Americas	7.77%	4.70%	2.87%	1.62%	17.96%
Europe-Americas	1.87%	4.17%	-1.04%	0.86%	5.91%

Source: Oxford Economics, Amadeus

Notes: Data captures origin and destination only.

Calculations for a single year reflect the change from prior year.

The table clearly shows that travel by air between the Middle East/Africa and the Asia Pacific region, as well as within the Asia Pacific region has grown the fastest over the last few years. This is closely followed by travel between the Middle East Africa region and Europe, the Asia Pacific region and the Americas, and the Asia Pacific region and Europe. These dominant bilateral travel flows are driven by high growth in both the Asia Pacific and the Middle East Africa markets.

In the competition for long-haul transfer passenger traffic, hub airports in the Middle East are thus far winning the race.

Point to point traffic may be growing, but at the same time, airports are competing to be regional hubs. While the number of international transfer long-haul O&D passengers across major European and North American hubs have been growing relatively modestly over the past 5 years (8% in North America and 10% in Europe), the number of such transfer passengers flying through the Middle East hubs has been increasing at the rapid rate of 79% over the same period. Hub airports in the Middle East have profited from their strategic location between Asia, Africa, and Europe in attracting long-haul transfer passengers, with Dubai airport leading the pack. In addition, such traffic at the six key Central and South American hubs is also increasing at a fast pace of 57%. Table 3.3 below shows the major hub airports per region with international transfer long-haul origin and destination (O&D) passengers in 2013 and the growth of such passengers from 2009 to 2013.

Table 1.3: Leading regions for transfer long-haul O&D passengers, 2013

Region	Hubs	2013 O&D Pax	% Change 2009-2013
Asia	SIN, HKG, BKK, NRT, PEK, ICN	24,797,116	20.1%
Europe	FRA, CDG, LHR, AMS, MAD, IST	39,915,881	10.0%
South and Central America	GRU, PTY, SCL, BOG, LIM, GIG	6,570,340	57.0%
Middle East	DXB, AUH, DOH	19,228,052	78.6%
North America	ATL, JFK, ORD, EWR, LAX, MIA	17,209,541	7.7%

Source: Amadeus

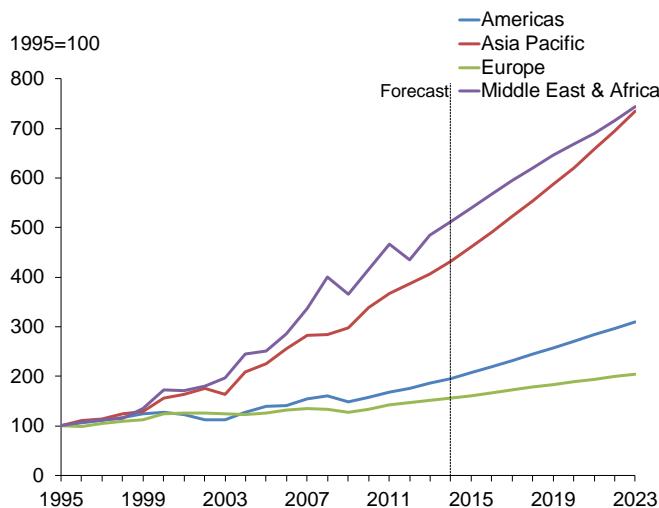
Note:

O&D Pax given is estimated number of O&D passengers travelling on international long-haul O&Ds (>5000 km) connecting at the given hub. Pax connecting at multiple hubs are distributed proportionally to the distance travelled.

In line with our international travel forecasts, we anticipate rapid growth in demand for accommodation in the Asia Pacific and MEA regions. Despite this, Europe will still lead the market in 2023.

Chart 1.6 below displays the growth in international accommodation nights from 1995 by region, a similar pattern to the international visitor flows.

Chart 1.6: Growth in international accommodation nights by regions, 1995-2023



Source: Oxford Economics

Asia-Pacific and the Middle East/Africa regions have had the highest growth rates over the last ten years, at 10.9% for the Asia Pacific region and 12.9% for the Middle East and Africa region. For the next ten-year period, Oxford Economics forecasts the Asia Pacific region to lead with a 7.3% growth rate and the Americas rising to second place with a 6.1% growth rate. See Table 1.4 for a summary of the annual growth rates by region.

Table 1.4: Growth in international accommodation nights by region

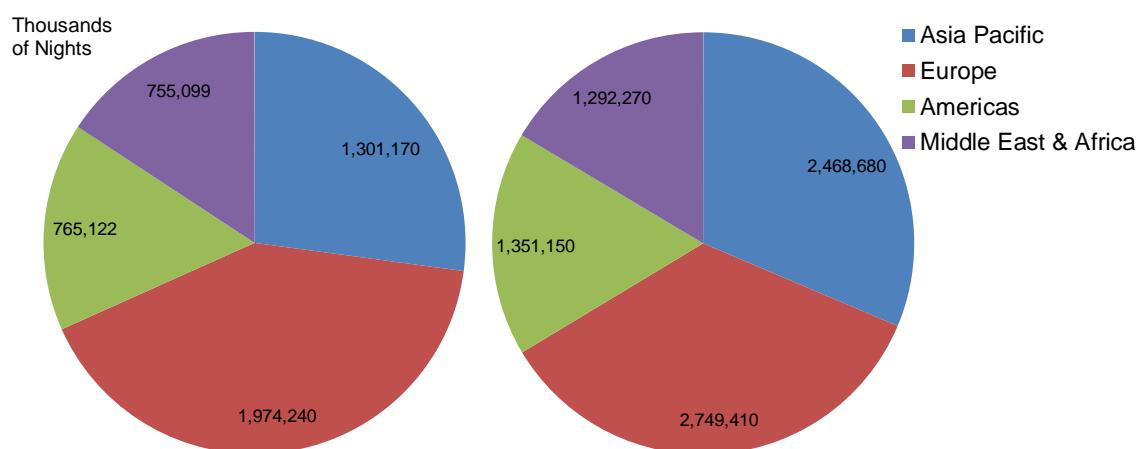
Region	Average Annual Growth (%)	
	2002-2012	2013-2023
Asia	10.9%	7.3%
MEA	12.9%	4.8%
Europe	1.5%	3.2%
Americas	5.1%	6.1%

Source: Oxford Economics

In terms of the levels of international accommodation nights, Chart 1.7 and Chart 1.8 show the levels of international accommodation nights in 2012 and also the forecast level in 2023 by region.

Chart 1.7: International accommodation nights by region, 2012 (Left-Hand Side)

Chart 1.8: International accommodation nights by region, 2023 (Right-Hand Side)

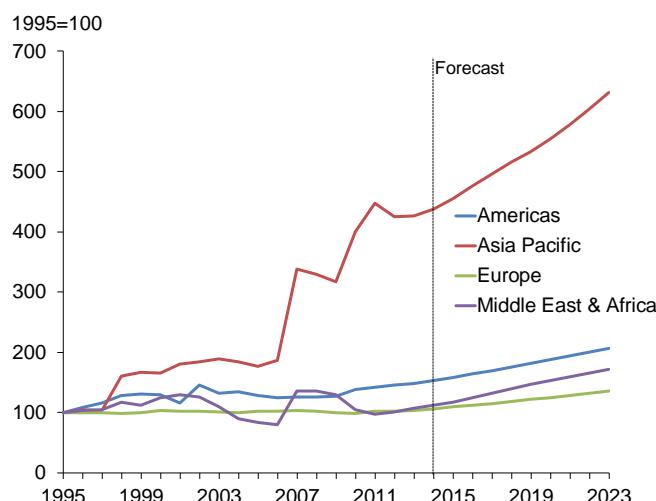


Source: Oxford Economics

In domestic accommodation nights, the Asia Pacific region is the leader of the pack, as with international accommodation nights and overnight visitors, displaying far higher growth rates than the other regions. Unlike the other indicators, however, the Middle East and Africa region does not display particularly high growth here, indicating its weakness in domestic tourism as compared to international tourism. Europe will retain the majority of the global domestic accommodation market share out to 2023.

Chart 1.9 below shows the predicted growth in domestic accommodation from 1995-2023 by region.

Chart 1.9: Growth in domestic accommodation nights by region, 1995-2023



Source: Oxford Economics

The outstanding performer for domestic accommodation growth is the Asia Pacific region, with annual growth of 11.9% over the past ten years, a slightly higher growth rate than for international accommodation nights. Growth over the next ten year-period is forecast to taper to a more moderate 4.4%, a few percentage points lower than forecast growth for international accommodation nights. This provides evidence of strong growth in the domestic tourism segment for the Asia Pacific region for the past decade (especially as compared to other regions), with slower growth in the next decade. In contrast, the other regions have shown little or negative growth over the past ten years, but the Middle East and Africa region is set to lead growth in this segment of the market over the next ten years, with a growth rate of 5.5%. Table 1.5 below summarises these growth rates.

Table 1.5: Growth in domestic accommodation nights by region

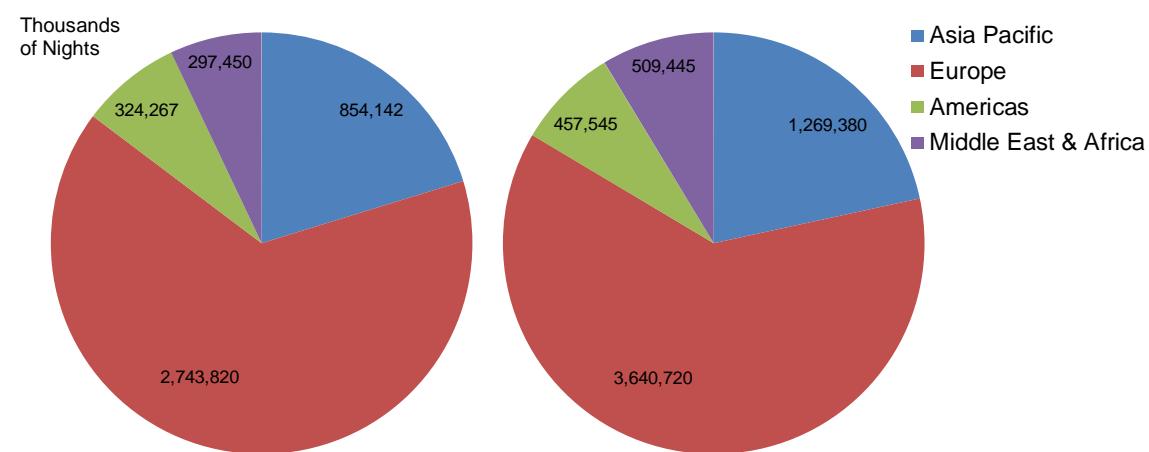
Region	Average Annual Growth (%)	
	2002-2012	2013-2023
Asia	11.9%	4.4%
MEA	-1.9%	5.5%
Europe	0.0%	2.8%
Americas	0.1%	3.5%

Source: Oxford Economics

In terms of the levels of domestic accommodation nights, Chart 1.10 and Chart 1.11 show the levels in 2012 and also the forecast number of domestic accommodation nights in 2023.

Chart 1.10: Domestic accommodation nights by region, 2012 (Left-Hand Side)

Chart 1.11: Domestic accommodation nights by region, 2023 (Right-Hand Side)

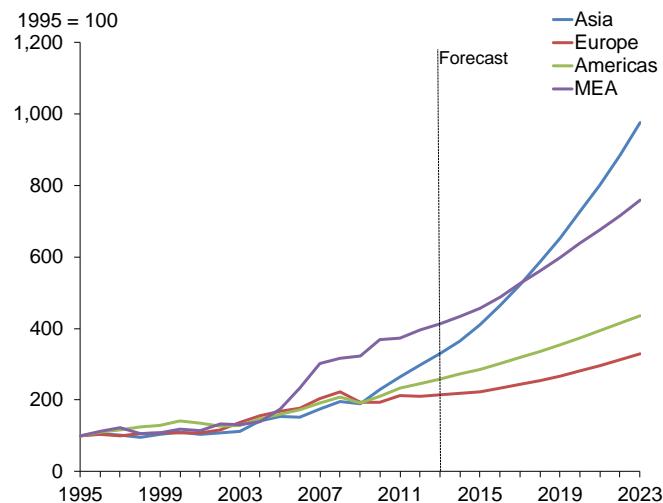


Source: Oxford Economics

In both 2012 and the forecast for 2023, despite high growth in the Asia Pacific region, Europe still retains the majority of domestic accommodation nights in terms of sheer volume, with a 62% predicted market share in 2023 as compared to Asia Pacific's 22% predicted market share in 2023.

For outbound travel spend, the Asia Pacific region will be the growth leader over the next ten years, overtaking Europe to have a dominant share of the outbound travel spend market by 2023.

Chart 1.12: Outbound travel spend by region, 1993-2023



Source: Oxford Economics

At the apex of the financial crisis, growth in outbound travel spend had a large upswing for the Asia Pacific region. Over the 2013 to 2023 forecast period, the Asia Pacific region will be the growth leader, with travel spend in the region forecast to increase at an annual rate of 18%, slightly higher than growth over the past ten years. The Middle East and Africa region is predicted to be another strong performer over the 2013-2023 period, with an annual growth rate of 7.6%, albeit much lower than its annual growth of 18.1% over the past ten years.

Oxford Economics' forecast annual growth rates for this and other regions are summarised in Table 1.6.

Table 1.6: Growth in annual outbound travel spend by region, 2012-2023

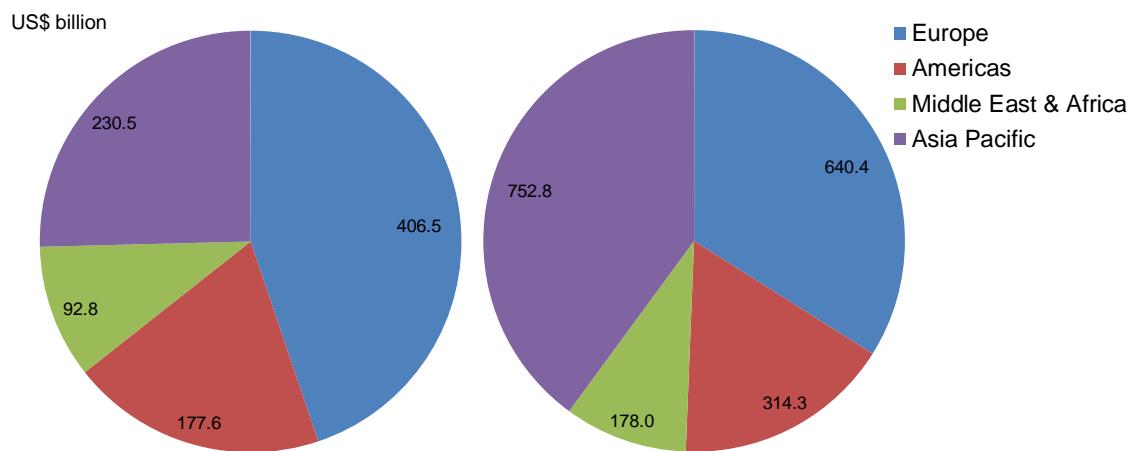
Region	Average Annual Growth (%)	
	2002-2012	2013-2023
Asia	16.1%	17.9%
MEA	18.1%	7.6%
Europe	7.4%	4.9%
Americas	8.5%	6.2%

Source: Oxford Economics

Chart 1.12 is built as an index, thereby equating all regions for 1995 and looking at the comparative growth for each region from 1995 to 2023. Chart 1.13 and Chart 1.14 show the levels of outbound travel spend per region for 2012 and 2023.

Chart 1.13: Outbound travel spend by region, 2012 (Left-Hand Side)

Chart 1.14: Outbound travel spend by region, 2023 (Right-Hand Side)



Source: Oxford Economics

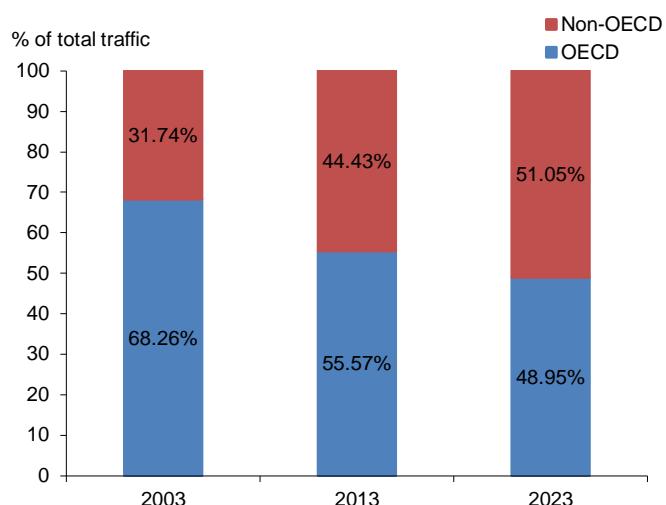
The 25% share of Asia Pacific outbound travel spend in 2012 is forecast to increase significantly to 40% by 2023, overtaking all other regions. In contrast, Europe's large share of global travel spend will decrease from 45% in 2012 to 34% by 2023.

2 Emerging and Frontier Markets

2.1 Emerging markets have already emerged in air travel

Non-OECD countries accounted for 44% of global air traffic in 2013 and we forecast this to rise to 51% in the next ten years, driven primarily by the expansion of large emerging markets, especially China. Non-OECD air traffic is increasingly independent of mature Western markets, with “South-South” journeys accounting for 40% of global air traffic in the past five years.

Chart 2.1: OECD declining share of global air traffic



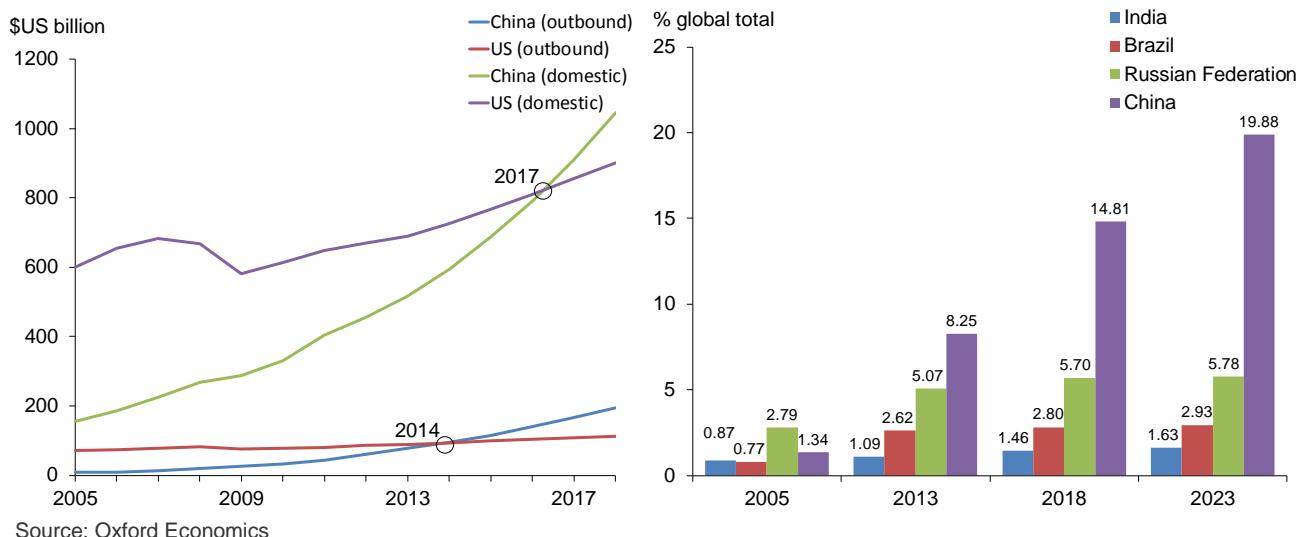
Source: Oxford Economics

2.2 At the heart of this trend is a rapid expansion in Chinese travel

Our model suggests that China may overtake the US as the largest source of outbound travel spend in the world in 2014, with China's share of global outbound travel expenditure set to rise from 1% in 2005 to 20% in 2023. This is shown in Chart 2.3, as China leaves other emerging markets in its wake in terms of global market share. China may also surpass the US as the world's largest domestic travel market by 2017 (Chart 2.12).

Chart 2.2: China overtakes US in travel spend (Left-Hand Side)

Chart 2.3: Growing BRIC share of global outbound business travel spend (Right-Hand Side)



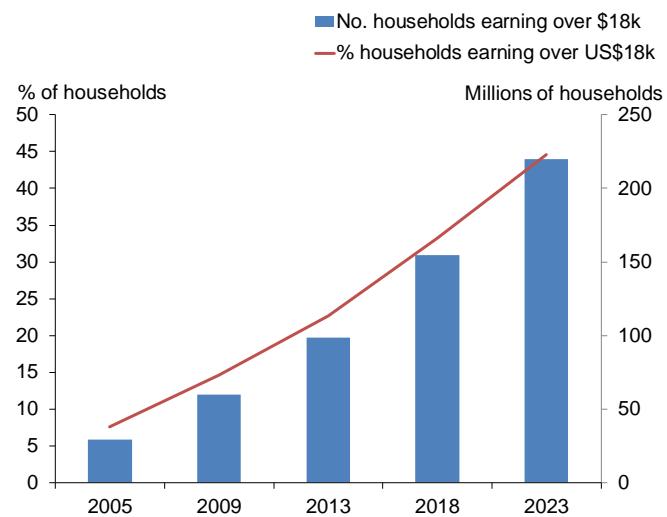
Source: Oxford Economics

Our forecasts of future travel expenditure in emerging markets are driven by expectations of consumer spending, employment and overall GDP growth. China's boom is also underpinned by a unique cultural and behavioural shift, whereby a new and very large generation of Chinese individuals is expanding its overseas business interests and engaging in cross-border tourism in a manner unprecedented in previous generations.

The potential market for outbound Chinese tourism could more than double to 220 million households in the next decade.

According to a survey of 3000 Chinese travellers by Hotels.com Chinese International Travel Monitor, the average outbound Chinese tourist in 2013 earned a salary equivalent to US\$18,000. We estimate that around 100 million Chinese households currently earn that level of income, which gives a sense of scale to the potential market place. According to our Global Cities 2030 forecast, and adjusting for inflation, our analysis suggests that number could rise to 220 million by 2023.

Chart 2.4: Potential growth in Chinese tourism market



Source: Oxford Economics

There is an emerging generation of Chinese that is increasingly aware of the outside world and has it within its means to go visit.

Chinese government initiatives are making it easier to travel overseas, reducing red-tape around passport applications and proactively promoting outbound tourism⁴. For the first time, the twelfth five year plan published in 2012 explicitly aimed to “actively encourage the development of outbound tourism.”

China’s travel sector is a large, diverse and evolving marketplace.

The clichéd Chinese tourist on a whistle-stop package-tour and eating in Chinese restaurants is rapidly evolving. Chinese travellers are increasingly opting for non-Chinese hotels and restaurants⁵ (although interviewees noted that more could still be done to cater to Chinese and other emerging market travellers through better provision of TV, newspaper and other services in their native language). Younger, more educated and sophisticated travellers are demanding richer experiences from overseas travel, researching and organising trips themselves over the internet and social media networks.

According to a hotel survey in 2013, almost two thirds of Chinese travellers said they preferred to travel on their own rather than as part of a group; almost half bypassed travel agents and booked their accommodation directly with the hotel. Shopping still accounts for one third of the traveller’s budget, according to a recent report by the China Tourism Academy, but the share is slipping.

Chinese outbound business travel will also expand rapidly in the next decade as more and more Chinese businesses expand overseas, procuring

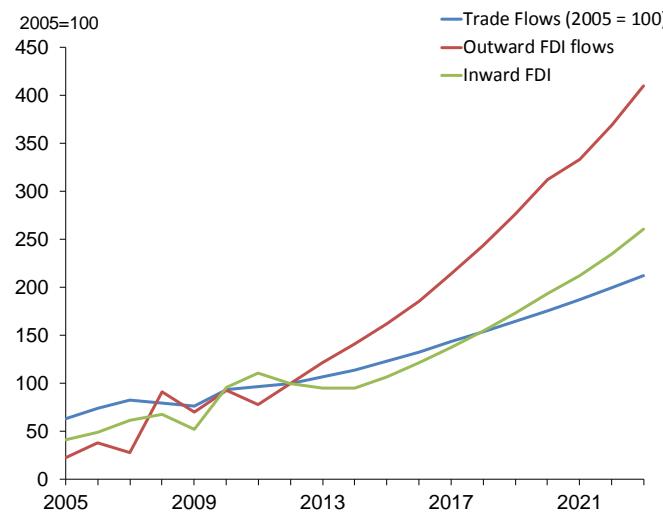
⁴ The Outline for National Tourism and Leisure, Feb 2013, The State Council of China.

⁵ Hotels.com Chinese International Travel Monitor survey 2013.

international goods and services and engaging in the global production chain.

We forecast Chinese trade flows to double in the next decade and outward foreign direct investment flows from Chinese firms to more than treble, to over \$250bn (current prices) (Chart 2.5). There is a strong linear correlation between these factors and outward business expenditure.

Chart 2.5: China's external trade and investment flows



Source: Oxford Economics

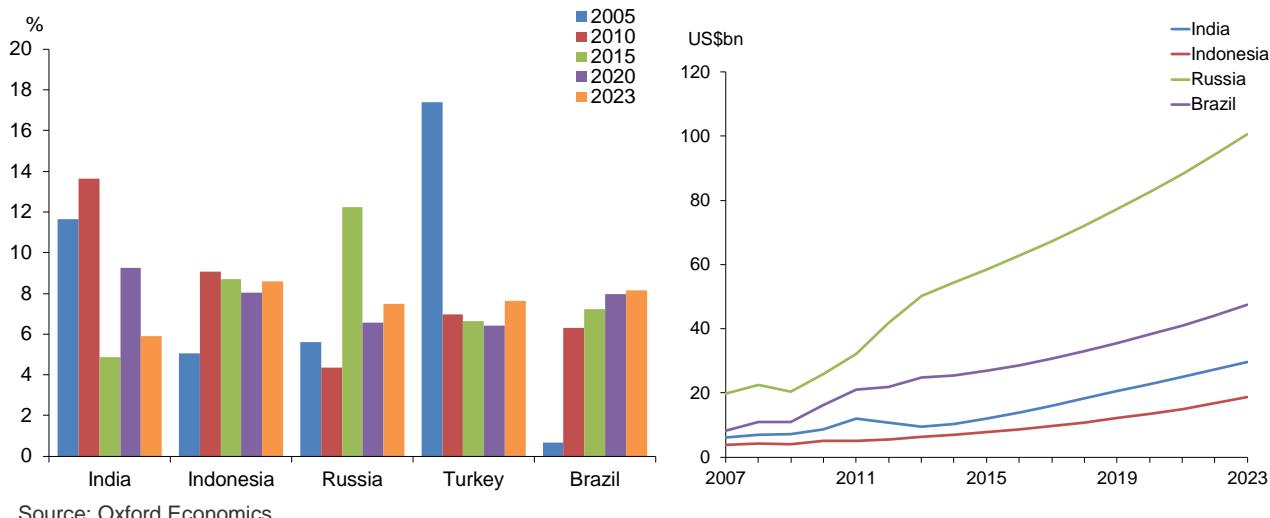
2.3 Other emerging economies will also play an important role

The growth story is not exclusive to China. Our forecasts show a number of large emerging markets, driven by rising wealth and changing consumer habits, expanding their international air traffic flows and outbound travel expenditure over the next decade. The standout performers are Russia, Brazil, India, Indonesia and Turkey. Chart 2.6 shows average annual growth rates in air traffic in these countries (on a 5 year rolling basis). Following rapid growth over the past decade, we expect each of them to average more than 5% annual growth over the next 10 years.

In line with that expansion, outbound travel spend is forecast to multiply over the next decade. We forecast Russian outward travel spend to rise from around US\$50bn in 2013 to over \$100bn in 2023. Similarly, we expect Brazil's outward travel spend to double, and India and Indonesia's to roughly treble in that time period (see Chart 2.7).

Chart 2.6 Average annual growth in international air traffic (5-year average annual growth rates) %

Chart 2.7 Outward travel expenditure (US\$, bn)



Source: Oxford Economics

Emerging market travel sectors are innovating to meet the demands of rapidly expanding and maturing domestic markets, with lessons for Western providers.

Local travel providers in emerging markets are successfully tailoring multi-modal content to travellers' requirements and making innovative use of mobile technology for bookings, payment and connectivity etc. Local providers are utilising local market expertise, incorporating local bus and ferry content to air travel and accommodation booking. These local champions will continue to secure market share in isolated markets that fall outside the scope of established global travel providers.

Technologically, emerging markets are often more open to change and local agents are more experimental than their advanced market counterparts.

Due to the lack of credit cards, many agents have leapfrogged to accepting payment by mobile. Payment via mobile becomes increasingly compelling in light of the very rapid expansion of mobiles in emerging markets (in contrast to the historical problems with fixed line networks and other infrastructure).

Interviewees report that travellers *within* emerging markets tend to follow a two-tier pattern – with newly emerged middle class travellers having lower expectations than equivalent Western consumers while wealthy travellers tend to have very high expectations. Accordingly, the domestic hotel market has had a tendency to bifurcate into serving these polarised ends of the market with branding playing an important role (particularly at the upper end of the market).

Case Study: MakeMyTrip, India - An emerging market travel technology pioneer

MakeMyTrip is an example of a company that has been able to capitalise on local market knowledge and the application of international technology to quickly win enormous market share from traditional travel agents.

MakeMyTrip is an online travel company headquartered in Haryana, India. It provides an online “one-stop-shop” for travel products and services for the domestic Indian market. With customer focus and a commitment to technological innovation at the centre of its business model, it has rapidly grown to dominate the Indian travel sector since it entered the market in 2005. Its new Route Planner application, launched in 2013, integrates data on domestic flights, buses, trains and cabs to offer unprecedented travel information to its users, providing exact connectivity options between any two Indian cities. The application sifts through 1 billion possible routes and over 20 billion possible schedules in seconds to offer optimum travel combinations. It offers ticket options for certain legs of the journey and information for the rest.

Central to the company’s success is its pioneering use of mobile technology as a platform for sales and service. Director Airlines and Agency Alliances Sanjeev Bhasin said the company invested in understanding the local market content and tastes and applied the very latest in technologies to the Indian market. It also timed its entry at the start of a boom in low cost air fares and mobile phone and internet usage. With a slew of popular marketing promotions over the years, MakeMyTrip has established strong brand recognition nationwide. It is the leader in online air-ticketing in India - 1 in 8 tickets booked online in India is through MakeMyTrip.com.

Its first mobile application was launched in 2012 - today it offers apps across iOS, Android and Windows platforms that enable booking of air travel, hotels, bus and train reservations as well as other geo-targeted travel services. The MakeMyTrip mobile app has received 2.4 million downloads to date. Mobile is a key growth channel - 20% of the site visitors are currently contributed by mobile and around 10-15% of domestic flights and nearly 25% of hotels are booked via mobile. Amongst mobile bookings, more than a quarter consist of new customers who have never before transacted with MakeMyTrip. The implication is that MakeMyTrip’s mobile technology has introduced these emerging customers to the travel market.

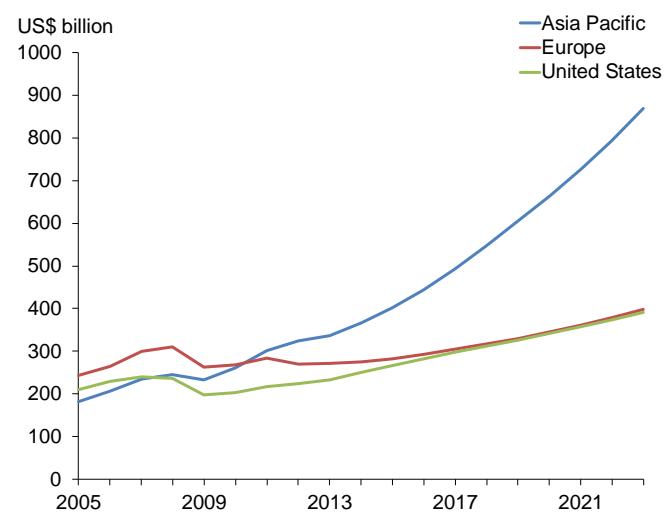
3 Business Travel Trends

3.1 Western business travel behaviour has adapted following the financial crisis

Western business travellers have been slow to recover old spending habits.

Modelling by Oxford Economics indicates that business travel expenditure by US and European passengers is not forecast to reach pre-recession levels until 2014 and 2018 respectively. This is in stark contrast to Asia, where trend growth in business travel expenditure was unaffected by the financial crisis (Chart 3.1).

Chart 3.1: Total business travel expenditure 2005-2023



Source: Oxford Economics

Western corporate spending habits have adjusted to austerity.

Travel budgets have always fluctuated in line with the economy; firms are more relaxed about travel spend in the good times and tighten their belts in the bad. During the recent belt-tightening in Europe and the US, Western companies have become more cost-conscious, introducing more sophisticated tools to control business expenses and making smarter use of technological alternatives such as videoconferencing.

Expert interviewees noted that technological developments may also be having an impact. With the gradual spread and “deepening” of internet and associated telecommunications technologies, more business trips are being planned by employees themselves or at least in-house rather than via an agent. Some interviewees suggested that this can result in a sense of increased employee empowerment resulting in employees making more cost-effective decisions and/or decisions more suitable to their precise individual circumstances than

would be the case if agents were involved⁶.

Interviewees differed on how enduring these effects would be. Having lived through previous recessions many were sceptical of any reports of the “death of business travel”. A general suggestion was that business travel had gradually recovered from the effects of the last recession. However, there had been changes in corporate travel policies meaning that the *yield* on such travel may have declined (whether through downshifting from business class to premium economy/economy, shorter hotel stays, changing to restricted fares or other means).

Changes in the business travel market may be having a lasting impact on business class ticket sales, in particular. Premium air traffic data from IATA⁷ shows that whilst long-haul (intercontinental) premium traffic recovered quickly and robustly from the financial crisis - particularly that connecting advanced to emerging markets - short-haul travel demand has been much more sluggish (see charts). North American and European short-haul markets are still yet to recover to 2008 levels.

Some of the difference between intra and intercontinental traffic growth could be explained by the fact that emerging market growth is helping to propel the latter. However, more broadly speaking, the potential reasons for sluggish short haul/intracontinental growth in traditional European and North American markets were hinted at by some interviewees. Changing business travel policies in the wake of the global recession have meant that companies may be more reluctant to pay for short haul business class flights, while continuing to recognise the value of long haul business class.

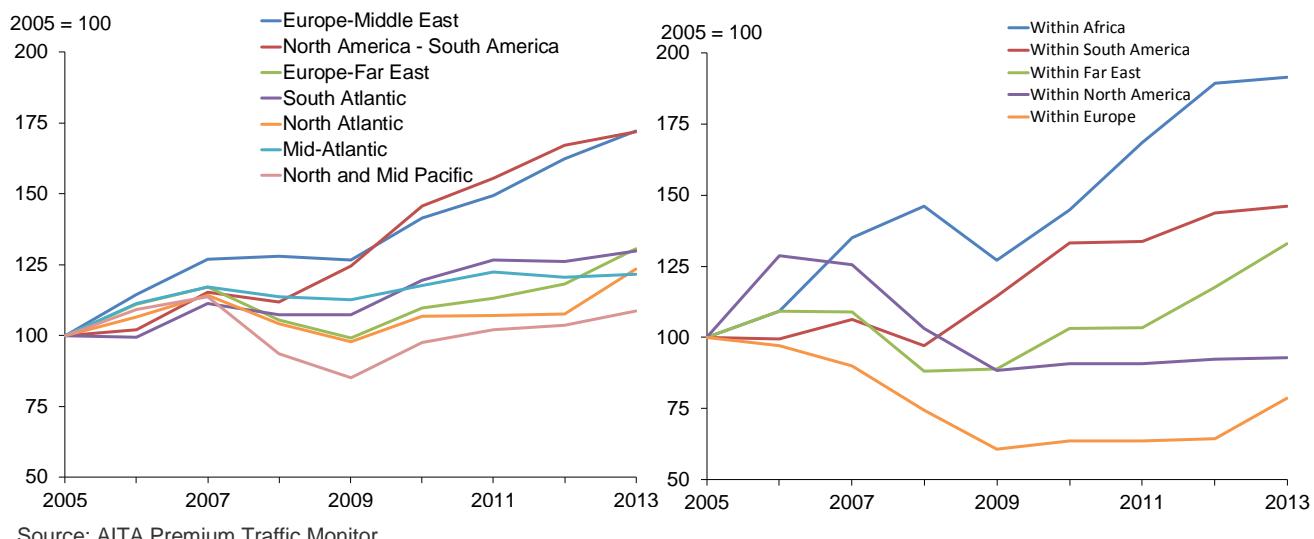
⁶ Some interesting insights are also offered by the European High Speed rail market between the UK/France/Belgium. Market research conducted by a high speed operator had observed that the increase in transparency that has come with the wider adoption of online travel booking tools by companies has caused a shift in spending habits, with business travellers showing greater diligence over the cost of their journey.

Transport economists have long pointed to the difference in perceived and actual travel costs as distorting travel decisions – new technology suggests this gap may be narrowing. Though more economically efficient, this may be to the detriment of travel providers in some cases, as it affects yields. For example the operator also noted that business travellers have begun purchasing greater numbers of (cheaper) non-flexible tickets, potentially cutting meetings short to meet travel timetables. In general, increased business autonomy over bookings and the precise tailoring of travel arrangements may be pushing prices and yields down even while increasing overall economic efficiency.

⁷ IATA, Premium Traffic Monitor, November 2006 to November 2013.

Chart 3.2: Intercontinental premium air traffic by route

Chart 3.3: Intra-continental premium air traffic by route



Given the high yields traditionally derived from business class passengers, this presents airlines with a challenge to their revenue base.

One response – also indicative of the shifting preferences of corporate travellers - has been the successful emergence of the ‘Premium Economy’ travel class. This hybrid class merges elements of business class, such as better quality service, and elements of economy class, such as better value for money, and has proven successful with business travellers, especially in medium-haul 6-8 hour journeys.

Some interviewees also noted that certain airlines have bolstered business class making their service provision more competitive, so hoping to retain or recapture business class passengers.

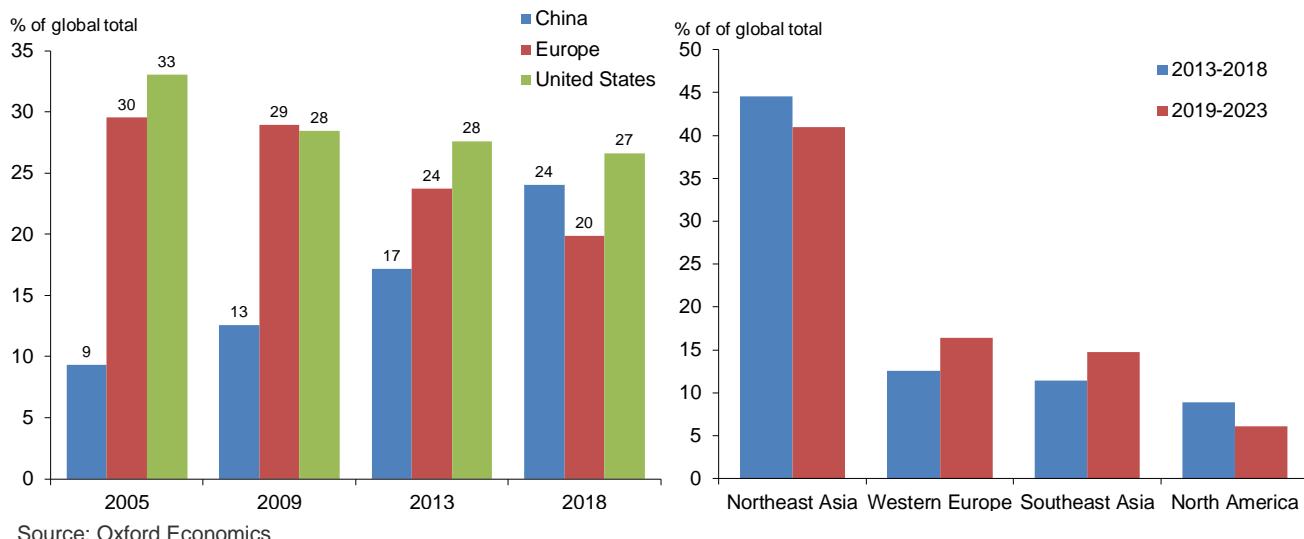
3.2 Asia will drive future growth in business travel

According to our model, North East Asia alone will account for 42% of the growth in global outbound business travel expenditure over the next decade, with South East Asia accounting for a further 13%. China is also fast catching up with the US as the largest domestic market for business travel (Chart 3.4).

European and North American business travellers are to become relatively less important globally, but will still account for one third of outbound business travel between them and will increase their business travel to emerging markets. We expect European business travellers to account for around 15% of future global revenue growth over the next decade, and North America 7% (Chart 3.5).

Chart 3.4: Domestic business travel expenditure (% of global total domestic business expenditure)

Chart 3.5: Regional share of global growth in business travel expenditure (2013-2023)



Source: Oxford Economics

3.3 Hotels will compete for yield in a rapidly expanding market

Asian growth undeniably offers a potentially vast expansion in demand in the hospitality sector but a recent Amadeus study, "Hotels 2020: Beyond segmentation", revealed 70% of survey respondents in the hotel industry expected emerging Asian middle class travellers to be extremely cost-conscious and to drive down prices. Asian travellers will tweak the global market towards their own preferences, as hotels accommodate their tastes into their service provision (such as language skills) and tailor the room and hotel facilities to their needs.

Established international hotel brands will continue to vigorously seek out strategic partnerships in emerging markets, marrying local expertise with the international creditworthiness of the international partner.

The international hotel market since 2009 also mirrors the airline business class experience to some extent with some important differences. Interviewees indicated that the business/luxury hotel market was badly affected by the recession in the short term. Some indicated that certain groups of business travellers were becoming more transient – either not staying in hotels at all (i.e. doing day trips) or not buying the same type of premium product (and thereby reducing spend).

However, the market in major cities has largely held up and been boosted by the development of emerging economies. Moreover, some interviewees suggested that now having emerged from recession, a two tier market has emerged – a

luxury market to cater for business and well-heeled leisure travellers and an economy market which might reflect the need of some companies to cut travel costs, while still needing to undertake trips due to the importance of face-to-face interactions (see discussion of videoconferencing below). In this environment mid-range hotels have suffered the most.

Expert interviewees pointed to the fact that hotels are increasingly mimicking the progress made by airlines in terms of yield management, price discrimination and the diversification of its service provision – reserving greater focus for ancillary revenue generation (hotels as shopping malls) and door-to-door travel options. The general spread of the internet and social media has also affected their business model, with Wi-Fi provision, for example, becoming a standard expectation.

Specifically they also indicated that hoteliers have also become more attuned to catering to differing market segments - offering attractive conference/group rates in order to preserve volumes but resisting the temptation to discount individual street prices ("rack rates"). In economic parlance this could be seen as an example of price discrimination, reflecting the differing elasticity (responsiveness) of demand with respect to price in these two market segments.

3.4 Videoconferencing is increasingly a supplement, not a replacement for business travel

There is a growing body of evidence that businesses view videoconferencing and business travel for face to face meetings as possessing distinctive strengths and weaknesses and as serving different purposes. Firms are increasingly optimising the two formats and the choice between the two differs according to the sector and the content of the communication.

A study by the Maritz Institute⁸ combined a review of academic literature with business surveys and found that face to face meetings are seen as the most effective way for a participant to capture the full attention of his or her audience, to inspire a positive emotional climate, and to build human networks and relationships. Other studies⁹ have shown that companies regard face-to-face meetings as essential for tacit information exchange such as delivering marketing demonstrations and making business deals. Cultural factors are also significant. In Asia, for example, direct face-to-face contact is a particularly important component of ongoing business relationships.

As the quality and availability of videoconferencing improves, however, it is becoming an increasingly viable alternative to business travel in particular contexts. It is an increasingly popular mode for meetings within a firm or between known partners where the focus is the exchange of explicit information,

⁸ M. B. McEuen and C. Duffy , Maritz Institute White Paper "The Future of Meetings: The case for Face to Face" 2010.

⁹ Aguilera, A. 2008. Business travel and mobile workers. *Transportation Research Part A: Policy and Practice*,42(8):1109-1116.

such as management decisions, project planning or certain types of training. Also, where cost and time are a particular priority, companies may be more inclined to use videoconferencing. A Norwegian study¹⁰ found that videoconferencing saved time not only on travel and organisational administration, but also in the duration of the meeting itself.

Another point also made by study interviewees is that, in the wake of the recession, internal business issues may be increasingly discussed through video (or tele) conferencing, whereas meetings with external clients were more likely to involve physical travel.

Moreover, some interviewees pointed out that large scale events (e.g. gathering 100 people together for a meeting/conference) would continue to require physical travel as videoconferencing is not a practical option in such circumstances. A related issue is that the face to face networking that takes place at major meetings/conferences (often during “coffee breaks” or other short intervals) cannot easily be replicated via videoconferencing. Indeed similar arguments about the importance of networking and face to face contacts have long been cited by economists and others as underpinning “agglomeration” effects. That is, productivity appears to rise when large groups of people are (physically) clustered together and interact.

Businesses will continue to seek to optimise their use of new technologies, but the ease of communicating via video will boost efficiency and strengthen the business case for investing in long-distance business relationships, which will ultimately benefit the travel sector.

We expect there to be room for growth in both videoconferencing and business travel over the next decade, in the context of globalisation and the growth of emerging markets.

¹⁰ J.M. Denstadli, T.E.Julsrud and R.J. Hjorthol, Journal of business and technical communication 26(1) 65-91, 2012, “Videoconferencing as a mode of communication: A comparative study of the use of videoconferencing and face-to-face meetings.”

4 Competition in the airline industry

4.1 The business models of Low Cost Carriers and Traditional carriers have converged in recent years, but remain distinctive

In the past 5-10 years - accelerated by the global financial crisis, but also by post-crisis developments - there has been a significant convergence of business models in the airline sector. Faced with a highly competitive marketplace, traditional carriers have begun to unbundle certain features such as seat selection and luggage charges, and have streamlined operating costs by reducing turnaround times. According to a KPMG study¹¹ the flight cost gap between LCCs and traditional carriers narrowed from 3.6 to 2.5 US cents per Available Seat Kilometre (ASK) between 2006 and 2012. These trends have been noted by a variety of commentators and were also observed by our interviewees.

But structural factors will continue to set the LCCs and traditional carriers apart and they will continue to compete along the familiar lines of their comparative advantages – price versus service.

Traditional airlines have demonstrated their ability to cut costs but interviewees generally agreed that they will not be able to go as far as to fully match the LCC cost base. LCC's frequent flights along profitable routes, point to point routing and fleet productivity (e.g. using only a few types of aircraft, having most of the aircraft in the air, most of the time) will inevitably set it apart from traditional carriers on price. The traditional carriers' strengths are tied up in their network connectivity, service provision and brand recognition, which place a limit on how far streamlining costs can go. Traditional carriers are constrained by the complexity of operating intercontinental networks and the average flight length of their routes. They also carry hefty legacy costs, for example senior staff salaries and pension liabilities, and face greater maintenance costs due to the diversity of their fleets, which are necessary to operate varied route-networks.

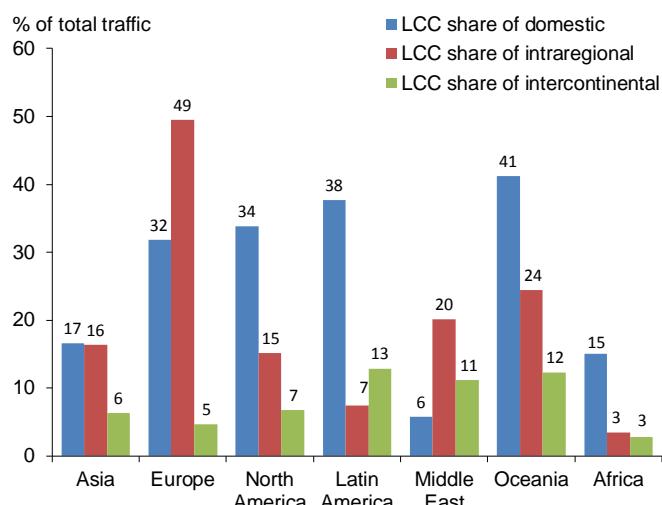
While there is likely to be continued convergence of the traditional and LCC models, it is equally the case that there are limits as to how far this process can go.

¹¹ KPMG 2013 Airline Disclosures Handbook.

4.2 The more important trend in the next decade is the further expansion of LCC market share

LCCs are outgrowing general traffic in every continent of the world. Europe remains the most active market for LCC business, with 250 million passenger trips per year. North America is next largest with 173m, but Asia is fast catching up, recording over 117m passenger trips on average over the last five years after growing more than 150% in the same period¹². Latin American, Middle Eastern and African low cost carrier traffic has almost doubled in the past 5 years as well¹³, and still has plenty of room for further growth. These numbers include both LCC and hybrid carriers. Chart 4.1 shows that LCCs only operate a relatively small share of domestic air traffic in Asia, the Middle East and Africa. And that regional markets the world over are far less saturated with LCC traffic than Europe. LCCs do operate a notable share of inter-regional journeys; around 5% in Europe, Asia and North America and around 10% in Middle East, Latin America and Oceania. However, a considerable portion of inter-regional passenger trips represents short-haul journeys between neighbouring regions. As result, LCCs are yet to demonstrate a viable model for capturing longer-haul market share.

Chart 4.1 LCC market share around the world (5 year average)



Source: Amadeus

The introduction to the market of large numbers of new middle class travellers from emerging economies in the next 10 years will pose great opportunities for LCCs.

¹² Passenger trips data include domestic, intra-regional and extra-regional.

¹³ Insights from Amadeus' Air Traffic Browser Solution.

New travellers are likely to come with lower expectations about the service experience and demand lower cost travel solutions, so are likely to find LCCs highly attractive.

The more successful LCCs become, the more likely they are to outgrow their original business model and be forced to adapt.

But adaptation will come at an extra cost. LCCs will have to respond to changing demand as traditional customers recovering from the recession and new customers entering the marketplace look for mid-price alternatives. LCCs will have to improve their offer to capture short haul business travel market share and respond to improvements in travel information and price transparency thanks to developments in web-based technology. In order to grow, Low Cost Carriers (LCCs) have therefore begun to place a greater premium on customer service, with some offering more traditional travel features such as assigned seats and frequent flyer cards, which are typical of the established airlines.

As LCCs saturate the short haul market, they will increasingly rely on longer haul journeys for further growth, which will require a diversification of the fleet and possibly operation of a wider network. Moreover, LCCs cannot grow limitlessly into secondary airports, they may have to access certain strategic hubs in the future, which will reduce flexibility and raise fixed costs. Also, as the fleet grows, it will become increasingly difficult for LCCs to fill their seats independently, making them increasingly reliant on agents, which will sap marginal revenues. And the longer an airline operates, the more its legacy costs (salaries, pensions etc.) begin to resemble the costs of established traditional carriers.

5 Seamless Travel

5.1 The technology and infrastructure behind seamless travel

The concept of seamless travel has two main aspects: technology and infrastructure. Certain markets are good at perhaps one aspect of seamless travel, but not the other.

Seamless travel refers to travel utilising a variety of modes of transportation organised through a single booking process or ticket. Seamless travel may exist in many forms but an “ideal” case would be booking a single “door to door” service which took a traveller from their home to and through an airport, onto and off a plane and to their destination hotel.

Seamless travel has two main aspects: technology and infrastructure. Infrastructure provides the different modalities of transportation, and technologies connect the different modes of transportation. The infrastructure component of seamless travel provides the bones and the technological component provides the connective tissue necessary to facilitate the logistics of the journey.

The importance of seamless travel has long been recognised in the field of transport economics, with its emphasis on considering the “generalised cost” of travel. Estimating a door to door journey’s generalised costs effectively involves adding up all the aspects of travel, including the costs of travel itself, the “in vehicle” time and the additional inconvenience of waiting time, changing travel modes (e.g. train to plane) or travel delays¹⁴. Reductions in the generalised cost of travel are seen as key to estimating the benefits of a particular travel initiative by transport economists. While this has long been seen as important within an economic context, less attention appears to have been paid to seamless travel as a commercial proposition until recently. One reason for this may be the fragmented nature of providers involved within the airline travel experience in particular. Technological change however, may offer a new opportunity to change this situation.

¹⁴ Travel time is typically assigned a dollar/pound/euro etc. value as a part of this process, allowing for the addition of various components of generalised cost. Further, different components may be weighted differently. For example, time spent waiting for a train/bus/plane is sometimes valued at twice the cost of the “in vehicle” time itself. This reflects passenger preferences to be in transit rather than waiting. Likewise, the perceived additional “cost” of time spent in airport security or on board with “laptops closed” could also be incorporated to provide a more accurate view of generalised cost. Some exploratory work along these lines is discussed in Neels K. and Barezi N. (2010) *The Effects of Schedule Uncertainty on Departure Time Choice*. Understanding of the relative importance of these components of generalised cost could help inform commercial decisions on which aspects of seamless travel are of the most value to potential customers.

While the door to door service mentioned previously might be an ideal, in practice much seamless travel currently exists in selective “bubbles”. For example, as indicated by one interviewee, Qantas provides a seamless travel service for frequent flyers within the Australian domestic market. Passengers without luggage swipe their frequent flier card and proceed directly to the airport gate. Passengers with luggage use tags that let them self-drop their luggage in the departure lounge. Qantas’ dominant Australian domestic market share facilitates the development of such systems; however, the system does not address the transportation to and from the airport and international travel poses further challenges.

Another example of seamless travel, noted by interviewees, consists of rail connections to/from major airports. Schiphol airport (Amsterdam) has a train terminal just below it with high-speed connections to Brussels and Paris. A second example of an airport with a rail terminal is London Heathrow. Recently, Singapore Airlines struck a deal with the Heathrow Express rail service and First Great Western trains to have a rail-fly partnership, with seamless rail and air ticketing for travellers going from 11 different cities in the UK to Singapore on one ticket¹⁵.

Currently, certain travel destinations are good at perhaps one aspect of seamless travel, but not the other. For instance, our interviews indicated the United States was a good example of seamless travel, but mostly on the technological front, whereas Europe was provided as one of the good examples of seamless travel on the infrastructure front (e.g. every major airport in Europe includes a rail station).

No major provider has yet managed to break out of these bubbles and deliver a seamless travel solution across both aspects. Industry players tend to consider only one aspect as the delivery of infrastructure and technology solutions are very different businesses. In addition, there is “market failure” in the sector that makes the provision of truly global seamless travel solutions very difficult.

Preston¹⁶ reports that integrating transport requires market intervention. This is due to a coordination failure in the provision of seamless travel. Airlines, hotels and other travel providers are too small and concentrated in certain markets to provide a global seamless travel solution – a viewpoint effectively backed up by the interviews conducted for the current study.

While each player in the travel industry (airports, airlines, ground transport, hotels, and car hire companies) will pursue its own commercial interests, this does not mean the collective industry will coordinate their respective operations for their mutual strategic benefit. The “seams” between these various providers may therefore prove a source of frustration to customers but by the same token also present an opportunity for any potential operator who can provide an

¹⁵ <http://www.airrailnews.com/index.php/component/simplelists/item/1089>.

¹⁶ Preston, John, “Integration for Seamless Transport,” International Transport Forum Discussion Paper 2012-01.

effective solution to the common issues affecting travellers^{17 18}. At the same time the development of internet based and mobile technologies would appear to provide more opportunity than ever before for a potential facilitator, given that they might help overcome many of the past issues which helped forestall seamless travel. Moreover, as one interviewee pointed out, the “on demand” nature of seamless travel makes this especially true.

In general, offering the right content for seamless travel requires economies of scale and, potentially, of scope (see Disneyworld example below) across the geographical and product space. More than this however, it also requires the appropriate “mind-set” to take on the challenge of seamless travel by utilising the benefits of recent technological advances. At present because many providers would appear to be focused on improving their own offerings, seamless travel would effectively appear to be left for “someone else” to worry about.

Global seamless travel provision requires a solution to the current coordination failure. To develop global seamless travel solutions would effectively require either a monopolist to enter the market, a regulator to require companies to take certain actions regarding seamless travel, or a large global company to solve the coordination problem itself by interacting with multiple travel providers.

As suggested above, one common element between the infrastructure and the technological aspect of seamless travel is coordination. The development of mobile technologies, in particular, offers opportunities for seamless travel, but mobile application providers must be able to coordinate with different travel providers, for example, to provide mobile tickets and boarding passes. Similarly, different transport providers in a city need to coordinate with each other – and/or with a common aggregator - to provide a smooth journey to airports and rail stations with cross-ticketing across services.

Another issue is the type of customer to whom seamless travel might appeal the most. While all travellers would appreciate its benefits, one interviewee pointed out that demand amongst frequent travellers and day travellers might be

¹⁷ The issue of “generalised cost” is again relevant here. For example imagine a passenger who values the cost of the “door to plane door” transfer process at £100 due to its inconvenient/time consuming nature. A (more) seamless travel system which cost the customer, for example, £20 but which halved the “door to plane door” time (implying an effective time cost of £50) would clearly be beneficial to the customer. (he/she would come out £30 “ahead”).

¹⁸ Of course, in theory government intervention could aid in this process. As one interviewee pointed out, governments are often responsible for infrastructure and improved co-ordination could foster seamless travel. At the same time, caution should be expressed about government involvement at every level of the process. Government may have useful input in ensuring major infrastructure decisions are planned with seamless travel in mind but within this fixed infrastructure, the actual specifics of individual trips are more likely to be better catered for by private initiatives.

particularly high, given the time constraints faced by both groups. Overlapping with these considerations (at least to some extent) is the fact that seamless travel is likely to appeal to business travellers (who may likewise make frequent trips and/or day trips). Transport economists note that the business value of travel time tends to be higher than the “leisure” value of travel time. So such travellers tend to be more willing to pay for the provision of seamless travel experiences.

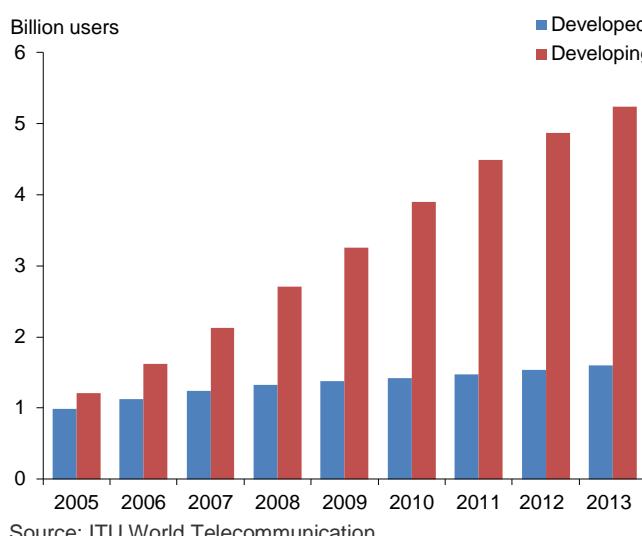
In short, seamless travel would appear to represent an area of unexplored potential for a travel provider who could implement it in a comprehensive way.

5.2 Mobile devices

The number of mobile device users in developing countries¹⁹ has been steadily increasing since 2005, with an average annual growth rate of 36.8% over the 2005-2013 period, with the effect that mobile users in such countries far outnumber users in developed countries. Mobile broadband user numbers in developing countries have also been growing at a rapid rate and are expected to have eclipsed user numbers in developed countries in 2013 for the first time, with 1.2 billion users.

As the world's mobile users and mobile broadband users have increased, so have the applications and uses of mobiles for travel. Mobile devices, other than their usage for travel bookings, can also contribute to a seamless travel experience. Chart 5.1 below shows mobile users split between developed and developing countries.

Chart 5.1: World mobile users ITU World Telecommunication

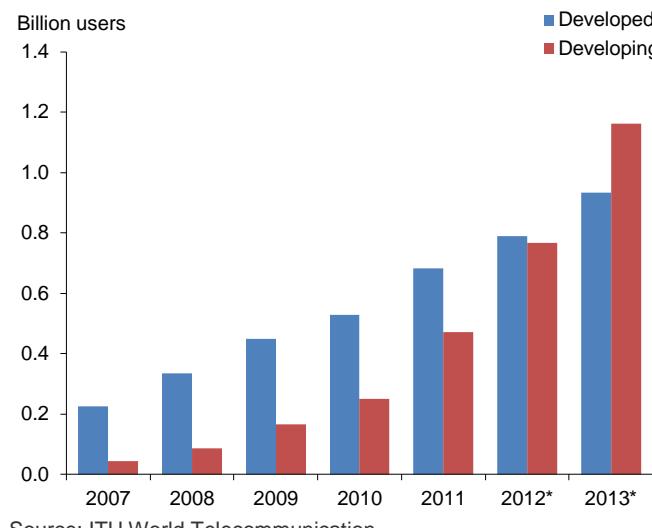


Source: ITU World Telecommunication

¹⁹ The developed/developing country classifications in ITU data are based on the UN M49, see: <http://www.itu.int/ITU-D/ict/definitions/regions/index.html>.

The numbers of users in developing countries has been steadily increasing since 2005, with an average annual growth rate of 36.8% over the 2005-2013 period. Over the same period, developed country mobile users grew at an annual rate of only 6.8%. Consequently, developing country mobile users now by far outnumber their developed country counterparts. Chart 5.2 below shows mobile broadband subscribers split between developed and developing countries.

Chart 5.2: World mobile broadband users



Source: ITU World Telecommunication

The trends are similar for mobile broadband users. Developing country user numbers have been increasing quickly and are expected to have eclipsed those of developed countries for the first time in 2013, at 1.2 billion users. While mobile broadband user numbers grew 45% per year in developed countries, they grew 371.9% per year in developing countries.

There are three categories of services that mobiles facilitate for travel: information, bookings and payments.

As a result of the growing trend of using mobile devices for travel, travel providers are developing applications to further facilitate information provision, reservations, and payments. For example, interviewees noted that Schiphol airport uses Bluetooth signal from mobile phones to determine how busy terminals are and whether they need to take measures to alleviate lengthy queues. For planning trips, Amadeus Travel Seeker allows one to find trip options using search queries on locations, prices, and when the best fares are to be found. The advantage of mobile devices is that it gives potential vendors a better way to stay in contact with the traveller and push offers that can be individually tailored to the traveller, using location services. Payment for services via mobile devices then completes the chain.

Travel bookings via mobile have increased exponentially in recent years. US mobile travel bookings will more than triple from 2012 to 2014, when it is predicted they will reach a value of \$25.8 billion for the US, according to a 2013 PhoCusWright report²⁰. In that market, three out of ten mobile web users booked or purchased travel products via their mobile phone, and more than half used their mobile to research travel destinations or products. In the European market, another 2013 PhoCusWright report²¹ predicts that one fifth of online travel bookings will be made via smartphones and tablets by 2015. In terms of mobile bookings, however, one interviewee indicated that tablets are not considered mobile devices, as they are not always on and not always accessible in the same way mobile phones are. Indeed, this is borne out by research showing that travellers booking via tablets behave more like desktop and laptop users rather than mobile phone users.

In the US travel market, the PhoCusWright report²² disaggregates mobile bookings into different categories of travel purchases. 12% of online bookings made directly with hotels were predicted to be via mobile devices in 2013, compared to 8% for car rental bookings and 6% for airline bookings. By 2015, they predict that a third of bookings US hotels process online will be made via mobile devices. In addition, a 2013 Business Insider report²³ on the mobile tourist emphasises how significant mobile bookings are for last minute hotel bookings.

Dovetailing with such figures, interviewees noted that while hotel bookings via mobile in particular are low, they expect these will increase in future years, especially with adoption by younger consumers and through technological "leapfrogging" in emerging markets. Moreover, as it becomes easier to book via mobile there is an expectation that take up by business will also drive such growth. At the same time, there is awareness among some interviewees that much mobile booking of hotels, for example, is done within a few days of arrival and that mobile cannot be used to plan every stage of a trip.

The development of mobile technologies therefore holds the potential to transform the travel industry, along with other aspects of everyday life in many countries. However, two issues must be distinguished with respect to the growth of a relatively new technology, such as mobile devices:

- The diffusion of such technology; and
- The full utilisation of such technology

A good case could be made that the diffusion of modern technology, such as mobile devices, occurs more rapidly than in the past (with historical advances

²⁰ PhoCusWright, "PhoCusWright's U.S. Mobile Travel Report: Market Sizing and Consumer Trends," 2013.

²¹ PhoCusWright, European and Global Edition Report, 2013.

²² PhoCusWright, "PhoCusWright's U.S. Mobile Travel Report: Market Sizing and Consumer Trends," 2013.

²³ Business Insider Intelligence, "The Mobile Tourist: How Smartphones Are Shaking Up the Travel Market," 2013.

such as railways, electricity and modern medicines) precisely because of the previous development of communication systems as well as the broader impact of globalisation. This would seem consistent with the very rapid growth of mobile devices in emerging markets²⁴ as well as their spread within the Western economies themselves.

However it is less clear that the *full utilisation* of technology is happening more rapidly than in the past. (Indeed one interviewee pointed to the fact that, while large numbers of people are trying to develop travel-related mobile products, relatively few seemed to “get it right” so far.) This may be because utilisation involves a human factor which may be less amenable to past technological changes. It takes time – as well as a fair bit of trial and error - for businesses and individuals to work out how to best apply a new technology within a given business context and more time for their applications to be accepted by others²⁵.

The history of the internet itself provides a guide in this respect. Social media for example did not immediately arise even as the internet became increasingly popular, but rather took many years to develop. Nor was the internet “planned” with this application in mind. Accordingly some economists argue that the internet itself will only realise its full potential many years hence²⁶.

The growth of mobile technologies within the travel industry should be seen in this context. While many interviewees noted the tremendous potential of mobile, a common theme was that in many cases it was used for more “tactical” issues – e.g. travel information. Likewise many had (understandable) difficulties in forecasting the potential applications to which mobile technologies could be put.

One interviewee also noted that while mobile devices are important tools for informing travellers on the move, the multi-faceted nature of more complex travel arrangements meant that many still preferred to make bookings in a “fixed” position (e.g. using a “traditional” laptop at home) with the full range of travel options at their disposal.

However, more optimistically, other interviewees noted that rather than being passive providers of data, mobile technologies could be used more interactively in the future - to inform consumers of “last minute” deals at airports (e.g. shopping bargains, flight upgrades). This might accord well with future yield management strategies in a variety of industries.

Likewise some interviewees recognised that personalisation was a key aspect of mobile technology – e.g. tailoring apps to reflect individual contexts such as preferences during certain times of the day and/or in certain locations. For

²⁴ The fact that mobile devices often involve a strong private sector element may also help. In some emerging markets, a failure by state-owned entities to provide adequate land lines for telephony inhibited communications for many years. The different infrastructure required for mobile networks and a strong commercial incentive may have assisted their growth in such markets.

²⁵ For example, the electric dynamo was essentially developed by 1880, however it took decades for it to be fully utilised. Bihde A. (2008) *The Venturesome Economy*.

²⁶ Cowan, T (2011) *The Great Stagnation*.

example, this might allow a hotel to offer a customer a preferred dinner dish shortly after a late-afternoon check in.

Contextualisation and personalisation are indeed likely to be the keys to the future development of mobile apps. In economic parlance they represent mobile's "comparative advantage" (i.e. the things mobile technology is particularly well suited to do). Just as economic principles suggest that nations should seek to maximise their comparative advantage (i.e. what they are particularly good at) so to it is likely the most important applications of mobile within the travel industry will reflect comparative advantages such as contextualisation and personalisation.

If economic history is any guide it is therefore likely that the spread and increasing usage of mobile technologies will produce major changes in the travel industry – as well as major financial opportunities – however these may take many years to fully develop and their shape is only dimly grasped at present.

Case Study: Disney World – A pioneer in seamless travel

Walt Disney World, in late 2013, took a bold step in the direction of seamless travel. Before this move, Disney, by virtue of its multiple offerings across the entertainment, accommodation, and dining spheres in one area, was already able to offer a somewhat seamless travel experience. Disney has now taken this concept a step further with the introduction of MyMagic+. MyMagic+, via the provision of special wrist bands and a specialised mobile app, allows travellers to plan and execute their Disney vacation in a seamless way.

Travel between Disney hotels, attractions, and the airport had already been made seamless by the provision of a transportation network combining monorails, trams, buses, and boats to take travellers between different Disney destinations and the airport. In addition, travellers at Disney hotels can check in for their flights at the hotel, get a boarding pass, and drop off their luggage before hopping on Disney-provided transport to the airport. MagicBands and Disney's mobile app, however, give travellers an extra degree of personalisation and convenience for their journeys.

MagicBands, specialised wristbands for each traveller, have multiple functions in the provision of a seamless travel experience. They allow travellers to gain access to the theme parks they have booked tickets for; they serve as a room key for Disney hotels; they store any dining reservations scheduled at Disney properties during the stay; they store the traveller's credit or debit card details so that purchases can be made using the band, essentially serving as a virtual wallet; they store FastPasses for certain theme park attractions, allowing travellers to skip the queues for attractions they pre-book; and they store any photos taken by Disney at attractions can be stored on the band, allowing the traveller to later access their holiday photos.

The My Disney Experience mobile app is used to tie the entire experience together, giving travellers the ability to pre-plan their vacations by exploring

travel options and booking them via the app. Then, during their travels, they can use the geo-linked app to pinpoint their location, along with schedules and times of nearby attractions in the parks, access dining reservations and FastPass tickets, and share travel plans with family and friends.

This is an example of economies of scope, where the average cost for a firm of producing two or more products is lower, making product diversification economically efficient. Disney is able to offer this seamless travel experience because it provides a wide array of travel products in the same geographical space, which means it does not experience the same coordination problems that multiple travel providers would experience in organising themselves to provide a joint seamless experience.

Together, the mobile app and the MagicBands allow travellers an unparalleled degree of customisation for their holidays. In addition, they combine that with the convenience of a wristband that holds all travel bookings, payment card details to make purchases, and collects personal mementos from the trip for later access; and a mobile app that provides up to the minute information on all attractions and geo-enabled services to navigate between attractions.

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