## 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.

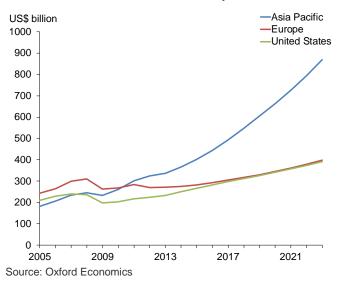
## 3 Business Travel Trends

# 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



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 involved<sup>6</sup>.

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 IATA<sup>7</sup> 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.

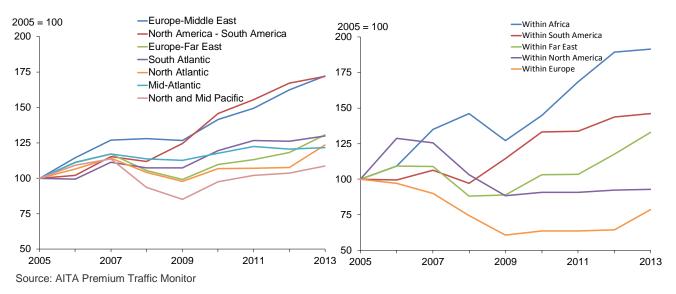
Some of the difference between intra and intercontinental traffic growth could be explained by the fact that emerging market growth is helping to propel the latter. However, more broadly speaking, the potential reasons for sluggish short haul/intracontinental growth in traditional European and North 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.

<sup>&</sup>lt;sup>6</sup> 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.

<sup>&</sup>lt;sup>7</sup> 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.

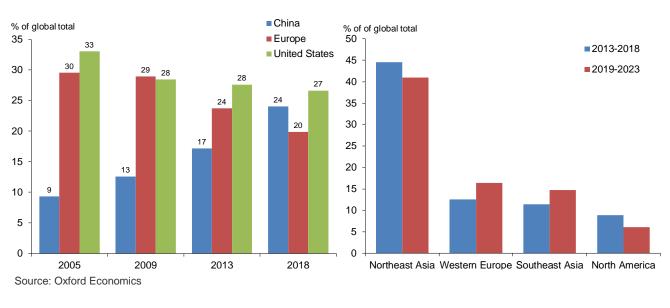
One response – also indicative of the shifting preferences of corporate travellers - has been the successful emergence of the 'Premium Economy' travel class. This hybrid class merges elements of business class, such as better quality service, and elements of economy class, such as better value for money, 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)

#### 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 Institute<sup>8</sup> 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 studies<sup>9</sup> 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,

<sup>&</sup>lt;sup>8</sup> M. B. McEuen and C. Duffy , Maritz Institute White Paper "The Future of Meetings: The case for Face to Face" 2010.

<sup>&</sup>lt;sup>9</sup> 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 study<sup>10</sup> 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.

<sup>&</sup>lt;sup>10</sup> 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 study<sup>11</sup> 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.

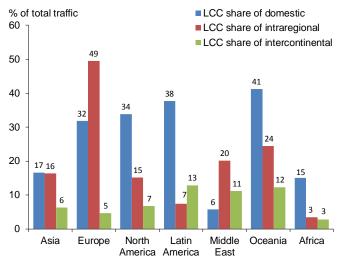
Traditional airlines have demonstrated their ability to cut costs but interviewees generally agreed that they will not be able to go as far as to fully match the LCC cost base. LCC's frequent flights along profitable routes, point to point routing and fleet productivity (e.g. using only a few types of 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.

<sup>&</sup>lt;sup>11</sup> 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 period<sup>12</sup>. Latin American, Middle Eastern and African low cost carrier traffic has almost doubled in the past 5 years as well<sup>13</sup>, 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.

<sup>&</sup>lt;sup>12</sup> Passenger trips data include domestic, intra-regional and extra-regional.

<sup>&</sup>lt;sup>13</sup> 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 delays<sup>14</sup>. 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.

<sup>&</sup>lt;sup>14</sup> 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 ticket<sup>15</sup>.

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.

Preston<sup>16</sup> 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

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

<sup>&</sup>lt;sup>16</sup> Preston, John, "Integration for Seamless Transport," International Transport Forum Discussion Paper 2012-01.

effective solution to the common issues affecting travellers<sup>17</sup><sup>18</sup>. 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

<sup>&</sup>lt;sup>17</sup> 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").

<sup>&</sup>lt;sup>18</sup> 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 countries<sup>19</sup> 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.

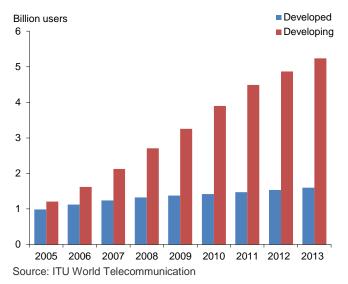
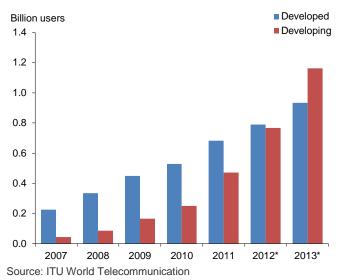


Chart 5.1: World mobile users ITU World Telecommunication

<sup>&</sup>lt;sup>19</sup> 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.





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 report<sup>20</sup>. 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 report<sup>21</sup> 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 report<sup>22</sup> 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 report<sup>23</sup> 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

<sup>&</sup>lt;sup>20</sup> PhoCusWright, "PhoCusWright's U.S. Mobile Travel Report: Market Sizing and Consumer Trends," 2013.

<sup>&</sup>lt;sup>21</sup> PhoCusWright, European and Global Edition Report, 2013.

<sup>&</sup>lt;sup>22</sup> PhoCusWright, "PhoCusWright's U.S. Mobile Travel Report: Market Sizing and Consumer Trends," 2013.

<sup>&</sup>lt;sup>23</sup> 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 markets<sup>24</sup> 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 others<sup>25</sup>.

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 hence<sup>26</sup>.

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 aps to reflect individual contexts such as preferences during certain times of the day and/or in certain locations. For

<sup>&</sup>lt;sup>24</sup> 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.

<sup>&</sup>lt;sup>25</sup> 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*.

<sup>&</sup>lt;sup>26</sup> 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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