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PREGLEDNI NAUČNI RAD / OVERVIEW SCIENTIFIC PAPER

A REVIEW OF RECENT TRENDS IN AIRLINE **ANCILLARY REVENUES**

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Abstract: Airline ancillary revenue which refers to non-ticket revenue sold directly to passengers or indirectly as part of their travel experience, has become a mandatory component for the revenue mix of all airlines as well as a key reason for the improved financial performance of the airline industry in the recent years. It is generated by a large amount of activities that include "a la carte" services such as fees for checked bags, frequent flying miles to airline partners, miscellaneous sources like advertising and commission-based products such as inflight retail, and car rentals - virtually any service added to the core transportation service. Contribution of ancillary services to the total revenue streams of airlines has been increasing substantially over the past decade. In 2007, the top ten airlines, as rated by total ancillary revenue, generated \$2.1 billion, while ten years later, the top ten airline total has reached \$29.7 billion. The paper explores the recent growth and trends in ancillary revenue in the airline industry, particularly within in the last ten years and identifies significant differences in ancillary sources with regard to carrier type. Low-cost carriers pioneered the practice of charging for supplementary services that were previously provided free of charge by seeking revenue from checked bags, assigned seats and extra leg room seating. Traditional airlines moved from all-inclusive booking arrangement and started to adopt add-on bundling practice when selling flight tickets taking advantage of low headline price. Their ancillary revenue mostly comes from the use of frequent flyer program, a mix of baggage fees and premium seats. Top airlines in overall ancillary revenue performance measured as total revenue, a percent of revenue, or on a per passenger basis are determined in the paper and new trends in creating ancillaries are elaborated. In order to improve profit performance, the airline revenue management and distribution systems should consider total revenue from each passenger, by linking his ticket value and his ancillary revenue potential.

Key words: ancillary services, ancillary revenues, unbundling, airline profitability, low-cost airlines, legacy airlines

JEL: D40, L11, L93, M20

INTRODUCTION

Air transport industry is one of the very important businesses worldwide. The global recession in the years 2008/2009 and regional economic crisis in the countries of Southeast Europe have caused domestic demand weakening for air travel. At the same time, high increase of competition on the air transport market in the period 2008-2016 made positive influence on flows of people, goods, capital, technology and ideas (Škurla, Mišetić, & Bajić, 2017). Since airline deregulation in 1978, the airline industry has been struggling to maintain marginal profits due to its dependence on cyclical economics developments and crises, high fixed costs, declining revenues from core services, and most of all, fluctuating fuel prices. Strong demand, efficiency and reduced interest payments in recent years have helped airlines to improve their profitability despite rising costs, especially oil prices and labour costs. 2018 is expected to be the airline industry's ninth consecutive year of profitability and its fourth consecutive year with a return on invested capital exceeding the industry's average cost of capital (Figure 1).

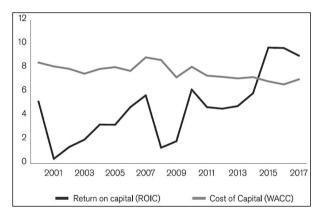


Figure 1. Airline industry profitability

Source: IATA (2017:14)

With the development of low-cost airlines around the world and the background of profit falling, many airlines were trying to find new profit model, which make the concept of airline ancillary products popular. Airline ancillary revenue refers to non-ticket revenue sold directly to passengers or indirectly as part of their travel experience and include income from onboard sales, services such as baggage fees and frequent flyer programmes. Traditional airlines followed the low cost carriers' practice of charging for supplementary services and even found new resources to further enhance the offerings which generate ancillary revenues.

In 2007, the top ten airlines, as rated by total ancillary revenue, generated \$2.1 billion, while ten years later, the top ten airline total has reached \$29.7 billion (IdeaWorks-Company, 2018a). This exponential growth in ancillary revenues has positive consequences that significantly contribute to the airline financial performance.

PREVIOUS RESEARCH

Airline ancillary revenues in academic literature have been considered from few different perspectives. Although many air transportation choice and behaviour studies have been conducted, few studies have examined the factors that lead to customers purchasing ancillary services and their willingness to pay fees for such services. Warnock-Smith David and O'Connell F. (2013) conducted an on-line passenger survey to examine booking preferences as well as attitudes toward a selection of air and non-air travel components sold by the airlines. It was found that airport car parking and checked baggage charges proved to be the most accepted commission based and unbundled products for airlines to sell respectively. Ødegaard Frederik and Wilson G. John (2016) stated that the sale of ancillary and secondary services is a relatively undeveloped research area. Motivated by the growing prevalence for airlines to charge for checked baggage, they studied pricing of primary products and ancillary services. Leon Steven and Uddin Nizam (2017) examined a number of airline ancillary services and factors that may influence the purchase of ancillary services using logistic regression and generalized linear model (GLM). The results showed that the number of times a passenger flies per year and the trip purpose were significant, as opposite to their age and gender. Warnock-Smith David, O'Connell F. John and Maleki Mahnaz (2017) examined the performance of the two core classifications of airline ancillary revenues: unbundled products and commission based income. They also investigated the willingness of passengers to pay (WTP) for these services together with what type of ancillary items are acceptable at a particular price point. It was found that passengers value a narrow range of perceived 'necessity' products and services such as food and drink, checked baggage and seat assignment as opposed to perceived 'optional' unbundled or commission based products/services. Significant differences in WTP for specific ancillary services based on carrier type (FSC/LCC/Charter), length of flight (long and short haul) and journey purpose (business, leisure, VFR) were recognized. John G. Wilson (2016) investigates the question of what price to charge for the primary and multiple ancillary products considering linear demand functions. Xu Yong, Xu Jianbin and Bai Yu (2017) use integrated model based on Technology Acceptance Model and Howard-Sheth Model to analyse the factors about customers' acceptability to airline ancillary products. The result shows that customers' behaviour, personalized service, trust to the marketing channel and the risk all can infect the customers' acceptability to airline ancillary products.

Cristian Morosan, (2014) investigated air travellers' adoption of mobile phones to purchase ancillary air travel services. Extending a popular technology adoption theory, the Technology Acceptance Model (TAM) (Davis, 1989), he developed a comprehensive conceptual model that captures the specifics of m-commerce in air travel. Avram Bogdan (2017) has investigated how airlines use ancillaries in their favour to add value and revenue sources to the booking engine, offer flexibility to their passengers, increase revenues and customer satisfaction, interact with passengers at all touch points to create commercial opportunities and differentiate their brand.

Charging ancillary airline fees has been a controversial issue in terms of price fairness ever since their first appearance. However, very few researchers have studied price fairness in the tourism literature. Jin Young Chung and James Petrick (2012) examined the antecedents and consequences of tourists' perceived price fairness of ancillary revenues. They collected data from U.S. domestic airline passengers through an online survey of 524 customers and analysed them using structural equation modelling. Results suggest that price comparison and cognitive attribution influence price fairness, which, in turn, leads to emotional response and behavioural intentions.

Many authors have dealt with the issue of passenger frustration and their disapproval with the trend of introducing a variety of ancillary fees. Sven Tuzovic et al. (2011) investigate consumer perceptions of ancillary airline fees and the relationship on negative emotions such as anger and behavioural outcomes. Results of a survey of 464 customers of a large travel agency show that airline fees lead to customer anger and, subsequently, to various forms of retaliatory behaviour. In addition, airline fees lead to "avoidance" behaviour. The same authors in Tuzovic et al. (2014) developed a framework of fee acceptability, negative emotions, and dysfunctional customer behaviour, which was tested using data from the airline industry. It has been shown that the main impression people have in mind when talking about the unbundling trend is that some components that were once part of the product offering have become optional and chargeable as an add -on.

Apart from academic research, Sabre, Société Internationale de Télécommunications Aéronautiques (SITA), Amadeus and International Air Transport Associa-

tion (IATA) are also exploring new ancillary revenue opportunities. They regularly publish studies, white papers and reports that provide valuable insights in airline industry trends related to airline ancillary revenue. IdeaWorksCompany and Car-Trawler have been releasing annual reports on airline ancillary revenue since 2008.

TYPES OF ANCILLARY SERVICES

O'Connell and Warnock-Smith (2013) describe ancillary revenue as income beyond the sale of tickets that is generated by direct sales to passengers, or indirectly as a part of the travel experience. Charging fees in addition to a basic ticket price is referred to as "unbundling" or *a la carte pricing*. Some airline marketing departments call this practice "merchandising" or giving passengers "the freedom to choose" the specific services they wish to purchase (Peter P. Belobaba, Amedeo R. Odoni, & Cynthia Barnhart, 2016).

Airline industry accepted the definition of ancillary revenue developed by IdeaWorks-Company (IdeaWorksCompany, 2018a): Revenue beyond the sale of tickets that is generated by direct sales to passengers, or indirectly as a part of the travel experience. IdeaWorksCompany further defines ancillary revenue using these categories:

- 1. A la Carte Features: The category includes the amenities passengers can add to their air travel experience. Typical activities are: onboard sales of food and beverages, checking of baggage and excess baggage, assigned seats or better seats within the same cabin, call center support for reservations, fees charged for purchases made with credit cards, priority check-in and screening, early boarding benefits, onboard entertainment systems, and wireless internet access.
- 2. Commission-Based Products: It involves the commissions earned by airlines on the sale of hotel accommodations, car rentals and travel insurance through the airline's website and the sale of duty-free and consumer products onboard aircraft.
- 3. Frequent Flier Programs: It consists of the sales of miles or points to program partners such as hotel chains and car rental companies, co-branded credit cards, online malls, retailers, and communication services and sales of miles or points directly to program members.
- 4. Advertising Sold by the Airline: This category was added in 2010 and includes any advertising initiative linked to passenger travel. Typical activities are the following: revenue generated from the in-flight magazine, advertising messages sold in or on aircraft, loading bridges, gate areas, and airport lounges, fee-based placement of consumer products and samples.

5. Fare or Product Bundle: Airlines may allocate a portion of the price associated with an economy class bundle or product bundle as ancillary revenue. This is determined by assigning a revenue value to the services included in the bundle, such as checked baggage, early boarding, and extra leg room seating (IdeaWorksCompany, 2018a).

Historically, airline ancillary revenues included excess baggage fees, cancellation/ change fees and revenue from in-flight sales of duty-free products. More recently, many airlines have begun charging fees for checked baggage, onboard sales of food, drinks, pillows, blankets, TV and Internet, advance seat assignments, premium seat locations or blocking of a neighbouring seat and priority boarding and expedited security lines.

More innovative (some even controversial) sources of ancillary revenues are: fees for carry on bags in overhead bins, fees for purchasing tickets online, fees for using web check-in (even if there is no alternative), fees for guaranteeing a ticket price for 72 hours to 7 days without actually purchasing the ticket.

Initially bundled with core services, most ancillary services are currently unbundled and sold separately to provide additional revenues to airlines and personalized experiences to travellers (Jay Boehmer, 2012). The move toward unbundling and a la carte pricing by traditional carriers was motivated initially by competition from low-cost carriers whose fares did not include amenities such as checked baggage, onboard food and beverages, or seat assignments. Legacy airlines tried to protect their market share and remain price competitive, so they followed suit. Limitations posed by reservation systems prevented the legacy carriers from displaying both prices and product attribute differences to passengers since Internet search engines look for the lowest "base fares" and do not account for ancillary fees for "add-ons". Consequently, legacy airlines introduced unbundling practice and offered the same low fares as low-cost carriers in the distribution systems. Moreover, many carriers expanded their range of add-ons with products and services that were never included in the ticket price and still seek new resources to further enhance the offerings which generate ancillary revenues. Airlines are also upgrading their revenue management systems to assess the total expected revenue contribution of each passenger that exceeds the ticket price.

GROWTH AND TRENDS IN ANCILLARY REVENUE

Airline ancillary revenue has had an impressive growth trend over the last decade. Since 2007, airline industry consultancy IdeaWorksCompany and travel technology company CarTrawler have studied the trend of airline ancillary revenues by searching airline financial documents. Their surveys cover airlines that disclosed revenue by charging for checked baggage, seat upgrades and from activities such as frequent flyer points sold to partners and commissions from hotel bookings. Figure 2 illustrates summaries from those studies: number of airlines that disclosed ancillary revenues, their total ancillary revenue, and ancillary revenue for top 10 airlines over the years. Ever since IdeaWorksCompany began searching airline financial documents, ancillary revenue has grown.

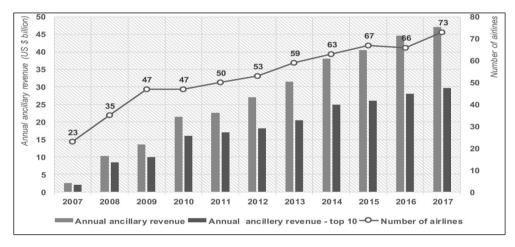


Figure 2. Ancillary revenue according to IdeaWorksCompany annual reports

Source: IdeaWorksCompany (2009-2018a)

Besides reporting on the ancillary revenue disclosed by the growing number of airlines (23 in 2007 to 73 in 2017) CarTrawler and IdeaWorksCompany has provided a global projection of ancillary revenue activity by the world's airlines since 2010 (Figure 3). The statistics for 2017 were applied to a larger list of 184 airlines (IdeaWorksCompany, 2017b).

IATA airline members ancillary revenues in 2017 accounted for 4.3% of total industry passenger revenues (IATA, 2018:56). IdeaWorksCompany annual report for 2017 shows that 73 airlines around the world generated \$47.2 billion in ancillary revenue. The largest single source of a la carte revenue remains checked baggage while assigned seating takes second place. Qantas Loyalty achieved revenue in excess of US\$1.16 billion. In 2007 the top 10 airlines, as rated by total

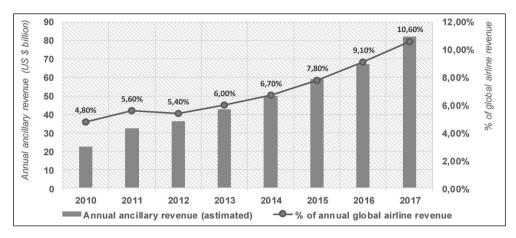


Figure 3. Estimate of ancillary revenue activity

Source: IdeaWorksCompany (2017b)

ancillary revenue, generated US\$2.1 billion. Ten year later, top 10 airlines recorded a 14-fold increase (Table 1). United Airlines leads the list of the world's top ten carriers measured by ancillary revenues in 2017. It is followed in the rankings by Delta, American, Southwest and Ryanair.

Table 1. Top 10 Airlines – Total Ancillary Revenue
esults - 2017 Approximate Source of

Annual Results - 2017	Approximate Source of Revenue			
Airline	Total Ancillary Revenue (US dollars)	Frequent Flyer Program	A la Carte + Travel Retail Commissions	
United	5,749,000,000	41%	59%	
Delta	5,391,000,000	56%	44%	
American	5,274,000,000	59%	41%	
Southwest	3,084,100,000	79%	21%	
Ryanair	2,304,748,827	0%	100%	
Air France/KLM 1,971,662,916		20% 80%		
Lufthansa Group 1,947,027,128		43%	57%	
Alaska Air Group	laska Air Group 1,339,700,000		36%	
Air Canada	1,334,461,449	41%	59%	
easyJet	1,284,402,695	0%	100%	
Total:	29,680,103,015			

Source: IdeaWorksCompany (2018a)

Spirit Airlines has the highest percentage of ancillary revenue with 46.6% of its total income (Table 2). Spirit's total ticket revenue was approximately \$110 per passenger for 2017 so, of this amount, about \$51 would qualify as ancillary revenue (IdeaworksCompany 2018a). Top "% of revenue" producers were Wizz Air

(Europe), Spirit (Americas), and Hong Kong Express (Asia and South Pacific). The right column in Table 2 lists notable 2017 activities that contributed to each carrier's results. The list includes the introduction of co-branded credit cards, improved bag and assigned seating results, and market-determined *a la carte* fees. The most novel in the group is the hiring of 450+ "customer helpers" by Jet2. com at its sun destinations.

Table 2. Top 10 Airlines – Ancillary Revenue as a % of Total Revenue

Annual Results - 2017		Notable Ancillary Revenue Activities	
46.6%	Spirit	Began dynamic pricing of seats, bags, and bundled offerings.	
43.6%	VivaAeroBus	The Viva Credit Car was introduced.	
42.4%	Frontier	Per passenger bag revenue jumped 50% above 2016 rate.	
41.6%	Wizz Air	Wizz Priority option guarantees space for carry-on bags.	
39.8%	Allegiant	The Allegiant World MasterCard was introduced.	
34.2%	Volotea	Placement of a la carte in online booking path was optimized.	
28.5%	WOW air	Big seats, now called WOW Premium, added to new aircraft.	
28.2%	Ryanair	50% now pay for assigned seating, up from 23% in a year.	
27.7%	Volaris	Dynamic pricing for bags and assigned seats boosted revenue.	
27.6%	Jet2.com	Airline employs 450+ customer helpers at resort locations.	

Source: IdeaWorksCompany (2018a)

Low cost carriers rely upon a la carte activities: checked bags, assigned seats, and extra leg room seating, focusing their *a la carte* effort on those leisure travellers who are willing to spend more. For the last few years, they try to capture more business travellers by relaxing their baggage police. Figure 4 shows ancillary revenue sources for one traditional network carrier and for one low cost carrier (British Airways and easy Jet). The large slice of blue illustrates the importance of fees for checked baggage as an ancillary revenue source for low cost airlines. It is much smaller for global carriers which continue to include a checked bag on their long-haul routes, such as transatlantic flights. Traditional airlines generate the largest part of their ancillary revenue from their frequent flyer programs. Most of activity occurs when airlines sell miles to the banks that issue co-branded credit cards.

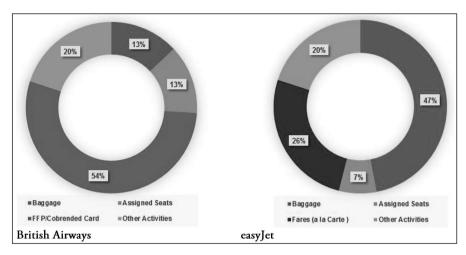


Figure 44. Ancillary revenue sources for British Airways and easyJet (2016)

Source: IdeaWorkCompany (2017)

The top performing airlines are largely low cost carriers, with a couple of global network airlines appearing, when ancillary revenue is expressed on a per passenger basis (Table 3). Top producers, from various ancillary revenue sources, by global region are: WOW air \$48.87 (Europe & Russia), Spirit \$50.97 (Americas), and AirAsia X \$33.12 (Asia & South Pacific)

Annual Results - 2017 **Ancillary Source** % increase above 2008 (in US dollars) 50.97 Spirit **Various** +174% 48.87 WOW air **Various** Airline did not operate in 2008 48.33 Frontier **Various** +1,206% 48.67 Allegiant **Various** +83% 43.00 Jet2.com Various +126% **FFP** 42.55 **Quantas Airways** +169% 38.83 United **Various** +70% Air Asia x 33.12 **Various** +58% 32.52 Not available **HK Express** Various 31.15 Wizz Air **Various** Not available

Table 3. Top 10 Airlines – Ancillary Revenue per Passenger

Source: IdeaworksCompany (2018a)

2017 has seen many new examples of innovative approaches to ancillary revenue among ever increasing number of airlines providing testimony to the success of a wide range of a la carte, commission-based, and frequent flyer related activities. Those examples are (IdeaWorksCompany 2018a):

- Aeroflot provided a robust disclosure of the composition of online travel retail sales for 9 months of 2017: trip and flight insurance 90.4%, hotel bookings 4.3%, rail bookings 1.9%, car hire 1.7%, cruises 1%, and other 0.7%
- Air Canada purchased \$203 million of Aeroplan Miles from Aimia
- Air China has 51.9 million members in the Phoenix Miles program and their activity represented 43.8% of the carrier's revenue
- AirAsia disclosed the distribution of other revenue sources for 2018: baggage 40%, onboard retail sales (Big Duty Free) 15%, cargo 15%, Big Pay digital wallet 8%, FlyThru connections and Woki onboard Wifi 8%, onboard café 7%, and seat selection 7%
- Allegiant has adapted its "buy-on-board" technology into a golf course management program, and at the end of 2017 was providing these services to approximately 220 golf courses in the US
- American realizes a 50% upsell rate to more expensive branded fare products, with the current basic economy and premium economy project having revenue potential of \$1 billion
- EasyJet's invitation only Flight Club recognition program has more than 50% of members flying 20 or more times a year, with just under 40% representing business or commuter customers
- GOL claims the SMILES loyalty program was responsible for issuing approximately 54% of total miles accrued in Brazil, which is up substantially from 29% at the end of 2013
- JetBlue's Even More Space product, which provides extra leg room seating and early boarding, generated \$6 per customer in 2017
- Lufthansa, with 10 million active Miles & More members, disclosed 1 out of every 3 miles is accrued through partner activities, notably co-branded credit card purchases
- Ryanair noted big increases in the number of customers paying for allocated seating (23% in FY 2017 to 50% in FY 2018) and priority boarding (4% in FY 2017 to 20% in FY 2018).

DISTRIBUTION AND PASSENGERS WTP FOR ANCILLARY SERVICES

Airlines are dealing with lots of passenger data, but paradoxically know little about their passengers beyond those enrolled in loyalty programs. Estimates indicates a typical airline has around 25-30 different databases containing customer data. Many come for transactional purposes with the data stored for only a short period of time (SITA, 2013).

The New Distribution Capability XML-based data transmission standard for airline distribution promoted by IATA (International Air Transport Association) will allow airlines to display all of the features of their fare products, not just prices and restrictions, on the basis of personal information, should customers choose to disclose it. It enhances the capability of communications between airlines and travel agents and enables passengers to compare the value of ancillary products and services across airlines.

A global study by travel technology provider Sabre in October 2016, based on a pre-defined basket of extras such as seats, bags and food, revealed that passengers would actually be willing to spend up to \$99 to personalise their experience. Sabre surveyed travellers from 20 countries about what they would spend and why. The results show that 80 percent of travellers purchased air extras on their last trip, spending an average of \$62 and that they would spend up to \$99 more to personalize their trip, if it improved their travel experience (Sabre, 2016). The survey also found differences between what passengers from different regions would spend on add-ons (Table 4).

Table 4. Regional differences in ancillary purchases

Current Spend		Willing to Spend	
Africa	\$95	Africa	\$144
Asia &Pacific	\$63	Latin America	\$114
Middle East	\$58	Middle East	\$91
Europe	\$55	North America	\$88
Latin America	\$55	Europe	\$82
North America	\$55	Asia &Pacific	\$76

Source: Sabre, 2016.

The most desired ancillaries were cabin class upgrades, on-board food and beverage and preferred seating and extra leg room – all at 11 percent. This was followed by in-flight Wi-Fi (nine percent) and extra checked baggage (nine percent). The popularity of each ancillary varied between passengers: North Americans and Europeans chose preferred seating and extra leg room, Latin Americans opted for on-board Wi-Fi, Asia Pacific travellers selected extra checked luggage, Africa and the Middle East passengers chose on-board food and beverage, and fast track security as their topped popular add-on.

ANCILLARY SERVICES - RECENT DEVELOPMENTS

Airlines are becoming more creative in inventing new ways for monetising relevant products and services during passenger journey thus increasing their ancillary revenues with new products being launched almost every month. The unbundling gives passengers option to pay lower fares while picking and choosing add-on products according to their individual needs.

Android-based in-seat inflight engagement (IFE) platforms, wireless inflight engagement, Internet connectivity enables airlines to move beyond providing just in-flight entertainment and generate ancillary revenues. Rather than generating revenue from selling Wi-Fi connectivity, airlines are turning to third-party merchants with last-minute inventory (hotels and restaurants, duty free retailers, sale of event tickets) and develop a retail environment as part of their in-flight Internet portals. Some examples are given below.

Finnair offers new services to passengers through its 'Nordic Sky' inflight portal which can be accessed on passengers' own devices and gives all passengers free access to Finnair web site plus Finnair services such as destination information, customer care and pre-order duty free shopping with items purchased being delivered to the passenger's seat on their return flight. Passengers can also order taxis on in-bound Helsinki flights, or book destination services such as trips, dinner cruises and concert tickets.

Passengers on in-bound long-haul Lufthansa flights can pre-order a selection of duty free from retailers at Frankfurt Airport via the Lufthansa inflight portal and have their orders delivered to them at their arrival gate.

IAG's new long-haul low-cost carrier LEVEL is one of several long-haul LCCs such as Norwegian and Azul to allow passengers to order food, beverages and travel accessories via the in-seat IFE system and pay with their credit card via an application called Pair & Pay.

Air China has collaborated with online retailer JD.com to offer passengers a selection of goods they can purchase via the in-seat IFE system for delivery to their homes, while China Eastern's 'In-flight Mall' enables Boeing 777-300s enables passengers to order meals, pay for upgrades onboard, and purchase duty free items through the seatback screen, passenger's personal devices or tablets that are provided by the crew.

There are many examples of how airlines are thinking beyond the flight. One of them is *Appie Fly*, experiment of Dutch low cost carrier Transavia and Holland's major retailer Albert Heijn which allows passengers on all inbound Transavia flights to Rotterdam to order fresh breakfast boxes and then collect them after arrival. Moreover, Transavia is using Whatsapp to let passengers purchase additional services (extra luggage allowance or better seats) using ABN Amro's Tikkie service.

Today, only about a dozen airlines allow passengers to order food or snacks on demand, be it via the (wireless) IFE system or by just asking the flight attendant.

On demand meal service is a hospitality-inspired service spreading in airline premium classes and started on Etihad, Qatar Airways, Air Canada, KLM, and Finnair flights. Since mid-2017, KLM has been operating a new service model called 'Anytime For You' in its long-haul Business Class on some key routes. It allows passengers to order from the 'Anytime For You' menu throughout the flight. To transfer each order from the iPad carried by the flight attendant taking orders to the crew member preparing the orders in the galley, animated QR-codes are used. KLM is rolling out the 'Anytime For You' on-demand service concept on a destination-by-destination basis and the service is currently being offered on flights between Amsterdam and Johannesburg, Bangkok and Tokyo. Eventually, KLM expects to offer the 'Anytime For You' service on about 10 'key' routes.

One way to enhance ancillary revenue is to look at the different needs of passengers travelling in the same class. SWISS has recently introduced a fee to prereserve one of the popular solo business class seats on its A330 and B777-300ER aircraft.

South Korean low-cost carrier Jeju Air introduced a *Side Seat* offer, which is similar to *Empty Seat Option* (adopted by airlines such as AirAsia X, Vietnam Airlines and Spicejet), and lets travellers purchase one or two seats next to their own seat. Whereas the *Empty Seat Option* lets passengers purchase an option to a possible empty seat for a small fee and be notified if an empty seat is available 1 to 3 days before their flight, Jeju Air's passengers can only book the additional seats at their departure airport on the day of the travel, up to 1 hour before boarding. On longer routes onboard Jeju Air's B737-800s, the airline offers passengers the option to purchase a *Sleeping Seat Package*: two extra *Side Seats* in addition to his or her main seat, a pillow and blanket are added as they now have a row of seats to themselves.

In October 2015, Jet Airways introduced a new product *Seat Select* that allows economy travellers to buy seats with extra legroom (typically emergency exit rows for a certain fee. Passengers responded very positively, especially for long-haul international flights. Similarly, SWISS has introduced a fee to pre-reserve one of the popular solo business class seats on its A330 and B777-300ER aircraft.

Many airlines offer passengers the option to place their bids in a blind auction for an upgrade to a premium seat, while airlines such as KLM and Emirates invite passengers to contact the tablet-equipped crew if they want upgrade to another cabin at the very last minute onboard.

Lufthansa has recently started to sell upgrades to Premium Economy at the departure gate by inviting passengers to take a 360 degrees view of how the Premium Economy seat and cabin looks using virtual reality glasses at its Frankfurt Airport hub.

Most ancillary services have been commercialized via electronic commerce applications provided almost exclusively by airlines or via mobile commerce which enables a high level of personalization of ancillary services. A report that was done by IdeaworksCompany in March 2018 reviews the mobile applications offered by the world's largest LCCs as measured by passengers flown. The mobile applications evaluated represent state-of-the-art examples of ancillary revenue excellence. It was found that (IdeaWorks Company, 2018b):

- 14 of the 15 airlines have in-app flight booking capability for Android phones
- the mobile apps from Jetstar, Ryanair, and Wizz Air offer seven to nine à la carte options in their booking paths
- Ryanair was found to have the best overall mobile app with excellent capabilities related to pre-paid baggage, seat assignment, and car hire
- · Pegasus delivers the most thorough meal descriptions
- 56% of visitors to the Wizz Air website use mobile phones.

CONCLUSIONS

Ancillary revenue is a necessity for all airlines as they struggle to maintain their profitability continuously threatened with high operating costs and intense competition. Ancillary revenues increased from about 2% to more than 10% over the last decade, when measured as a proportion of total operating revenues. Therefore, to achieve significant revenue gains and maximize total revenue airlines need to upgrade their revenue management systems to assess

the total expected revenue contribution of each passenger. Traditional airlines generate the largest part of their ancillary revenue from their frequent flyer programs. An increasing number of full service carriers decided to move from all-inclusive booking arrangement and adopt add-on bundling practice when selling flight tickets, by making some components of service optional to passengers.

In 2017 the top 10 airlines, as rated by total ancillary revenue, generated US\$29.7 billion, a 14-fold increase to 2017. List leaders are United Airlines, Delta, American, Southwest and Ryanair. Spirit Airlines has recorded the highest percentage of ancillary revenue with 46.6% of its total income followed by exclusively low-cost carriers in top 10. Those airlines generate the largest part of their ancillary revenues from checked bags fees, assigned seats, and extra leg room seating, focusing their a la carte effort on those leisure travellers who are willing to spend more. Network carriers generate the largest part of their ancillary revenue from frequent flyer programs. When ancillary revenue is expressed on a per passenger basis the top performing airlines are largely low cost carriers. Substantial regional differences in ancillary purchases are noticed: passengers coming from Europe and North America prefer premium seating and extra leg room, Latin Americans opt for on-board Wi-Fi, Asia Pacific travellers select extra checked luggage, Africa and the Middle East passengers choose on-board food and beverage, and fast track security as their most popular add-on.

Airlines are becoming more creative in offering new ancillaries. Many of them offer access to carriers' inflight portals providing destination information, duty free shopping, booking of trips, dinner cruises and concert tickets, and allowing passengers to order taxi, food or snacks on demand, even to collect them after arrival. Passengers can upgrade to a premium seat (after using virtual reality glasses to see how the desirable cabin looks like), purchase seats with extra legroom or empty seats to have whole row of seats to themselves.

Most ancillary services have been commercialized via electronic commerce applications provided almost exclusively by airlines or via mobile commerce which enables a high level of personalization of ancillary services. Air travel industry should invest great effort to gain the full benefit of the distribution revolution promised by forthcoming New Distribution Capability standard that will allow airlines to display all of the features of their fare products enabling passengers to compare the value of ancillary products and services offered. To successfully drive ancillary services, airlines should focus on personalised offers and recommenda-

tions using all available passenger data and create added value for each and every passenger based on service differentiation.

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A REVIEW OF RECENT TRENDS IN AIRLINE ANCILLARY REVENUES

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Abstract: Airline ancillary revenue which refers to non-ticket revenue sold directly to passengers or indirectly as part of their travel experience, has become a mandatory component for the revenue mix of all airlines as well as a key reason for the improved financial performance of the airline industry in the recent years. It is generated by a large amount of activities that include "a la carte" services such as fees for checked bags, frequent flying miles to airline partners, miscellaneous sources like advertising and commission-based products such as inflight retail, and car rentals, fare or product bundles - virtually any service added to the core transportation service. Low-cost carriers pioneered the practice of charging for supplementary services that were previously provided free of charge by seeking revenue from checked bags, assigned seats and extra leg room seating. Traditional airlines moved from all-inclusive booking arrangement and started to adopt add-on bundling practice when selling flight tickets taking advantage of low headline price. Their ancillary revenue mostly comes from the use of frequent flyer program. Many carriers expanded their range of add-ons with products and services that were never included in the ticket price and still seek new resources to further enhance the offerings which generate ancillary revenues becoming more creative in inventing new ancillaries. Many of them offer access to carriers' inflight portals providing destination information, duty free shopping, booking of trips, dinner cruises and concert tickets, and allowing passengers to order taxi, food or snacks on demand, even to collect them after arrival. Passengers can upgrade to a premium seat (after using virtual reality glasses to see how the desirable cabin looks like), purchase seats with extra legroom or empty seats to have whole row of seats to themselves. When measured as a proportion of operating revenues, ancillary revenues increased from about 2% to more than 10% over the last decade. In 2017, the top ten airlines, as rated by total ancillary revenue, generated \$29.9 billion, 14 times more than 2007 when they produced \$2.1 billion. Top airlines were United Airlines, Delta, American, Southwest and Ryanair. Spirit Airlines has the highest percentage of ancillary revenue with 46.6% of its total income followed by exclusively low-cost carriers in top 10 relying upon a la carte activities: checked bags, assigned seats and extra leg room seating, focusing their a la carte effort on those leisure travellers who are willing to spend more. When ancillary revenue is expressed on a per passenger basis the top performing airlines are largely low cost carriers. Passengers tend to purchase different add-ons depending on the region they come from: those coming from Europe and North America prefer premium seating and extra leg room, Latin Americans opt for on-board wi-fi, Asia Pacific travellers select extra checked luggage, Africa and the Middle East passengers choose on-board food and beverage, and fast track security as their most popular ancillaries. Most ancillary services have been commercialized via electronic commerce applications provided almost exclusively by airlines or via mobile commerce which enables a high level of personalization of ancillary services. To successfully drive ancillary services, airlines should invest great effort to gain the full benefit of the distribution revolution promised by forthcoming New Distribution Capability standard and focus on personalised offers and recommendations using all available passenger data and create added value for each and every passenger based on service differentiation.

Key words: ancillary services, ancillary revenues, unbundling, airline profitability, low-cost airlines, legacy airlines

JEL: D40, L11, L93, M20

