IBN HALDUN UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF AIR TRANSPORT MANAGEMENT

MASTER’S THESIS

UNLOCKING AIRLINE REVENUE POTENTIAL: AN ANALYSIS ANCILLARY REVENUE STRATEGIES IN THE AIRLINE INDUSTRY

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ISTANBUL, 2025

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by
KAHRAMAN SÜSLEYİCİ

A thesis submitted to the School of Graduate Studies in partial fulfillment of the requirements for the degree of Master of Science in Air Transport Management

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THESIS APPROVAL PAGE

This is to certify that we have read this thesis and that it is fully adequate, in scope and quality, as a thesis for the Master of Science in Air Transport Management degree.

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It has been confirmed that this thesis has been written following all the standards set by the School of Graduate Studies of Ibn Haldun University.

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I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

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ÖZ

HAVAYOLU GELİR POTANSİYELİNİ DETAYLANDIRMA: HAVAYOLU ENDÜSTRİSİNDE EK GELİR STRATEJİLERİ ÜZERİNDE KAPSAMLI BİR ÇALIŞMA

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Ocak 2025, 46 Sayfa

Havayolu sektörü, yüksek işletme maliyetleri, yoğun rekabet ve hem yerel hem de uluslararası etkiler karşısındaki kırılganlığıyla karakterize edilmekte olup, bu durum sektörde kalıcı olarak düşük kârlılığa yol açmaktadır. Düşük maliyetli havayolu şirketlerinin sektöre girişi, yalnızca geleneksel maliyet yapılarını değiştirmekle kalmamış, aynı zamanda yan gelirler konseptini tanıtarak sektördeki rekabet dinamiklerini önemli ölçüde dönüştürmüştür. Bu yenilik, geleneksel bilet satışlarının ötesine geçerek kullanılmayan gelir kaynaklarını değerlendirmekte ve havayolu şirketlerinin gelirlerini çeşitlendirmelerine olanak tanımaktadır.

Yan gelirler, bir işletmenin ana faaliyetleri dışında sunulan ürün ve hizmetlerden elde edilen gelir olarak tanımlanmakta ve günümüz havayolu operasyonlarının ayrılmaz bir parçası haline gelmiştir. Havayolu şirketleri, ileri düzey gelir yönetim sistemlerinden yararlanarak envanter tahsisini optimize etmeyi ve toplam gelirlerini artırmayı hedeflemektedir. Bu sistemler, rekabetin yoğun olduğu ve zorlu piyasa koşullarında havayolu şirketlerinin finansal dayanıklılıklarını artırmak ve rekabetçi konumlarını güçlendirmek için stratejik olarak tasarlanmıştır.

Düşük maliyetli havayolu şirketlerinin büyümesiyle artan rekabet baskısı ve sektördeki siyasi ve ekonomik dalgalanmalara olan hassasiyet, geleneksel havayolu şirketlerini yenilik yapmaya yöneltmiştir. Geleneksel taşıyıcılar, düşük maliyetli iş modelinin unsurlarını giderek daha fazla benimseyerek hizmetlerini ayrıştırmış ve eskiden bilet fiyatına dahil olan ürün ve hizmetler için ek ücretler talep etmeye başlamıştır. Bu paradigma değişikliği, yalnızca maliyet azaltma gereksinimlerini karşılamakla kalmayıp, aynı zamanda yan gelirler akışları yoluyla gelir maksimizasyonu amacına da hizmet etmektedir.

Düşük maliyetli rakiplerin agresif fiyat stratejilerine karşı koymak için geleneksel havayolu şirketleri, envanter kullanımında maksimum verimlilik sağlamak amacıyla gelişmiş gelir yönetim sistemlerini giderek daha fazla entegre etmektedir. Bu operasyonel strateji, yan gelirlerin havayolu şirketlerinin finansal performanslarını sürdürülebilir kılmada hayati bir rol oynadığını ortaya koymaktadır.

Bu çalışma, yan gelirler kategorilerinin önemini sistematik olarak incelemek için birinci düzey doğrulayıcı faktör analizini kullanacaktır. Bu yaklaşım, havayolu iş modellerinin kârlılığına ve stratejik sürdürülebilirliğine ilişkin daha derin bir anlayış sağlamayı amaçlamaktadır.

Anahtar Kelimeler: Ödeme İsteği, Rekabet, Sürdürülebilirlik, Yan Gelir.

ABSTRACT

UNLOCKING AIRLINE REVENUE POTENTIAL: AN ANALYSIS ANCILLARY REVENUE STRATEGIES IN THE AIRLINE INDUSTRY

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The airline industry is distinguished by its high operating costs, intense competition, and susceptibility to domestic and international disruptions, resulting in chronically low profitability. The competitive landscape of the sector has been fundamentally reshaped by the rise of low-cost carriers, which not only disrupted traditional cost structures but also pioneered the concept of ancillary revenue. This innovation enables airlines to generate income beyond conventional ticket sales by diversifying their revenue streams through non-core offerings.

Ancillary revenue, defined as income derived from supplementary products and services beyond an enterprise's primary operations, has become a cornerstone of contemporary airline strategies. Airlines increasingly rely on advanced revenue management systems to optimize inventory allocation and maximize overall revenue. These systems play a critical role in enhancing financial resilience and fortifying competitive positioning within the industry's volatile environment.

Heightened competition, spurred by the aggressive growth of low-cost carriers and the industry's inherent vulnerability to political and economic shocks, has driven legacy airlines to adapt. Traditional carriers have progressively incorporated elements of the low-cost model, such as unbundling services and charging for previously included amenities, as a means to reduce costs and boost revenue through ancillary channels.

This strategic shift reflects a broader objective to achieve sustainable profitability in a fiercely competitive market.

To counteract the pricing pressures of low-cost competitors, traditional airlines have integrated sophisticated revenue management practices to optimize inventory utilization and operational efficiency. Consequently, ancillary revenue has emerged as a critical driver of financial performance and long-term viability in the sector.

To reduce their costs and increase revenue, traditional carriers have changed their business model by separating some of the products and services they offer their passengers and charging them separately. In this study, confirmatory analysis will be applied to reveal the importance of the subcategories that a la carte services of the ancillary revenue.

Keywords: Ancillary Revenue, Competition, Sustainability, Willingness to Pay.

DEDICATION

It is dedicated to my precious mother in heaven, whose memory never fails to uplift and encourage me who expressed her unconditional love, unwavering support and encouragement with legacy honored not only my academic steps but my entire life.

I extend my sincere thanks to my advisor, Assistant Professor Merve Şahin, for her extremely precious guidance and assistance, together with the diligent oversight and resolute direction crucial for the accomplishment of this study with success.

I would like to thank my father for his guidance and inspiration, as well as his material and moral support.

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I would like to express my sincere gratitude to my valuable advisor, Assistant Professor Merve Şahin, who guided me in this research and helped me overcome my difficulties with her knowledge, and allowed me to gain valuable experiences.

I want to thank all the staff at the Air Transport Management Department of Ibn Haldun University for their material and moral support in conducting the research.

I present my endless love and respect to my family, who were beside me alone at every stage of my thesis. I express my sincere thanks to Prof. Dr. Penbe Çağatay for statistical analysis.

Kahraman SÜSLEYİCİ

İSTANBUL, 2025

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LIST OF SYMBOLS AND ABBREVIATIONS

AI	Artificial Intelligence
ARASK	Ancillary Reserve Per Available Seat Kilometer
FSC	Full-Service Carrier
GEN Z	Generation Z
LCC	Low-Cost Carrier
WI-FI	Wireless Fidelity
WTP	Willingness to Pay

CHAPTER I

INTRODUCTION

The aviation industry operates in a highly competitive and dynamic environment as a critical component of the global economy. Traditionally, airlines have derived their revenues primarily from ticket sales. However, factors such as rising operating costs, fluctuating fuel prices, and price-sensitive consumers mean that this source of revenue may no longer be sufficient to sustain profitability. In recent years, financial pressures on airlines have encouraged a shift towards alternative sources of revenue, and one of the most important of these sources of revenue has been ancillary revenues. Ancillary revenues are generated through services and products offered to passengers in addition to the basic ticket price. These services include baggage fees, seat selection, in-flight meal service, priority boarding, and duty-free shopping. The rise in ancillary revenues has become an important tool for airlines to not only increase profitability but also to offer passengers a more customized and flexible travel experience. Diversification of revenue sources has become a vital strategy for airlines, especially considering the shrinking profit margins and intensifying competition. In this context, the importance of ancillary revenues in the aviation sector is increasing. By focusing on this alternative revenue model, airlines can manage operational costs more effectively and gain financial flexibility. In addition, with the rise in the trend of "unbundling" services, passengers are given the opportunity to pay only for the services they value, which address different customer demands and increase customer satisfaction and loyalty. The constant change in passenger behavior leads to ancillary revenues playing an increasingly important role in the overall business strategies of airlines.

This study is also designed to evaluate the concept of ancillary revenues in the aviation industry and to investigate the importance of this revenue source and its role in airlines' financial strategies. This research will identify which ancillary services are most effective and how airlines can decide their a la carte offerings to align with customer preferences. This thesis aims to examine how ancillary revenues and à la carte services can enable airlines to generate substantial additional income while maintaining their competitiveness.

1.1. Ancillary Revenue and WTP

Revenue that does not come from a business's primary products and services is known as ancillary revenue. Because it can assist businesses in diversifying their overall revenue streams, ancillary revenue is significant.

Airline companies apply different strategies to survive in an environment where it is very difficult to make a profit. One of these strategies is to offer separate products and services that were previously included in the ticket price by airline companies. The strategy that enables airline companies to increase their revenue and profits is expressed as ancillary revenue. Ancillary revenue is an increasingly preferred and important strategy for airline companies. Different definitions of ancillary revenue exist depending on the core products. Ancillary revenue includes revenue from services that develop core products different from the company's core products or services (Dufour, 2010). Apart from ticket sales, products or services that are sold directly or indirectly to passengers as part of the trip are expressed as ancillary revenue (IdeaWorks, 2012). Ancillary revenue for airline companies is earned through the website after ticket sales or during the journey.

The oldest ancillary revenue is duty-free products sold during the flight, and this sale was the only application where airline companies could earn additional revenue for years.

Ancillary revenue classification made by IdeaWorks Company in 2008 and accepted worldwide consists of four headings. However, after the developments in the aviation industry, a new title was added to the ancillary revenue classification by IdeaWorks Company in 2015.

Ancillary revenues are classified under five headings according to IdeaWorks (IdeaWorks, 2018).

- A la carte Sales Revenues
- Unbundled Product Package Revenues
- Commission-Based Product Revenues
- Advertising Revenues
- Loyalty (Frequent Flyers) Program Revenues

Ancillary revenues can be grouped into two main different categories which are A la carte and Third-party ancillary revenues (Figure 1.1). The à la carte entity, which consists of items decomposed for selling and criminal charges, which are penalties for indecision and poor planning by the passengers. The third-party ancillary streams which consisted of incentive-based commission, revenue from frequent flyer programs, and advertising.

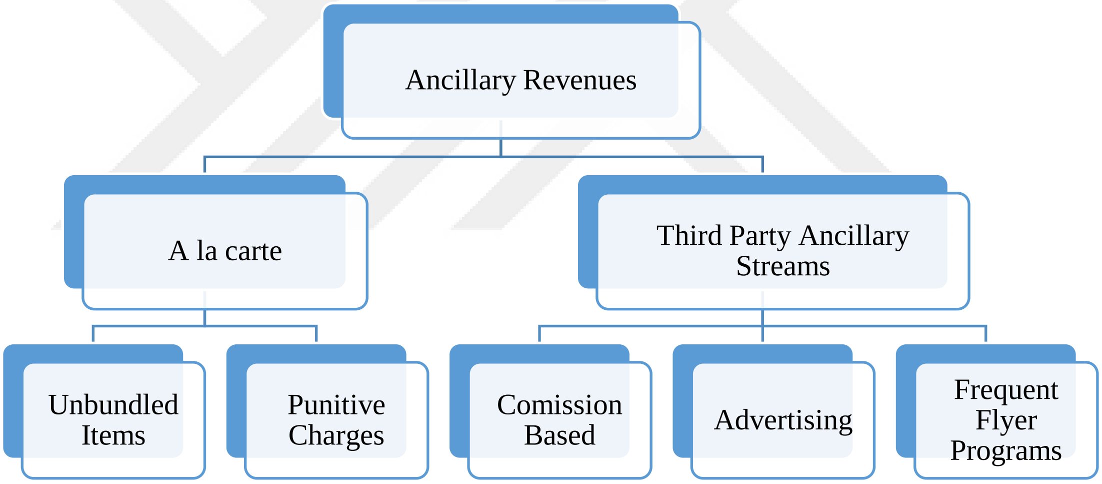

Figure 1.1. Ancillary Revenue's Main Categories and Sub-groups

A la carte Sales Revenues are obtained from separate presentations of the products and services offered within the flight ticket prices (Warnock-Smith, O'Connell, & Maleki, 2015). Due to the demands and expectations of different customer segments, the market needs to be analyzed and segmented before all airline companies in the world can determine which of their products will be offered as a package or separately. Understanding the wishes and expectations of the passengers, we can provide information about the products and services that will be offered during the trip, thus enabling the ancillary revenue strategy to be more successful (Avram, 2017).

A la carte sales revenues of airline companies consist of alternatives that can be added to the flight experience. Developments and changes in the world also affect the airline industry and increase the number of à la carte products. A la carte products accepted worldwide are as follows (IdeaWorks, 2018).

- In-flight food and beverage sales
- Excess baggage charges
- Paid call services support
- Selling optional seats or seats at emergency exit doors
- Selecting a seat or selling the seats in the emergency exit
- Priority check-in
- Fees for card payments
- Priority boarding right
- Providing internet connection on board
- Using in-flight entertainment systems

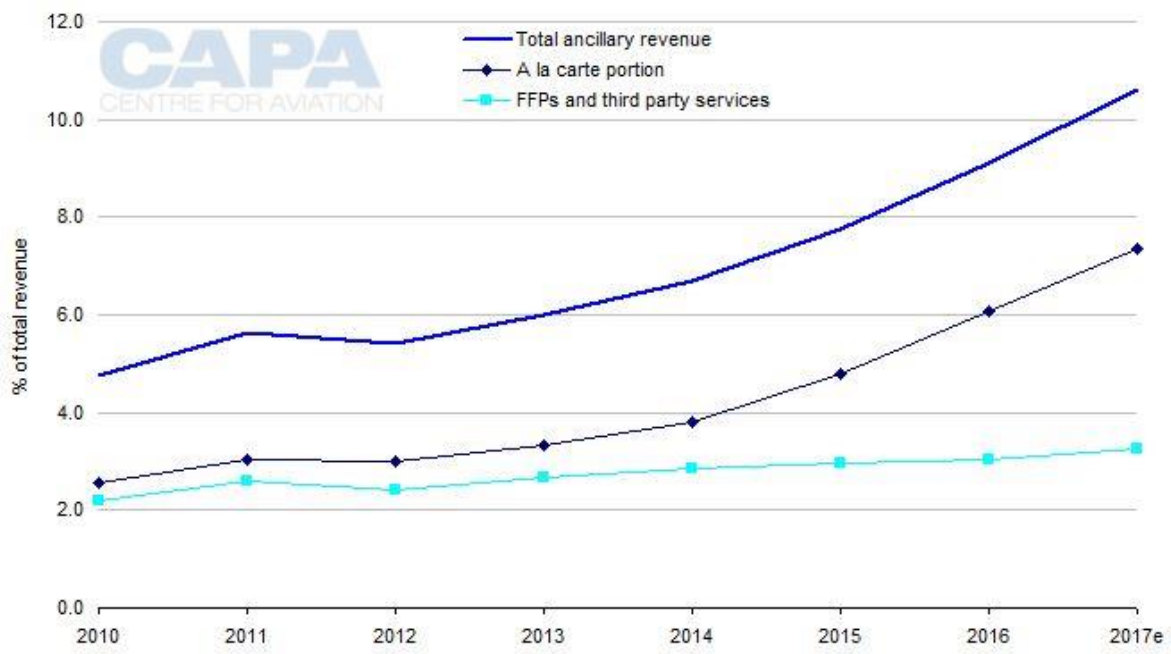

Figure 1.2. World Airline Industry: Ancillary Revenue as a Percentage of Total Revenue, 2010 to 2017

Reference: CAPA - Centre for Aviation, IdeaWorksCompany / CarTrawler, 2018

Data from IdeaWorks/CarTrawler estimate that ancillary revenue grew from 4.8% of total airline revenue in 2010 to 10.6% in 2017 (Figure 1.2.). The biggest segment, also with the fastest growth, was what it calls 'A la carte ' revenues, which are almost all items that were previously part of the core ticket price for FSCs.

Table 1.1. Traditional Airline Companies Ancillary Revenue Analysis

AIRLINE	2010	2011	2012	2013	2014	2015	2016	2017	2018
AER LINGUS	**100**	88,93	97,87	104,68	108,93	102,12	105,53	111,91	160,85
ALASKA AIRLINES	**100**	110,5	122,46	161,95	166,85	197,83	192,75	242,75	251,44
AMERICAN	**100**	108,13	101,68	106,40	238,02	241,45	250,81	269,90	370,77
CHINA EASTERN	**100**	111,07	115,43	170,80	164,76	188,92	157,04	114,76	110,06
DELTA	**100**	68,48	69,64	68,32	86,83	102,02	139,78	145,70	150,54
EMIRATES	**100**	63,57	17,54	18,54	19,70	18,54	17,71	19,53	20,03
HAWAIIAN	**100**	104,41	138,23	148,52	185,29	313,23	347,05	377,94	569,11
LUFTHANSA	**100**	66,84	78,35	351,50	447,39	409,31	369,86	533,42	720,00
QANTAS	**100**	92,49	102,73	83,03	90,47	76,12	77,88	75,47	81,93
UNITED	**100**	103,42	107,04	114,06	117,22	123,98	124,44	114,98	116,04

Reference: Compiled by Author from IdeaWorks reports from 2010 to 2018

Traditional Airline Companies Ancillary Revenue Analysis between 2010-2018 are given in Table 1.1. Aer Lingus managed to increase its ancillary revenues by 60% in 2018 compared to 2010. However, the company failed to increase its ancillary income in 2011 and 2015 compared to the previous year. Although it increased its ancillary income in 2012 compared to the previous year, it fell behind the base year. In 2010, an average of $24.91 ancillary income from each passenger was $32.15 in 2018. In addition, the company's ancillary income in 2018 was announced as $378 million in total. While 13.6% of Aer Lingus' total revenues in 2010 consisted of ancillary income, this figure was 16% in 2018 (Table 1.1.).

Alaska Airlines managed to increase its ancillary revenues compared to the previous year in all other years except 2016. The company's ancillary revenues decreased by 2.63% in 2016 compared to 2015, resulting in a revenue loss of $28 million. Alaska Airlines' ancillary revenue per passenger, which was $23.68 in 2010, was $30.30 in

2018. Compared to 2010, the total amount of ancillary income increased by 151% in 2018. While 14.4% of Alaska Airlines' total revenues in 2010 consisted of ancillary income, this figure was 16.8% in 2018 (Table 1.1.).

American Airlines managed to increase its ancillary revenues in all years except 2012 compared to the previous year. One of the most important reasons why the company increased its ancillary revenues by 123% in 2014 was the acquisition of US Airways that year. American Airlines increased its ancillary revenues by 270% in 2018 compared to the base year, generating $7,245 million in revenue. The company has also increased the share of ancillary revenues in total revenues. While 8.8% of American Airlines' total revenues in 2010 consisted of ancillary income, this figure was 16.3% in 2018 (Table 1.1.).

Table 1.2. Low-cost Airline Companies Ancillary Revenue Analysis

AIRLINE	2010	2011	2012	2013	2014	2015	2016	2017	2018
AIR ARABIA	100	112,50	137,50	650,00	762,50	775,00	775,00	1550,00	1737,50
AIR ASIA	100	116,00	124,28	142,28	159,14	149,71	159,14	176,28	218,57
AIR ASIA X	100	121,25	148,75	175,00	228,75	157,50	201,25	241,25	263,75
CEBU PACIFIC	100	220,93	179,06	230,23	306,97	360,46	383,72	409,30	397,67
EASY JET	100	119,43	123,97	149,56	157,34	158,31	146,32	138,66	172,57
FRONTIER	100	230,50	252,54	184,74	310,16	488,13	1230,50	1376,20	1562,70
JAZEERA AIRWAYS	100	92,85	92,85	100,00	107,10	100,00	92,85	100,00	142,80
JET2.COM	100	171,69	202,83	280,18	324,52	238,01	243,39	287,73	430,18
JETBLUE	100	112,63	124,21	141,05	156,84	171,15	201,26	227,57	228,00
NORWEGIAN	100	106,41	132,62	160,42	244,38	229,94	265,24	326,73	414,97
PEGASUS	100	117,91	182,08	235,82	373,13	367,16	420,89	488,05	655,22
RYANAIR	100	97,34	122,83	149,46	168,76	153,89	175,39	203,89	247,87
SOUTHWEST	100	240,81	337,75	331,22	384,69	432,44	578,16	629,38	826,32
SPIRIT	100	221,87	317,50	397,50	467,50	580,00	673,75	770,62	933,12
WESTJET	100	127,95	143,01	163,44	218,27	288,17	324,73	364,51	381,72

Source: Compiled by Authors from IdeaWorks reports from 2010 to 2018

Low-cost Airline Companies Ancillary Revenue Analysis (2010-2018) is given in Table 1.2. Air Arabia has managed to significantly increase its ancillary revenues. While it earned the same amount of side income in 2015 and 2016, it earned more side income in all other years compared to the previous year. Compared to 2010, the company increased its ancillary income by 1637% in 2018. In addition to increasing the side revenues, the company has also increased the average side revenue from each passenger and the share of side revenues in total revenue. Air Arabia's average side income from each passenger was $1.90 in 2010, compared to $15.99 in 2018. While 1.5% of the company's total income in 2010 was ancillary income, this increased to 12.4% in 2018 (Table 1.2.).

Pegasus Airlines managed to increase its ancillary revenues compared to the previous year in all other years except 2015. In 2015, it lost 1.59% of its side income compared to 2014. Receiving $67 million in ancillary income in the base year, Pegasus increased its ancillary income by 555.22% in 2018, generating $439 million in revenue. While the average side income of Pegasus Airlines from each passenger was $7.83 in 2010, this figure increased to $14.65 in 2018. While 8.5% of the company's total income in 2010 consisted of ancillary income, this figure was 24.3% in 2018 (Table 1.2.).

Ryanair succeeded in increasing its ancillary revenues in all of the years compared to the previous year, except for the years 2011 and 2015. Ancillary income remained behind the base year in 2011, making it the lowest amount of ancillary income the company has achieved. It increased its ancillary income by 147.87% in 2018 compared to the base year. The average side income generated by Ryanair from each passenger was $15.37 in 2010, compared to $20.14 in 2018. While 22.1% of my company's total income in 2010 consisted of ancillary income, this figure became 31.7% in 2018 (Table 1.2.).

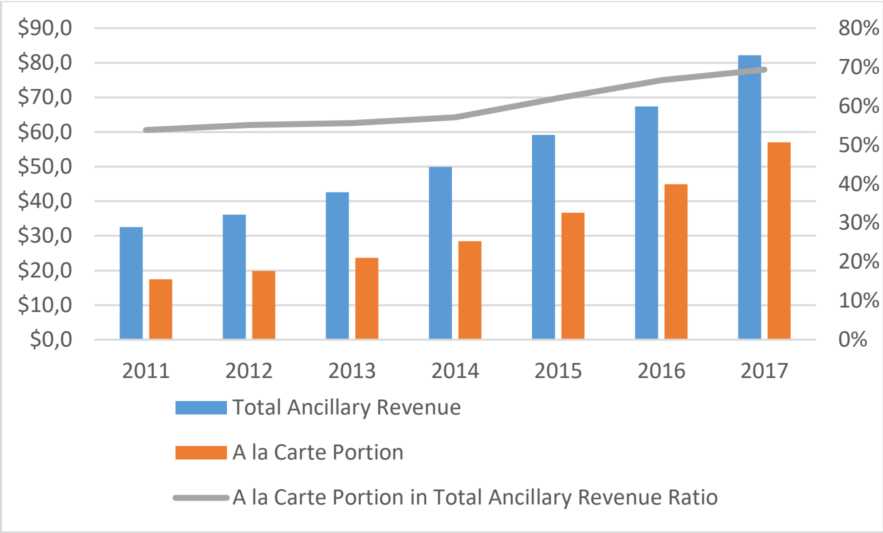

Figure 1.3. Total Ancillary Revenue and A La Carte Portion Values

Reference: Compiled by Author from Car Trawler Worldwide Estimate of Ancillary Revenue report, 2017

Total Ancillary Revenue and A la carte Portion values are presented in Figure 1.3. Total ancillary revenue yearly growth achieved more than 22% for 2017, which is $82.2 billion, and the A la carte portion is $57 billion, which is %69 of the total (Figure 1.3.).

The thesis examines the performance of two main classifications of airline ancillary revenue benefits, which are disaggregated (unbundled) products and commission-based revenues. The thesis also explores the willingness of passengers to pay (WTP) for these services along with what kind of ancillary items are acceptable at a given price point.

The study found that travelers valued a narrow range of perceived "needs" and services such as food and beverage, checked baggage, and seat allocation as opposed to perceived 'on-demand' segregated or commission-based products/services.

CHAPTER II

LITERATURE REVIEW

2.1. Ancillary Revenues in the Airline Industry

Ancillary revenue has become a mandatory component of airlines' revenue mix. Airline ancillary revenue is a key reason for improved financial performance. According to Ružica Škurla Babić (2019), Traditional airlines followed the low-cost carriers' practice of charging for supplementary services and even found new resources to further enhance the offerings that generate ancillary revenues. Nawal Hanim Binti Abdullah and Shin Yiing Lee (2024) strongly indicate the significance of ancillary services within the airline industry is progressively gaining prominence. As such, research on airlines' ancillary services has continuously grown.

According to Richard Klophaus (2013) Many airlines adopted a strategy to unbundle their services to create additional revenue and focus on the practice of à la carte pricing.

2.2. A La Carte Ancillary Revenue

Ružica Škurla Babić (2019) provides an in-depth look at common ancillary services such as baggage fees, in-flight sales, and premium seating options. It explains how "à la carte" or unbundled services have grown, offering airlines revenue diversification while giving passengers the option to pay for only the services they use. It also covers how airlines have expanded to newer fee-based services like priority boarding and premium check-in options. (Economy and Market Communication Review). O’Connell and Warnock-Smith (2016) examined how airlines' unbundling practices impact passenger satisfaction and purchasing decisions. It distinguishes between traditional service bundling and à la carte pricing, where each additional service (e.g., seat selection, baggage) is separately charged. Personalized pricing and how it has evolved with technology to match passengers' preferences and WTP. By offering pertinent add-ons like in-flight meals or entertainment services and modifying rates based on passenger preferences and market conditions, airlines may optimize ancillary revenue. By customizing offerings to meet the demands of each individual, this strategy promotes personalization and optimizes income.

2.3. Airline Ancillary Services Considering Passenger Choice Behavior and WTP

In their research, Xinhui Ren, Na Pan, and Hong Jiang (2022) show that the passenger's personal characteristics (gender, age, etc.) have no significant influence on the WTP. However, the flight purpose for business and leisure travel, day flight, flight duration, the number of luggage, and preferred seats have a significant impact on WTP. Steven Leon and Nizam Uddin (2017) indicated in their study that not all passengers want to purchase existing ancillary services. This indicates that their WTP and their preferences differ. Findings in their study revealed that certain factors affect passengers' ancillary service preferences. For example, how often a traveler flies per year and the purpose of their trip (business or leisure) are understood to be important factors influencing purchasing decisions. However, age and income may also play a role in these preferences, although they are not very effective. Literature research reveals that frequent flyers are more likely to purchase ancillary services. For example, it has been observed that passengers who take five or more flights per year are more willing to pay for services such as extra legroom and Wi-Fi. While not as crucial as other factors, age and income still impact passengers' choices regarding ancillary services. For example, younger passengers, especially those born between 1982 and 2000, are more prone to purchasing Wi-Fi compared to older travelers. Additionally, passengers with annual incomes under $25,000 are more likely to opt for services like reserved overhead space than those with higher earnings. In general, the findings indicate that airlines can boost their revenue by customizing their ancillary service offerings based on passenger characteristics and preferences. By targeting the right services to the right customers, airlines can improve customer satisfaction and drive higher sales. In their joint study, Andreas Wittmer, Philipp Boksberger, and Andreas Gerber (2012) highlight that airlines can increase revenue by personalizing their ancillary services based on passenger characteristics and preferences. By delivering the right services to the right customers, airlines can enhance customer satisfaction and drive higher sales. In this regard, utilizing technology and AI through specialized departments focused on this area makes it highly possible to boost ancillary income by offering tailored service recommendations that cater to the specific needs of each customer.

2.4. The Impact of A La Carte Services on Business Profitability

Ružica Škurla Babić (2019) indicated that Airline ancillary revenue, which encompasses non-ticket revenue generated through indirect sales to passengers, has become an essential element for all competing airlines. Airline ancillary revenue has played a significant role in enhancing the financial competitiveness of the airline industry. Airlines generate substantial income through a variety of activities, including à la carte services such as checked baggage fees, frequent flyer miles with airline partners, advertising, and commission-based products like in-flight retail sales and car rentals. The above-mentioned diversified revenue stream enables airlines to leverage their competitive advantage, contributing to their success in the market. Anna Tomova and Zdenka Strmiskova (2014) conclude that the increasing reliance on ancillary revenues is a defining characteristic of low-cost airlines, and this trend is likely to continue as airlines seek new revenue streams to enhance their financial performance and business profitability. Anna Tomova and Zdenka Strmiskova (2014) suggested that further research is needed to explore the specific components of ancillary revenue and understand how specific components contribute to overall revenue dynamics to develop more effective strategies for maximizing their ancillary revenue potential. Overall, Anna Tomova and Zdenka Strmiskova (2014) emphasize the critical role of ancillary revenues in the economics of airlines, which suggests that revenues are essential for profitability and competitive positioning in the airline industry. O'Connell and Williams (2016) explored how low-cost carriers leverage the à la carte pricing model to boost ARASK (Ancillary Revenue per Available Seat Kilometer), resulting in a substantial increase in overall revenue without the need to raise ticket prices. Their research demonstrated that this model enables airlines to compensate for lower base fares by generating extra income from optional services, such as baggage, meals, seat selection, and other add-ons, thereby enhancing their total revenue. The impact of A la carte services on business profitability is multifaceted. It appears from the literature review of Andreas Wittmer et al. (2012) that, by allowing businesses to tailor their services, the revenue may be increased together with profit margins through high-margin add-ons and customer satisfaction by offering customized experiences. The above-offered model also requires careful management to avoid customer disappointment due to perceived hidden costs or lack of transparency. Airlines have successfully implemented various models within company privacy, which aim to increase profitability and create a competitive advantage. However, for airlines to benefit from their ancillary revenue strategy, they need to have clear communication and correct customer selection.

When all the findings are examined, A la carte services can increase profitability, but their success is only possible with additional effort depending on correct application and management.

2.5. The Strategic Importance of A La Carte Services in Airlines

Historically, airlines employed a bundled pricing system, where the cost of a ticket encompassed various amenities such as meals, checked baggage, and seat selection. However, with intensifying competition in the airline industry, especially with the rise of low-cost carriers (LCCs), this all-inclusive pricing model gave way to a more flexible, customer-oriented approach. O'Connell and Williams (2005) note that LCCs were at the forefront of implementing à la carte pricing. These carriers introduced base fares that excluded additional services, such as luggage fees, in-flight meals, and seat preferences, giving passengers the choice to purchase only what they needed. This innovation, initially common in low-cost models, has since been widely adopted across the airline industry, with both LCCs and full-service airlines increasingly relying on ancillary revenue from A la carte services (Papatheodorou & Arvanitis, 2018). One of the major benefits of the A la carte approach is its ability to boost revenue per passenger without raising the base price of tickets. According to Papatheodorou and Arvanitis (2018), ancillary revenue has become a vital source of income for airlines, particularly low-cost carriers that depend heavily on these additional earnings. For instance, Lebeau (2017) observed that airlines have successfully enhanced their profitability by offering extra services such as early boarding, extra baggage, and Wi-Fi access, all of which contribute significantly to ancillary income.

A report by CAPA Idea Works Company (2018), revealed that global ancillary revenue reached $92.9 billion in 2017. This surge in ancillary revenue is largely attributed to the growing adoption of A la carte pricing, where optional services like Wi-Fi, premium seat selection, and priority boarding are sold separately, allowing airlines to maximize revenue by catering to individual passenger preferences. This model, though especially beneficial for budget airlines, has also gained traction with full-service carriers.

A la carte services provide airlines with the opportunity to stand out in an increasingly crowded and competitive market. Zhang and Liu (2014) argue that airlines can gain a competitive advantage by offering personalized experiences that cater to the specific needs of various passenger segments. This segmentation allows airlines to meet the diverse needs of their clientele, ultimately leading to higher customer satisfaction and brand loyalty (Kimes, 2005).

Additionally, the flexibility of the à la carte model enables airlines to respond to market fluctuations. During periods of high demand, airlines can increase the cost of optional services such as Wi-Fi or extra luggage to optimize revenue. Chen and Liu (2019) suggest that this dynamic pricing model allows airlines to adjust their prices in response to market trends without having to alter the base fare, thereby maximizing revenue potential. The success of the A la carte model is also rooted in its ability to align pricing with consumer preferences. As travelers increasingly seek personalized travel experiences, offering A la carte options allows airlines to meet these demands effectively. This trend is expected to continue as customers prioritize comfort and convenience while benefiting from lower base ticket prices.

By allowing passengers to choose only the services they need, airlines can improve customer satisfaction, which leads to greater loyalty. Wensveen (2016) suggested that whenever airlines provided passengers with the freedom to select their own services, their sense of empowerment and overall satisfaction was enhanced, resulting in higher rates of repeat business and long-term customer loyalty. While the A la carte offers several strategic advantages, its implementation also presents certain challenges. One potential issue is customer frustration. Although many passengers appreciate the ability to pay for only the services they use, some may become overwhelmed by the complexity of choices and the hidden costs associated with add-on services. Baker (2010) points out that a lack of transparency in pricing structures can lead to dissatisfaction, especially if passengers are unclear about what is included in their ticket and what is subject to additional fees. To mitigate this risk, airlines must ensure that their pricing models are transparent and clearly communicated to avoid confusion and maintain customer trust.

2.6. Future Trends in A La Carte Services

Looking forward, the future of A la carte services in the airline industry is expected to be increasingly driven by personalization and the use of advanced technology. The integration of AI and big data analytics will enable airlines to segment their customers more effectively and offer services tailored to individual preferences. As Chen and Liu (2019) predict, airlines will continue to use AI tools to analyze customer data and predict demand, allowing them to adjust pricing dynamically and enhance both revenue generation and customer satisfaction.

Furthermore, airlines are likely to expand their ancillary revenue streams by offering a broader range of non-flight-related services. For example, partnerships with third-party providers to offer hotel bookings, car rentals, and vacation packages as part of à la carte services are becoming more common. This shift towards creating comprehensive travel experiences has been gaining traction, as noted by Smith (2009).

With the release of the liberalization law in the United States of America in 1978, the number of airline companies applying the low-cost business model in the airline market began to increase. Traditional airlines have begun to actively use revenue management systems to compete with new low-cost carriers and to combat their pricing policies. Airline companies have tried to increase their revenues by using their inventories in the best way through the revenue management system. Due to the high-cost structure of the airline industry and the fact that it is easily affected by political and economic crises, competition conditions are getting heavier. Airline companies must both reduce their costs and increase their revenues. Airline companies applying the low-cost business model have added a new revenue item to their revenue items to generate more revenue, resulting in the emergence of ancillary revenue. Companies that apply the traditional airline business model have started to use ancillary revenue sources to increase their revenue. To reduce their costs and increase their revenue, traditional carriers have changed their business model by separating some of the products and services they offer to their passengers and charging them separately. Low-cost carriers increase passenger loyalty and comfort.

Although ancillary revenue plays a pivotal role in modern airline operations, it is a novel revenue stream. Hence, gaining deeper insights into the consumers' willingness to pay on ancillary services and the formulation of pricing strategies by airline companies holds considerable significance for the sustained advancement of the broader aviation sector.

CHAPTER III

METHODOLOGY AND IMPLEMENTATION

Randomly selected passenger profiles from various age groups (18-24, 25-34, 35-44, 45-54, over 55 years) who have already flown and have the potential to place ancillary revenue orders are surveyed. The total number of individuals included in this survey study was 254.

3.1. Data Set

The dataset for this study was constructed using a survey conducted via Google Forms. This platform was selected due to its user-friendly interface and wide accessibility. A total of 254 participants completed the survey, although some responses were excluded from the final analysis due to being incomplete or inadequate. In designing the survey questions, we referred to several academic studies that had previously utilized similar methodologies to ensure alignment with our research hypothesis [Baker (2010), Chen & Liu (2019), Lebeau (2017), and Vogel & Williams (2018)].

This study primarily relies on primary data supplemented by secondary sources. The primary data was collected through a detailed questionnaire survey, while secondary data such as reports and statistical figures was obtained from online resources. Based on the insights gathered, the following hypotheses were formulated for analysis.

Table 3.1. Hypotheses of the Study

No.	Hypothesis
H1	Passengers who are more aware of the available à la carte services are more likely to purchase them than passengers who are unaware of these options.
H2	Frequent travelers (those who fly more than 5 times a year) are more likely to purchase à la carte services compared to occasional travelers.
H3	Younger passengers are more likely to purchase Wi-Fi compared to older passengers.

Table 3.1. (cont.)

H4	Passengers who are members of an airline's frequent flyer or loyalty program are more likely to purchase ancillary services due to perceived benefits (e.g., upgrades, priority boarding).
H5	Passengers on long-haul flights are more likely to purchase ancillary services (such as extra baggage, premium seating, or meals) than passengers on short-haul flights.
H6	Type of employment influences yearly flight time and A la carte service purchase.

3.2. Study Population

Passengers selected randomly who have already flown with the potential to place ancillary revenue orders with 254 attendees have been surveyed.

3.3. Data Collection

The study predominantly relies on primary data. Primary data collection involved a thorough questionnaire survey.

3.4. Descriptive Analysis

3.4.1. Demographic Data

Figure 3.1 displays that a large percentage of participants (31%) are aged between 25-34 and (29%) 35-44. 18% of the participants were 45-54, while 13% were 18-24. Finally, 9% of the participants are above 55 years.

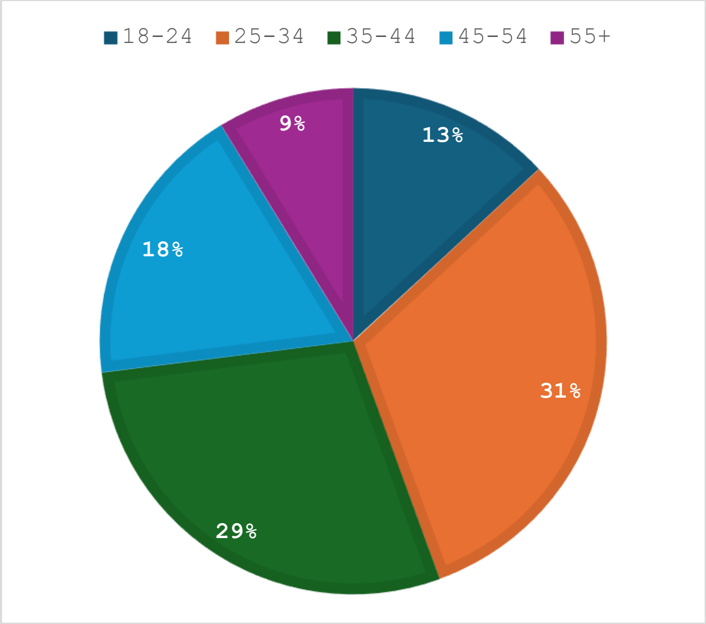

Figure 3.1. Age of the Participants

Figure 3.2 indicates that most of the participants (69%) were Employed full-time. The students' participation was (12%), and the rest of the participants were Self-employed (8%), Retired (6%), Employed part-time (2%), and Other (%3).

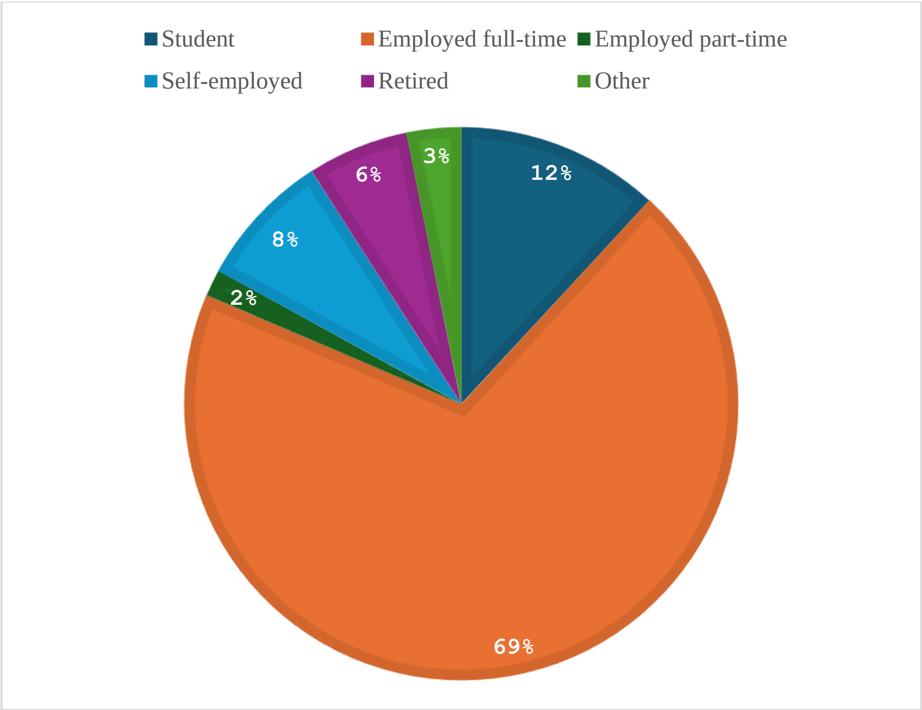

Figure 3.2. Occupation of the Participants

Figure 3.3 illustrates the familiarization with A la carte Services. The survey results show that 42% of the participants were not familiar with A la carte Services while a greater number (58%) of the participants were familiar.

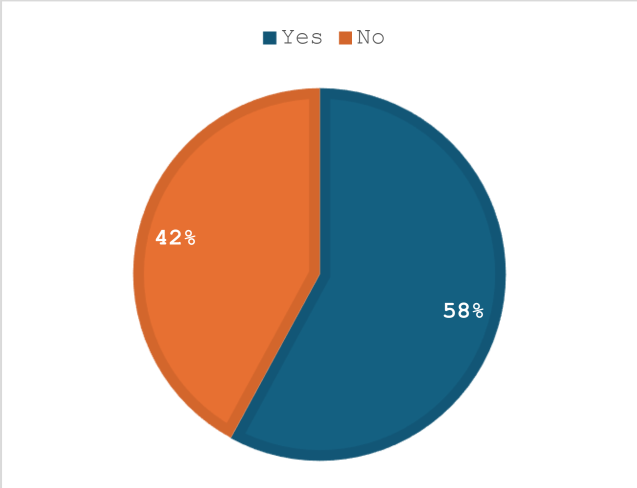

Figure 3.3. Familiarization to A La Carte Services of the Participants

Figure 3.4 shows which A la carte Services participants are willing to pay. The highest selection was 63% with seat selection. The figure illustrates the percentage of each selection. Each attendee can select multiple options which they prefer.

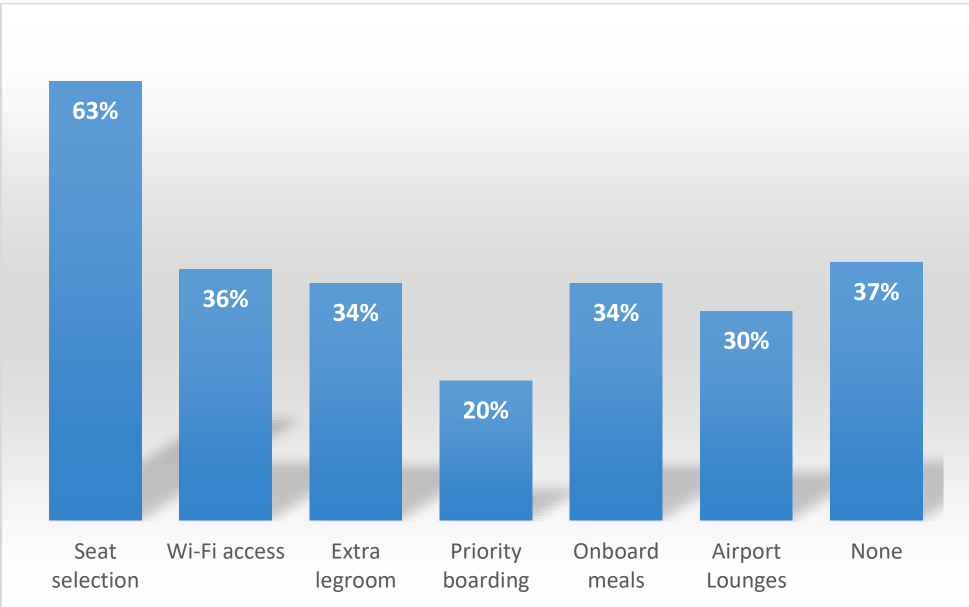

Figure 3.4. Preferred A La Carte Services

The following questions aimed to understand the importance of the A la carte Services selected. The scale has been generated between the values 1 to 5. 5 corresponds to very important and 1 as not important.

Figure 3.5 shows the result of the importance of seat selection for the attendees, in Figure 3.5. Importance has been graded as very important, with the highest percentage, which is 36%.

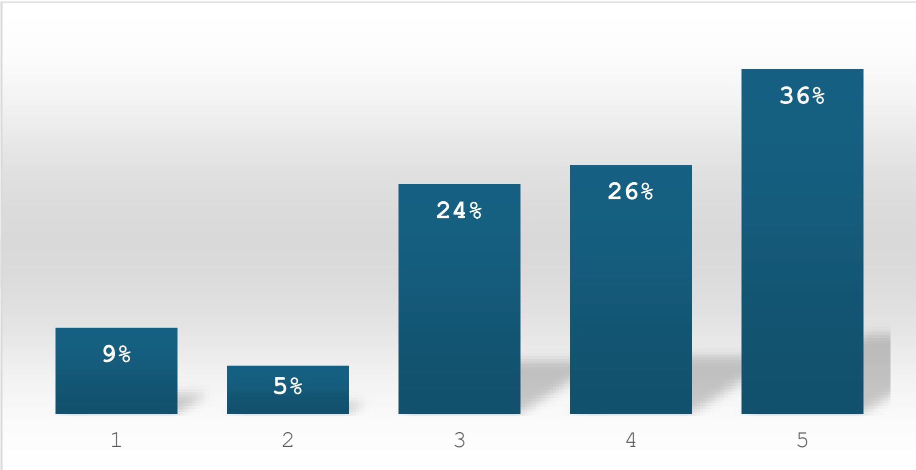

Figure 3.5. Seat Selection Importance

Figure 3.6. shows attendee ratings of Wi-Fi importance. Most of the participants rated it as very important (%27), whereas the vast majority of participants (24%) rated it as "whether or not."

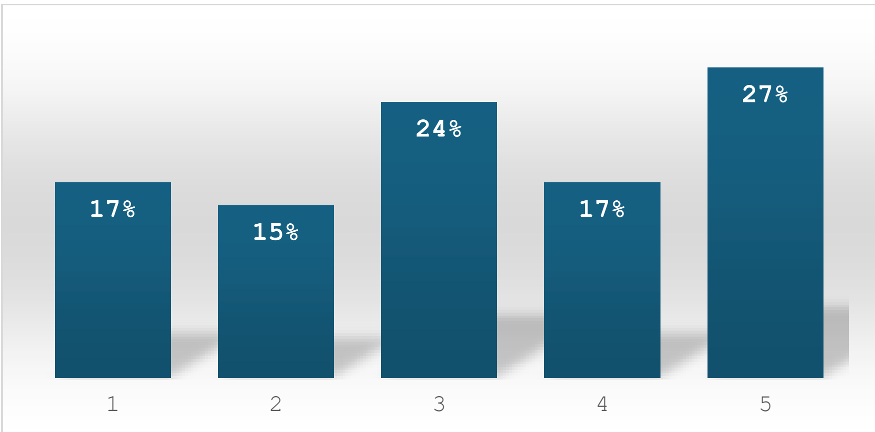

Figure 3.6. Wi-Fi Importance

Figure 3.7. shows the Extra Legroom importance which is ranked as important (30%) and very important (28%) as the highest scores.

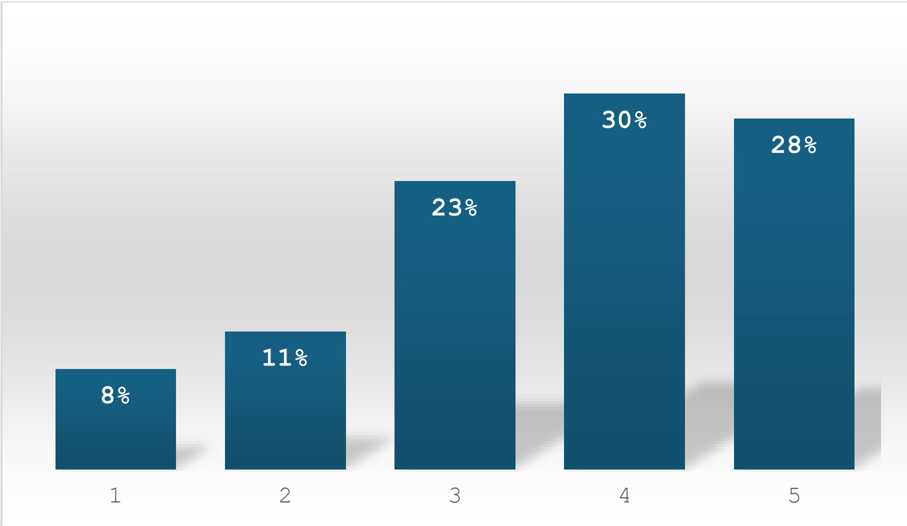

Figure 3.7. Extra Legroom

Figure 3.8. shows that among all attendees, priority boarding importance was rated as the highest (24%) for "Not Important."

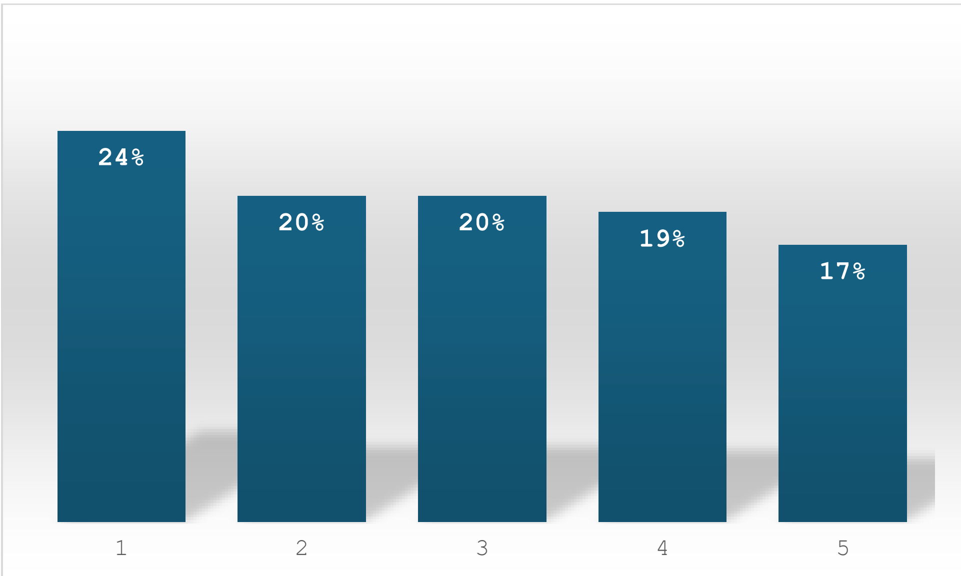

Figure 3.8. Priority Boarding Importance

Figure 3.9. shows that Onboard meal importance has an equal distribution among the importance level. For some of the Attendees it was “not very important” (27%) for some others it was recorded as “very important” (28%).

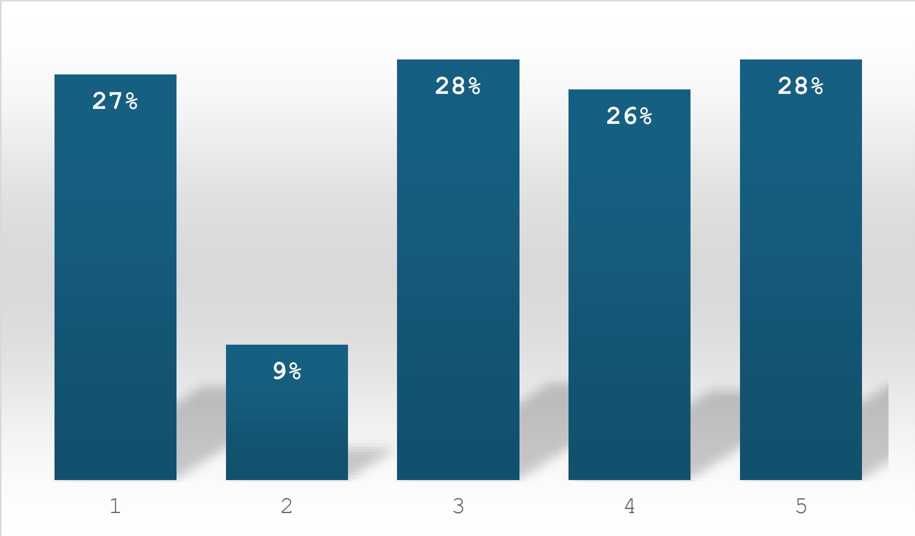

Figure 3.9. Onboard Meals Importance

Figure 3.9. reflects the survey results of Airport Lounges' importance, with the highest percentage (26%) of “important."

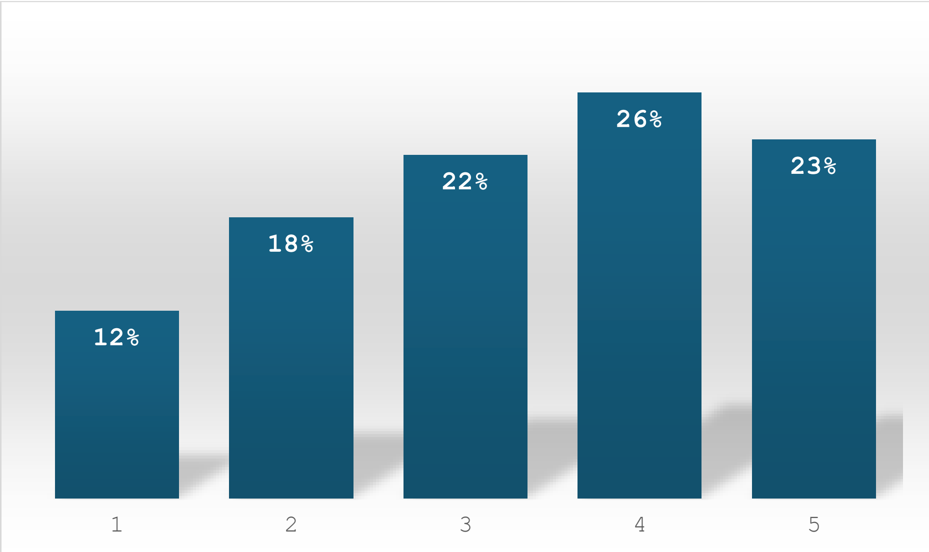

Figure 3.10. Airport Lounges Importance

Figure 3.11. shows how often attendees purchase A la carte services. The highest rating is “sometimes” (42%), followed by “rarely” (31%). These values reflect attendees WTP and the potential for A la carte services to generate additional revenue.

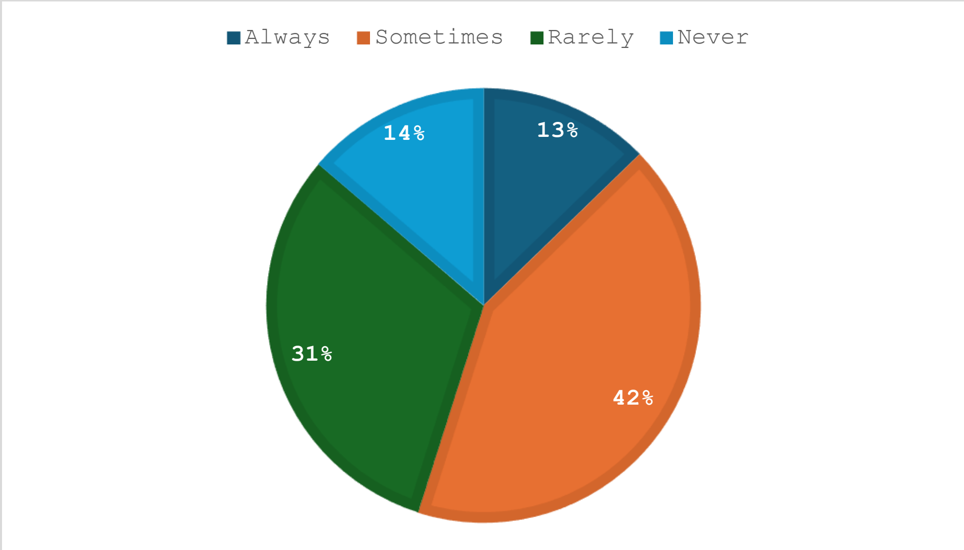

Figure 3.11. A La Carte Service Purchase

Figure 3.12. shows how often attendees travel by air. Most of the participants in this survey study traveled more than five times per year (56%).

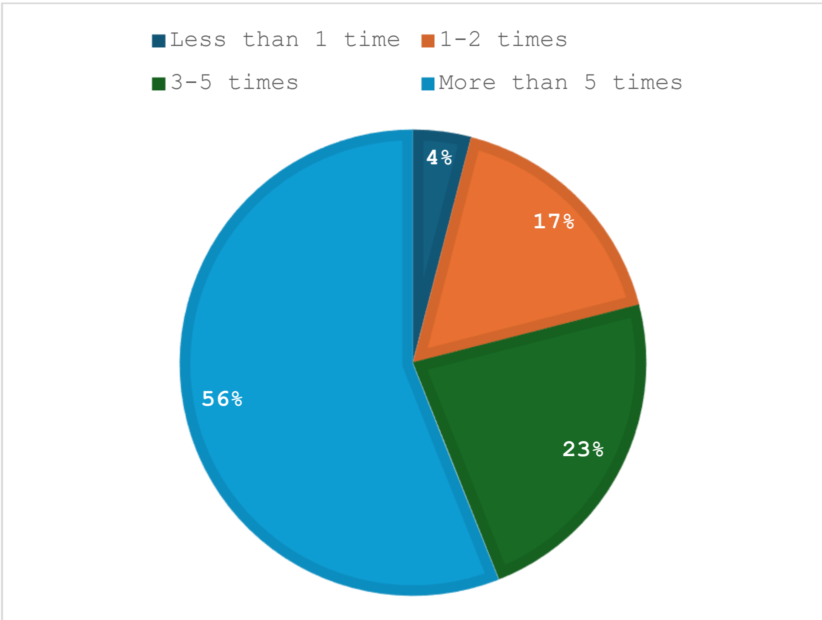

Figure 3.12. Air Travel Frequency per Year

Figure 3.13. shows the preferred booking channels for attendees' air travel tickets. The dominant channel is directly through airline websites (76%), followed by online travel agencies (13%).

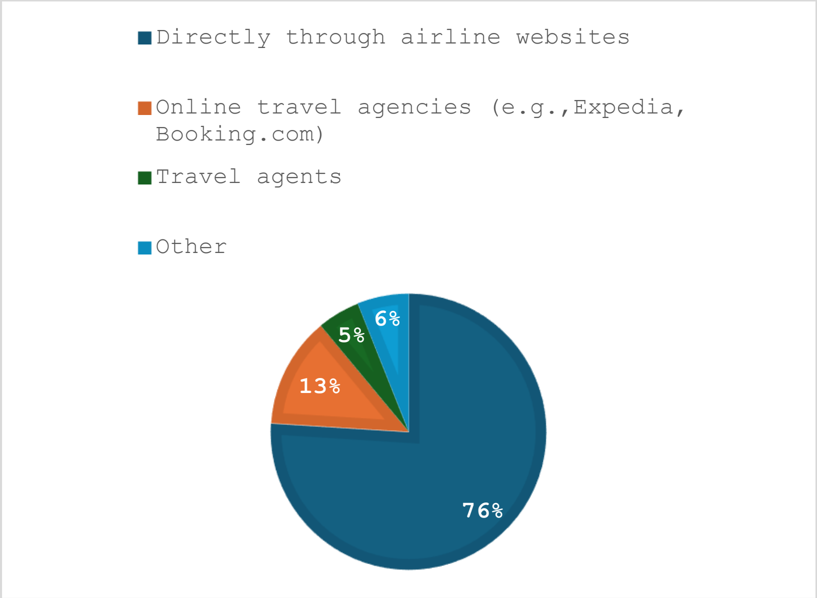

Figure 3.13. Flight Booking Channels

Figure 3.14. shows whether attendees prefer to be part of airline loyalty programs. A high percentage (70%) have decided to join the loyalty programs individually to gain the benefits.

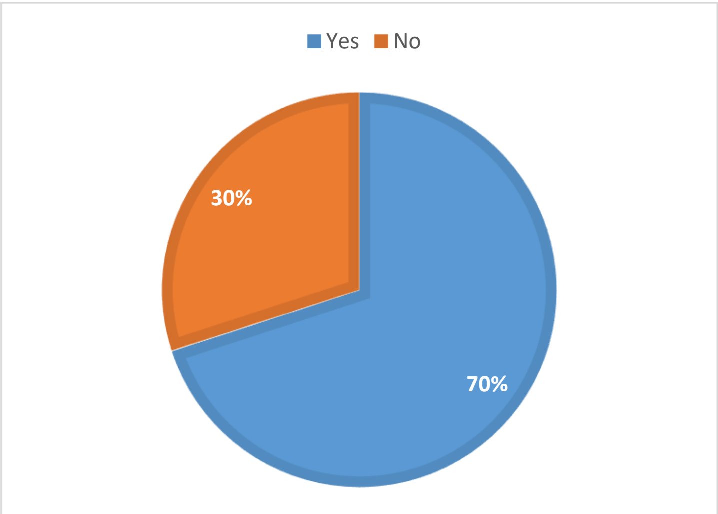

Figure 3.14. Airline Loyalty Program

Figure 3.15. shows the preferred cabin class of attendees while traveling. Most of the participants selected in this survey were Economy class (86%).

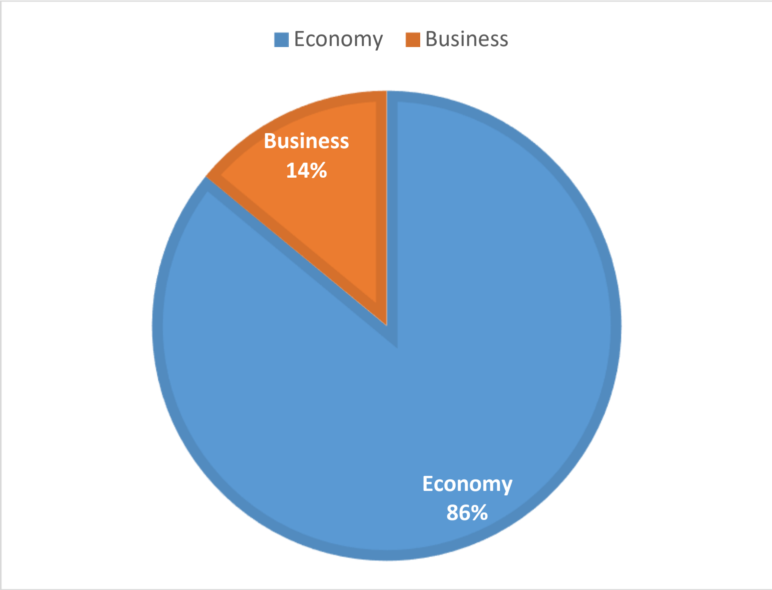

Figure 3.15. Cabin Class

Figure 3.16. shows the preferred flight duration of the attendees based on their needs which was found as Short-haul (54%), Medium-haul (32%), and Long-haul (14%).

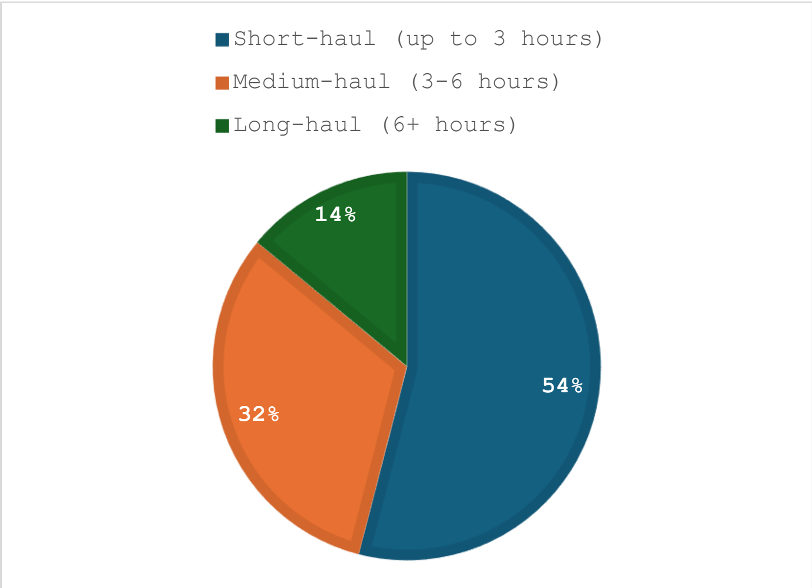

Figure 3.16. Flight Duration

Figure 3.17. shows the importance level of the in-flight entertainment system. The percentages were found to be relatively close to each other.

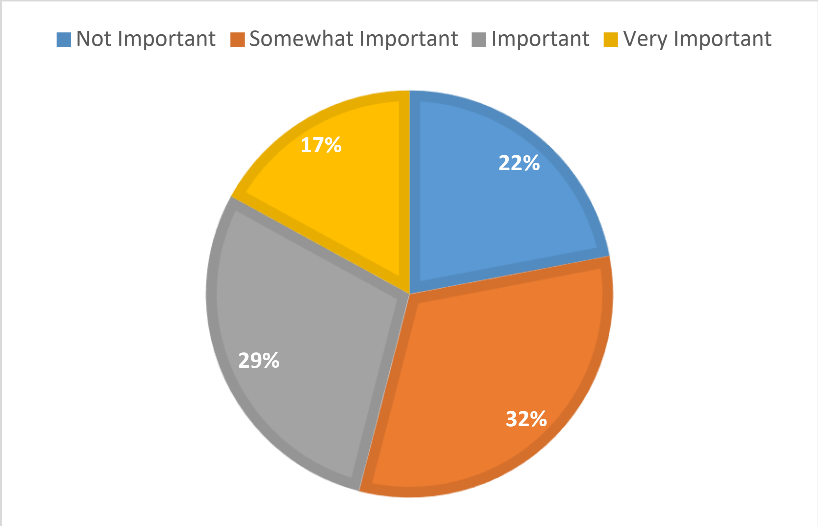

Figure 3.17. Flight Entertainment

Figure 3.18. shows the percentage of the travel budget allocated for À la carte services. The majority of attendees are considering spending 10% of their total travel budget (43%), while 4% are considering spending more than 50% of their travel budget.

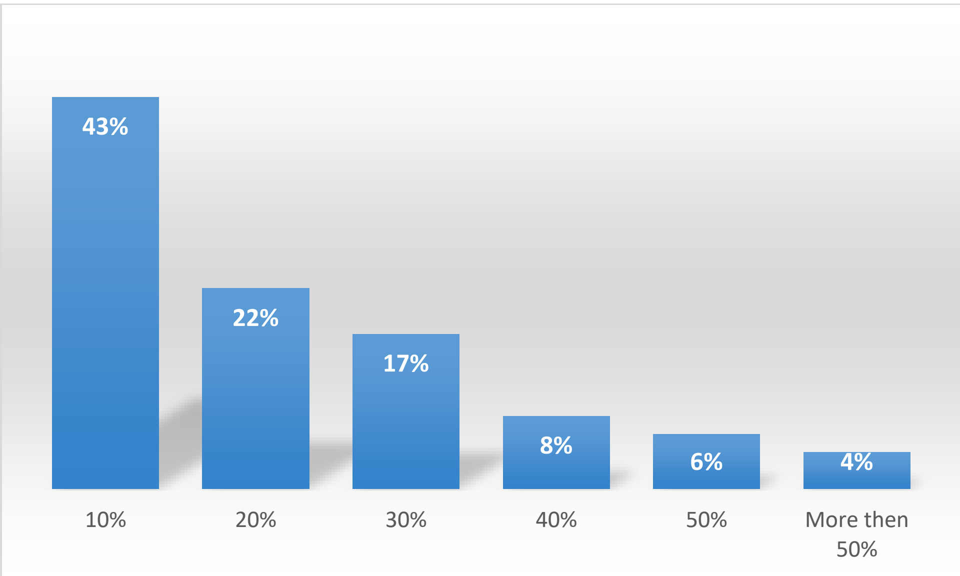

Figure 3.18. Travel Budget

Figure 3.19. shows whether attendees are following airline or travel-related accounts on social media. The majority of participants (66%) were detected to follow the intended airline or travel company to easily access via social media.

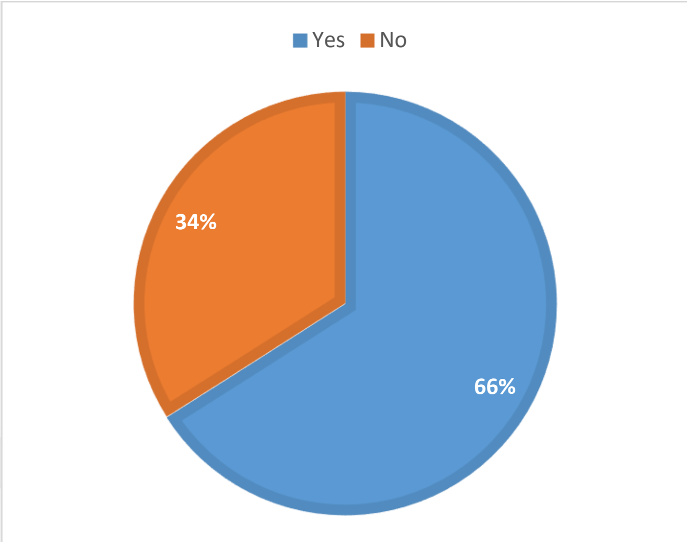

Figure 3.19. Social Media

Figure 3.20. data reflects whether attendees are considering buying tickets from airlines that are investing in sustainability projects. The breakdown is as follows: Yes (41%), No (15%), Maybe (44%). Given the high demand for sustainability initiatives from airlines, the figures indicate that airlines investing in sustainability projects could see an additional 44% in A la carte revenue opportunities.

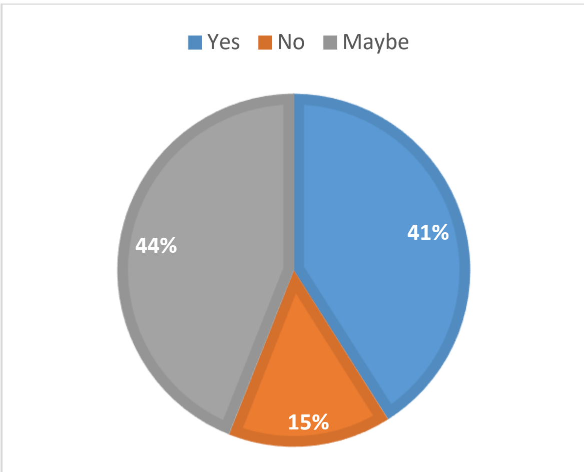

Figure 3.20. Sustainability

3.5. Data Analysis Tool

Statistical analysis was performed using IBM SPSS statistics version 26. Data were summarized as numbers and percentages for categorical variables and mean ± standard error of the mean (SE) (Interquartile Range) for continuous variables. Chi-Square ($\chi 2$) tests were performed to analyze the accordance of genotype distributions with Hardy–Weinberg equilibrium. $\chi 2$ or Mann-Whitney U test was performed for pairwise comparisons. Shapiro-Wilk tests were used to determine whether the continuous variables were normally distributed. Continuous variables were compared using the Mann-Whitney U or Kruskal-Wallis test as appropriate. p values below 0.05 were considered statistically significant

CHAPTER IV

FINDINGS AND DISCUSSION

A total of 254 people were included in the survey study. The participants were asked questions online via Google Form about their age, profession, and ancillary income, which A la carte services prefer when booking their flight tickets, how often they travel per year, through which channels they make the necessary ticket reservations for their flights, and whether they are members of any frequent flyer programs. They were asked questions about which class they travel in, flight durations, the importance of in-flight entertainment systems, how much of their total travel budget they allocate for ancillary income, whether they follow the airlines they decide to fly with on social media, and whether they want to fly with companies that invest in and support sustainability projects. Six separate groups were created for the data targeted in the study. These groups were created as follows: Group 1: A la carte service familiarity, Group 2: Flight frequency, Group 3: Different age ranges, Group 4: Frequent Flyer membership, Group 5: Flight duration, Group 6: Profession.

In Table 4.1. evaluates the Relationship between Familiarization with A la carte Services and A la carte Travel Budget Percentage. As a result, individuals familiar with A la carte services are found to prefer significantly higher ($p<0,05$) A la carte percentage of their travel budget in comparison to individuals who are not familiar with A la carte services (Table 4.1.).

Table 4.1. Relationship between Familiarization with A La Carte Services and A La Carte Travel Budget Percentage

Familiarization with A la carte Services (Group 1)	A la carte Percentage of Travel Budget Mean±SD; median (min-max)	p
Yes	23,49±14,59; 20 (10-60)	<0,05
No	20,09±13,53: 10 (10-60)	

The a la carte Percentage of the Travel Budget variable was summarized as mean ± standard deviation (SD); median (minimum-maximum of mean). Mann-Whitney U test was used to compare the groups. $p<0,05$ was considered statistically significant.

The relationship between familiarization with A la carte services, the frequency of purchasing A la carte services, and the number of flights per year is evaluated in Table 4.2. Individuals who are Familiar with A la carte Services have been found to purchase A la carte services with higher frequency in comparison to those who were not familiar with A la carte services ($p<0,001$). Also, individuals familiar with A la carte services have been detected to fly more than those who were not familiar with A la carte services ($p<0,001$) (Table 4.2.).

Table 4.2. Relationship of Familiarization to A La Carte Services with Frequency of Purchasing A La Carte Services and Number of Flights per Year

Familiarization with A la carte Services (Group 1)	Frequency of purchasing A la carte Services Median (min-max)	p	Number of flights per year Median (min-max)	p
No	1 (0-3)	<0,001	1 (0-3)	<0,001
Yes	2 (0-3)		2 (0-3)	

Frequency of purchasing A la carte Services and Number of flights variables were summarized as median (minimum-maximum). Mann-Whitney U test was used to compare the groups. $p<0,05$ was considered statistically significant.

The relationship of Flying Frequency with A la carte Service Purchase Frequency has been evaluated in Table 4.3. Passengers flying more than 5 times per year have been found to purchase A la carte services significantly higher in comparison to those flying less than 5 times per year ($\chi2=8,44$; $p<0,01$)

Table 4.3. Relationship of Flying Frequency with A La Carte Service Purchase Frequency

Flying Frequency (Group 2)	A la carte Service Purchase Frequency n (%)		χ2, (p)
	Always	Never	
Less than 5 times per year	49 (36,03)	59 (54,63)	8,44 (<0,01)
More than 5 times per year	87 (63,97)	49 (45,37)	

The chi-square test was used to analyze the categorical variable, which was expressed as n (%). $p < 0.05$ was considered statistically significant.

Passengers with different age have been search for their relationship with WI-FI access importancy.in Table 4.4. Although it is not statistically significant (p>0,005) all of the Age internal groups (1-24, 25-44, 45+ yrs) have voted access to Wi-Fi as important.

Table 4.4. Relationship of Age with Importance to Wi-Fi Access

Age Interval (Group 3)	Wi-Fi Access, n (%)		χ2 (p)
	Not Important	Important	
18-24 yrs	13 (40,63)	19 (59,38)	1,04 (>0,05)
25-44	46 (31,29)	101 (68,71)	
45+	21 (32,31)	44 (67,69)	

Table 4.5. Frequent Flyer membership passengers have been evaluated for their relationship with A la carte service purchase importance. Frequent flyer members have been found to purchase A la carte services significantly higher have no more membership ($\chi2$=9,70;p<0,01)(Table 4.5.)

Table 4.5. Relationship of Frequent Flyer Membership with A La Carte Service Purchase Frequency

Frequent Flyer membership (Group 4)	A la carte Service Purchase Frequency n (%)		$\chi2$, (p)
	Always	Never	
Yes	108 (77,70)	66 (59,46)	9,70 (<0,01)
No	31 (22,30)	45 (40,54)	

The chi-square test was used to analyze the categorical variable, which was expressed as n (%). $p < 0.05$ was considered statistically significant.

The Relationship of Flight duration with A la carte Service Purchase Frequency has been evaluated in Table 4. 6. Passengers with Short-haul flight durations were found to purchase A la carte services in higher frequencies in comparison to passengers with Long-haul flight duration ($\chi2$=4,51;p<0,05) (Table 4.6.)

Table 4.6. Relationship of Flight Duration with A La Carte Service Purchase Frequency

Flight Duration (Group 5)	A la carte Service Purchase Frequency n (%)		$\chi2$ (p)
	Always	Never	
Short-haul	115 (82,73)	102 (91,89)	4,51 (<0,05)
Long-haul	24 (17,27)	9 (8,11)	

The chi-square test was used to analyze the categorical variable, which was expressed as n (%). $p < 0.05$ was considered statistically significant.

The relationship between different Occupations with Frequency of purchasing A la carte Services has been evaluated for frequency of purchasing A la carte services and also for number of flights per year Table 4.7.and number of flights per year. The frequency of purchasing A la carte Services between occupation groups was found to be statistically different only between students+part-time employed and self-employed individuals (p<0,005). Pairwise comparisons of other occupation groups with respect to purchasing A la carte Services were not significant (p>0,05). The number of flights per year between occupation groups was found to be statistically different between students+part part-time employed and full-time employed individuals, students and self-employed individuals, and students and retired individuals (p<0,005).

Table 4.7. Relationship of Occupation with Frequency of Purchasing A La Carte Services and Number of Flights per Year

Occupation (Group 6)	Frequency of purchasing A la carte Services n; Median (min-max)	p	Number of flights per year n; Median (min-max)	p
Student+Part Time Employed	34; 2 (0-3)	<0,05	34; 1 (0-3)	<0,001
Full time Employed	175; 1 (0-3)		175; 3 (0-3)	
Self Employed	18; 1 (0-3)		19; 3 (1-3)	
Retired	15; 2 (0-3)		15; 2 (1-3)	
Other	8; 1 (1-3)		8; 3 (2-3)	

Bonferonni corrected Mann Whitney U test was used for pairwise comparisons (limit p=0.005). Frequency of purchasing A la carte Services between occupation groups was found to be statistically significantly different only between students and self-employed individuals (p<0,005). Pairwise comparisons of other occupation groups with respect to purchasing A la carte Services were not significant (p>0,05). The number of flights per year between occupation groups was found to be a statistically significant difference between students and full-time employed individuals, students and self-employed individuals, and students and retired individuals (p<0,005).

This thesis study comprehensively examined a number of airline ancillary services and factors that may influence passenger purchases. In the investigation of ancillary services, we answer several hypotheses: 1) Passengers who are more aware of the available à la carte services are more likely to purchase them than passengers who are unaware of these options. 2) Frequent travelers (those who fly more than 5 times a year) are more likely to purchase à la carte services compared to occasional travelers 3) Younger passengers are more likely to purchase Wi-Fi compared to older passengers 4) Passengers who are members of an airline’s frequent flyer or loyalty program are more likely to purchase ancillary services due to perceived benefits (e.g., upgrades, priority boarding) 5) Passengers on long-haul flights are more likely to purchase ancillary services (such as extra baggage, premium seating, or meals) than passengers on short-haul flights 6) Type of employment has an effect on yearly flight time and A la cart service purchase. Addressing these issues could have a number of managerial uses, similar to the conclusion reached by Leon and Uddin (2017). We propose that the results of our study could help airline management create ancillary services in the future. Our findings may provide data for developing associated sales, marketing, and training strategies, leading to an elevation in revenue. Airlines can reduce the risk of new ancillary services by targeting customers who are ready to purchase. When selecting which services to offer, they should consider the right services and the right customer methodology.

Few academic studies have explored the factors influencing customers' purchases of ancillary services and their willingness to pay for them. (Mumbower, Garrow, and Newman, 2015; Espino, Martiìn and Romaìn, 2008; Ødegaard and Wilson, 2016).

Many airline ancillary service studies primarily utilize stated choice experiments. (Espino, Martiìn and Romaìn, 2008; Martin, Romaìn and Espino, 2008; Balcombe, Fraser and Harris, 2009; Chen and Wu, 2009; Correia, PimpaÞo and TaÞo, 2012; Wittmer and Rowley, 2014). These studies clearly demonstrate customer behavior in purchase situations; however, they are significantly limited by the number of attributes and levels considered in the experiments.

Leon S et al. (2017) looked at the differences between US international airline passengers and their willingness to pay for ancillary services. The report revealed differing preferences among airline passengers for purchasing ancillary services on international flights. The number of flight times for a passenger per year and the reason for travel was demonstrated to be significant by the researchers in detail. In our study, we examined the relationship between A la cart service purchase and familiarization with A la cart services, number of flights per year, frequent flight membership, flight duration, and occupation. Similar to the results of Leon S et al., 2017 A la cart service purchase was found to be significantly related not only to flight times per year but also to other additional parameters we analyzed, such as familiarization to a la carte services, number of flights per year, frequent flight membership flight duration and occupation.

A few ancillary service studies that looked at airline seating were found in the literature. Business and leisure travelers' willingness to pay for more legroom was compared by Lee and Luengo-Prado (2004). In our survey, since there were multiple preferred a la carte service selection choices, we were not able to analyze the relationship between seat selection and willingness to pay for additional legroom. According to Leon S. et al. (2017), travelers who have taken more than five domestic flights in a single year are more likely to buy Wi-Fi and additional legroom than those who have taken fewer flights. It is worth noting that while options, like reserved overhead space and aisle seats, may appear to be minor additional costs, passengers who have traveled on three or more domestic flights or two or more international flights tend to be more open to making these choices. (Leon S et al., 2017). In accordance with the results of Leon S et al., 2017 passengers flying more than five times per year have been found to purchase a la carte services significantly higher than those flying less than five times per year. By concentrating on the passengers who are most likely to purchase a particular ancillary service, airlines can now increase revenue per passenger. Airlines have an opportunity to improve customer service by training frontline employees—such as gate agents and flight attendants—to recognize potential customers. This training in effective sales techniques allows them to provide personalized ancillary services that cater to the specific needs of travelers.

A research group from Turkey evaluated the buying intentions of domestic airline passengers for ancillary products in Turkey and detected that the tendency of Turkish domestic passengers to buy ancillary products was low. The authors did not find any statistical relationship between the demographic characteristics of passengers and the intention of passengers to buy ancillary products. Our results were not in agreement with the results of Sengur et al.2017, in which we observed a significantly high percentage of a la carte service purchases regardless of flight duration.

Another study from Turkey examined the impact of cargo and ancillary revenues on net profit for full-service carrier airlines (Baş O, 2022). Baş O, et al. 2022 revealed that, cargo revenues and ancillary revenues have a positive effect on the net profit of airline companies. The significant results we obtained related to the similarly positive effect with Baş O et al, with higher a la cart travel budget percentage in passangers familiar to A la cart services.

Chiambaretto P. 2021, revealed that found that when distinguishing between millennial and nonmillennial respondents, neither passangers were willing to pay more for ancillary services. In our study we found that all passengers for different age intervals had a high intent to buy Wi-Fi services.

CHAPTER V

CONCLUSIONS

In this study, the following outcomes are obtained and these findings may suggest airlines to focus more on passengers familiar with à la carte services, frequent travelers, and frequent flyer members to maximize ancillary revenue and develop specific strategies for different occupational groups, addressing the unique needs of students, full-time workers, and retirees.

- Passengers who are more familiar with à la carte services are more likely to allocate a larger portion of their budget, purchase more frequently, and travel more often. Frequent travelers are a key segment for à la carte service purchases.
- While younger passengers view Wi-Fi as important, there is no significant difference across age groups regarding this preference.
- Membership in loyalty programs significantly increases the likelihood of purchasing ancillary services.
- Contrary to expectations, short-haul passengers purchase à la carte services more frequently than long-haul passengers. Since low cost carriers have more intention to sell ancillary items to their customers the,se airlines frequently fly short-haul.
- Employment status influences both flight frequency and à la carte purchase frequency, with students being less active than other groups.

Using these insights, airlines can refine their sales and marketing strategies, minimize risks associated with introducing new ancillary services, and boost overall revenue.

In conclusion, airlines have the opportunity to uncover valuable insights into ancillary service purchases by engaging both customers and non-customers in surveys about their intentions, paving the way for enhanced service offerings and customer satisfaction.

By offering a customized service model, airlines can cater to the unique needs of their passengers, driving both revenue growth and gaining a competitive advantage. While there are challenges, such as customer confusion and operational complexities, the benefits of higher profitability, improved customer satisfaction, and market differentiation make the A la carte model a fundamental aspect of modern airline strategies. As technology and consumer preferences continue to evolve, airlines that effectively leverage the A la carte model will be better positioned to succeed in a highly competitive aviation market.

Executives in charge of airline marketing will find great value in these findings, which may also help customers get the services they need at the price levels they are willing to pay.

5.1. Limitation of the Study

As with similar studies, a common issue encountered is that Airlines do not share ancillary revenue data derived from highly important commercial research due to confidentiality conditions.

REFERENCES

Adam, Bockelie., Peter, Belobaba. (2017). Incorporating ancillary services in airline passenger choice models. Journal of Revenue and Pricing Management, 16(6):553-568. doi: 10.1057/S41272-017-0100-6

Andreas, Wittmer., Philipp, Boksberger., Andreas, Gerber. (2012). The future of ancillary service fees in air travel: an exploratory investigation of budget air travelers. 1(4):231-241. doi: 10.1504/IJAM.2012.050474

Arinbjörn, Kolbeinsson., Naman, Shukla., Akhil, Gupta., Lavanya, Marla., Kartik, Yellepeddi. (2022). Galactic Air Improves Ancillary Revenues with Dynamic Personalized Pricing. 52(3):233-249. doi: 10.1287/inte.2021.1105

Babić, R. Š., Ban, M. O., & Bajić, J. (2019). A review of recent trends in airline ancillary revenues. EMC REVIEW-ECONOMY AND MARKET COMMUNICATION REVIEW, 17(1).

Baker, D. M. (2010). The Effect of Airline Ancillary Services on Customer Loyalty: The Case of Southwest Airlines. Journal of Air Transport Management, 16(3), 134-138.

Balcombe, K., I. Fraser, and L. Harris (2009). "Consumer Willingness to Pay For In-Flight Service and Comfort Levels: A Choice Experiment," Journal of Air Transport Management, 15(5):221–226.

Ben, Vinod. (2011). The Future of Airline Distribution and Revenue Management. 86-107. doi: 10.1057/9780230294776_8

Ben, Vinod. (2015). The expanding role of revenue management in the airline industry. Journal of Revenue and Pricing Management, 14(6):391–399. doi: 10.1057/RPM.2015.40

Ben, Vinod. (2021). Influence of Revenue Management on the Airline Business Process. 293–312. doi: 10.1007/978-3-030-70424-7_10

Blaise, Waguespack., Tamilla, Curtis. (2015). Ancillary revenue and price fairness: exploratory study pre and post-flight. 2:208-225.

Bockelie, A. (2019). Ancillary services in the airline industry: Passenger choice and revenue management optimization (Doctoral dissertation, Massachusetts Institute of Technology).

CAPA - Centre for Aviation, IdeaWorksCompany / CarTrawler, 2018. https://centreforaviation.com/analysis/reports/airline-outlook-unbundling-fare-families-ancillaries-447478

Chen, C.F., and T.F. Wu (2009), "Exploring Passenger Preferences in Airline Service Attributes: A Note," Journal of Air Transport Management, 15: 52–53.

Chen, M., & Liu, Y. (2019). Dynamic Pricing in Airline Industry: Opportunities and Challenges in Ancillary Revenue. Journal of Revenue and Pricing Management, 18(2), 158-169.

Chung, J. Y., & Petrick, J. F. (2013). Price fairness of airline ancillary fees: Attributional approach. Journal of Travel Research, 52(2), 168-181.

Dimitrios, Schoinas., John, F., O'Connell. (2011). The airline retail industry: a customer's perspective. World Review of Intermodal Transportation Research, 3(4):353-. doi: 10.1504/WRITR.2011.041718

Elina, Salmi. (2015). Merchandising airline ancillary services through optimized TMC adoption and enhanced corporate traveler experience.

Enikő, Legeza. (2001). Opportunities for revenue increase in air passenger transport. Periodica Polytechnica Transportation Engineering, 29:59-70.

Espino, R., J.C. Martiin, and C. Romaìn (2008), "Analyzing the Effect of Preference Heterogeneity on Willingness to Pay for Improving Service Quality in an Airline Choice Context," Transportation Research Part E, 44(4): 593–606.

Fallert, S. (2011). Ancillary revenues in air transport–gain and pain. In Trends and Issues in Global Tourism 2012 (pp. 145-150). Berlin, Heidelberg: Springer Berlin Heidelberg.

Ferhan, Kuyucak, Sengur., Temel, Caner, Ustaömer., Mustafa, Uzgör. (2017). Research on ancillary product buying intentions of domestic airline passengers in Turkey. 4(4):456-464. doi: 10.17261/PRESSACADEMIA.2017.733

Hawlena, J. (2016). Ancillary revenues in air transport.

Honglin L., Nawal H. B. A., and Shin Y. L. (2024). A review of ancillary services in the airline industry. Cogent Business & Management 2024, VoL. 11, no. 1, 2322018 https://doi.org/10.1080/23311975.2024.2322018

Imbruglia, R. (2014). Ancillary revenues in some sectors of the tourist industry. Rivista di Scienze del Turismo-Ambiente Cultura Diritto Economia, 3(2), 93-120.

Joan, M, Feldman. (1997). To the contrary. Air Transport World.

Johannes, Michelmann., Annika, Paul., Axel, Becker., Christoph, Schneider., Gilbert, Tay., Mirko, Hornung. (2019). Airline Revenues 2035: Revenue Generation and Business Models in Commercial Aviation - A Scenario Study.

Kevin, K., Wang., Michael, D., Wittman., Adam, Bockelie. (2021). Dynamic offer generation in airline revenue management. Journal of Revenue and Pricing Management, 20(6):1-15. doi: 10.1057/S41272-021-00349-4.

Kim, J., Rhee, E. Y., & Lee, J. W. (2017). Consumer Preferences for À La Carte Services in Airline Travel: Evidence from South Korea. Tourism Management, 58, 108-119.

Kimes, S. E. (2005). The Role of Pricing in Revenue Management: A Literature Review. Journal of Hospitality & Tourism Research, 29(4), 357-374.

Klophaus R. (2013). Book: Liberalization in Aviation. Chapter: À la Carte Pricing to Generate Ancillary Revenue: The Case of Ryanair. 1st Edition, p.9. eBook ISBN9781315592305

Lebeau, M. (2017). Ancillary Revenue in Airlines: A Study of the New Growth Model in Aviation. International Journal of Aviation Management, 4(1), 23-35.

Lee, D. and M.J. Luengo-Prado (2004). "Are Passengers Willing to Pay More for Additional Legroom?" Journal of Air Transport Management, 10: 377–383.

Legeza, E. (2001). Opportunities for revenue increase in air passenger transport. Periodica Polytechnica Transportation Engineering, 29(1-2), 59-70.

Leon, S., & Uddin, N. (2017). Data-driven insights: assessment of airline ancillary services. Journal of Transportation Management, 27(2), 6.

Liu, Hui-yon. (2015). Research on Passenger Interest Model for Civil Aviation Ancillary Services. Journal of Beijing University of Posts and Telecommunications

Madhusudan, Rao, Kummara., Bhaskara, Rao, Guntreddy., Ines, Garcia, Vega., Yun, Hsuan, Tai. (2021). Dynamic pricing of ancillaries using machine learning: one step closer to full offer optimization. Journal of Revenue and Pricing Management, 20(6):646-653. doi: 10.1057/S41272-021-00347-6

Martin, J.C., C. Romaìn, and R. Espino (2008). "Willingness to Pay for Airline Service Quality," Transport Reviews, 28(2): 199–217.

Michele, McDonald. (2009). Tapping the Ancillary Revenue Well. Air Transport World, 46(3).

Mumbower, S., Hotle, S., & Garrow, L. A. (2023). Highly debated but still unbundled: The evolution of US airline ancillary products and pricing strategies. Journal of Revenue and Pricing Management, 22(4), 276-293.

Naman, Shukla., Arinbjörn, Kolbeinsson., Ken, Otwell., Lavanya, Marla., Kartik, Yellepeddi. (2019). Dynamic Pricing for Airline Ancillaries with Customer Context. 2174-2182. doi: 10.1145/3292500.3330746

Nisara, Paethrangsi. (2021). Maximizing revenue in the airline industry through air cargo operations. 244:08019-. doi: 10.1051/E3SCONF/202124408019

O'Connell, J. F., & Williams, G. (2005). The Evolution of the Low-Cost Carrier Model: The Case of Ryanair. Journal of Air Transport Management, 11(5), 239-246.

Onur, Bas., Tamer, Aksoy. (2022). Examining the impact of cargo and ancillary revenues on net profit for full-service carrier airlines. International journal of business ecosystem & strategy, 4(3):48-72. doi: 10.36096/ijbes. v4i3.330.

Päivi, Rautanen. (2012). Airline Ancillary Services in Travel Management process.

Papatheodorou, A., & Arvanitis, A. (2018). Ancillary Services and Their Role in the Financial Performance of Low-Cost Airlines. Tourism Economics, 24(1), 128-141.

Paul, Chiambaretto., Paul, Chiambaretto. (2021). Air passengers' WTP for ancillary services on long-haul flights. Transportation Research Part E-logistics and Transportation Review, 147:102234-. Doi: 10.1016/J.TRE.2021.102234

Paul, Stephen, Dempsey. (2011). Airlines in Turbulence: Strategies for Survival. Social Science Research Network,

Renata, Imbruglia. (2014). Ancillary revenues in some sectors of the tourist industry. 3(2):93-120.

Ruwantissa, Abeyratne. (2014). Airlines: The Other Side of the Coin. 103-155. doi: 10.1007/978-3-319-01041-0_6

Sari, Okura. (2015). Optimizing the merchandising of airline ancillary services through Travel Management Companies.

Shukla, N., Kolbeinsson, A., Otwell, K., Marla, L., & Yellepeddi, K. (2019, July). Dynamic pricing for airline ancillaries with customer context. In Proceedings of the 25th ACM SIGKDD International Conference on knowledge discovery & data mining (pp. 2174-2182).

Smith, A. (2009). Customer Choice and Airline Ancillary Revenue: A Strategic Review of the A la Carte Model. Aviation Strategy Review, 12(1), 56-63.

Steven, Leon., Nizam, Uddin. (2017). Airline Ancillary Services: An Investigation into Passenger Purchase Behavior. Journal of the Transportation Research Forum, 56(1):41-62. doi: 10.5399/OSU/JTRF.56.1.4411

Sumayyah, Akoodie., C., E., Cloete. (2020). The contribution of airport retail to total airport revenues. business management review, 11(01) doi: 10.24052/BMR/V11NU01/ART-09

Tomova, A., & Strmiskova, Z. (2014). Explanatory Analysis of Ancillary Revenues: Case Study of Three European Airlines. Communications-Scientific Letters of the University of Zilina, 16(2), 36-40.

Farion. V., Y.,, Sviatoslav, P., Iryna, K.. (2023). Integrated accounting classification of expenses and incomes of the main activities of passenger carriers. Вісник економіки, 61-61. doi: 10.35774/visnyk2022.04.061

Waguespack, B., & Curtis, T. (2015). Ancillary revenue and price fairness: an exploratory study pre and post-flight. International Journal of Aviation Management, 2(3-4), 208-225.

Warnock-Smith, D., O'Connell, J. F., & Maleki, M. (2016). Development of intelligence-based ancillary revenues and products.

Wensveen, J. G. (2016). Airline Economics: A Comprehensive Introduction to the Economics of Air Transport. Ashgate Publishing.

Wittmer, A., & Oberlin, N. (2015). Ancillary revenue pricing. Journal of Air Transport Studies, 6(2), 43-62.

Wittmer, A., and E. Rowley (2014). "Customer Value of Purchasable Supplementary Services: The Case of a European Full Network Carrier's Economy Class," Journal of Air Transport Management, 34: 17-23.

Xinhui R., Na P., Hong J. (2022). Differentiated pricing for airline ancillary services considering passenger choice behavior heterogeneity and willingness to pay. Transport Policy, 126,292-305.

Zhang, Z., & Liu, L. (2014). A Competitive Analysis of the Airline Industry: The Role of Ancillary Services. Journal of Air Transport Research, 10(2), 215-230.

APPENDIX

APPENDIX A

A LA CARTE ANCILLARY REVENUES IN AIRLINE

Survey Questionnaire

Duration: **5-10 minutes**

Dear passenger,
Welcome to our survey! This comprehensive survey covers a wide range of topics related to Airline travel and A la carte ancillary services.

Survey General Information

I. Age

- Under 18
- 18-24
- 25-34
- 35-44
- 45-54
- 55+

II. Occupation:

- Student
- Employed full-time
- Employed part-time
- Self-employed
- Retired
- Other

III. Which à la carte services do you typically consider or use when booking a flight? (Importance as scale is not important - 1 to 5-very important)

- Seat Selection
- Wi-Fi Access
- Extra legroom
- Priority boarding
- Onboard meals
- Airport Lounges
- None

IV. How often do you purchase à la carte ancillary services when flying?

- Always
- Sometimes
- Rarely

- Never

V. How often do you travel by air per year?

- Less than 1 time
- 1-2 times
- 3-5 times
- More than 5 times

VI. How do you typically book your flights?

- Directly through airline websites
- Online travel agencies (e.g., Expedia, Booking.com)
- Travel Agents
- Other

VII. Are you a member of any airline loyalty programs?

VIII. Which cabin class do you usually fly in?

- Economy
- Business

IX. What is your preferred flight duration?

- Short haul (Up to 3 hours)
- Medium-haul (3-6 hours)
- Long-haul (6+ hours)

X. How important is in-flight entertainment to you?

- Not important
- Somewhat important
- Important
- Very Important

XI. What percentage of your total travel budget do you allocate for ancillary services?

- %10
- %20
- %30
- %40
- %50
- More than %50

XII. Do you follow airlines or travel-related accounts on social media?

XII. Do you consider airlines' sustainability practices when making travel decisions?

QUESTIONNAIRE SOURCES & REFERENCES

Warnock-Smith, D., O'Connell, J. F., & Maleki, M. (2016). Development of intelligence-based Ancillary revenues and products.

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