

## Conference Paper

# Analysis of Willingness to Pay for Ancillary Revenue of Full Service Airline (The Case of Garuda Indonesia)

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## Abstract

Airlines are facing challenges from high cost structures and intense competition. This has made airlines universally look for opportunities to generate ancillary revenue, additional income apart from their main sources, including Full Service Carriers (FSC). Measuring consumer's willingness to pay is pivotal in pricing and estimating ancillary revenue demand. This study analyzes whether customer's type of journey, purpose of journey, length of flight, and type of flight class have an impact on willingness to pay (WTP) of Garuda Indonesia's ancillary revenues which comprises of unbundled products and commission based income. This paper uses data from a survey to Garuda Indonesia's customer and follows quantitative studies to identify and describe the relationship between the WTP of Garuda Indonesia's ancillary revenue and all variables involved. The study found that passengers value more the unbundled products. It is also found differences in WTP for particular ancillary products and services based on purpose of journey, length of flight, and type of flight class.

**Keywords:** Ancillary Revenue, Willingness to Pay, Type of Journey, Length of Flight, Journey Purpose, Type of Cabin Class, Full Service Carriers

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## 1. Introduction

The high cost structure and competitive market structure has made airlines universally look for opportunities to generate additional income apart from their main sources such as unbundling the fare, retailing, dynamic packaging products, and also advertising (O'Connell and Warnock-Smith, 2013). Airlines becoming more innovative with ancillary products and services (IATA, 2016). Despite the strong demand, airlines are being challenged especially on the cost front by rising fuel price, labor, and infrastructure expense, but most airlines believes competition is the greatest challenge facing their business (Accenture – Amadeus, 2017). In the Association of Southeast Asian Nations (ASEAN) region, the fast growth of Low Cost Carriers (LCCs) are strengthening the competition and contributing to keeping profitability low (IATA 2018).

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According to IATA (2016), there is a positive correlation between ancillary revenue with high operating profits. It suggests that airlines should not only focus on selling the core flight products but also the ancillary products or services to increase the revenue per passenger. Previous research of D. Warnock-Smith et al, (2017), has also stated that ancillary revenue is currently become an engine to generate more revenue and a core competency as a part of many airlines' marketing mix.

Pioneered by low cost carriers, full service airlines, presently, have been employ this ancillary source of revenue (Amadeus, 2016). Full Service Carriers (FSCs) business model face challenges from LCCs which provides cheaper price and options priced separately, and all carriers consequently face challenge in how to create offers and how to communicate it with the customers (Accenture – Amadeus, 2017). It is a challenge for FSCs to develop the ancillary revenue, which dominated by LCCs. In Indonesia, only Garuda Indonesia operates as a full service carrier, while the others airlines operate as low cost carriers or premium regional carriers. Garuda Indonesia currently look for opportunities to generate additional revenues from their non-core sources and more intense to develop its non-ticket business or ancillary revenue as a new tool in increasing revenue (Kontan, 2018).

Previous study of O'Connell and Warnock-Smith, (2013) stated that acceptance level of travelers for ancillary products and services owned by FSC is only slightly lower than that of LCC, both for unbundled products and commission based products. Hence, FSCs can still developing its ancillary revenues but more in a prudent way such as at the right price.

Measuring consumer's willingness to pay is one of the crucial valid procedure in designing ideal pricing policies for ancillary products and services and for forecasting demand for new ancillary products and services (Voelckner, 2016). Hence, it is important for FSCs to analyze further factors that influence willingness to pay of ancillary products and services from their customers in order to increase its ancillary revenues. Airline could also enjoy the benefit of understanding customers' ancillary preferences and willingness to pay or use based on carrier type, journey length, and journey purpose. Willingness to pay for various ancillary products and services is different between LCCs and FSCs, short haul and long haul flights, and leisure or business purpose flights. Airline could use the information to engage in more accurate marketing target and to determine which categories of ancillary products and services to focus on (D. Warnock-Smith et al, (2017).

This study aims to analyze the customers' willingness to buy for ancillary products and services of Garuda Indonesia which is part of the company Business to Customer

(B2C) ancillary revenue and find the variation in the willingness to buy based on carrier type, length of flight, journey purpose and type of journey based on the responses to a comprehensive passenger survey. The result also add to find potential ancillary product or services to expand by Garuda Indonesia.

This paper is structured as follows: Section 2 reviews the theory of ancillary products and services along with previous related research of ancillary revenue, section 3 discusses the methodology and data collection phase, section 4 presents the descriptive results and section 5 concludes and recommends.

## 2. Literature Review

### 2.1. Ancillary Revenues

Ancillary revenue defined as revenue beyond the sale of flight tickets, which can be directly or indirectly sell to the passengers as a part of the travel experience (Sorensen, 2018). Ancillary revenue is increasingly becoming an important part of the revenue stream for many airlines. Airlines continuously develop new ancillary products and services, the development must involving a balance mix of revenue management and customer satisfaction (Rouncivell, Timmis, & Ison, 2018) Warnock-Smith, O'Connell, and Maleki M. (2017) stated that the next ideal purchasable ancillary products and services expansion to offer is products and services that bring more comfort value added and convenience amenities to economy class travel.

Ancillary revenue can be divided into two categories, first, the a-la-carte item that consist of unbundled items for sale and punitive charges which are penalties that are levied from indecision and poor planning by passengers. Second, third party ancillary streams, comprising commission based incentives, revenues from frequent flyer programs and advertising (Warnock-Smith, O'Connell, Maleki, 2017).

A la carte features characterize with the features consumers can add to their air travel experience. **Commission-based products** is a commission-based activity such as on the sale of hotel accommodations, car rentals and travel insurance (dynamic packaging). **Frequent flyer programs** consist of sale of miles or points to program partners such as co-branded credit cards, hotel chains, car rental companies, online retailers, and also sales of miles or points made directly to program members. **Advertising sold by the airline** includes any advertising initiative linked to passenger travel. The following are common activities; advertising in the in-flight magazine, overhead luggage bins, seat backs, etc (Ideaworks,2011).

Ideaworks found that many airlines starts to apply a la carte pricing to boost the ancillary revenues. There is also an enormous opportunity for airlines to boost its commission-based products that are provided by third parties such as holiday package, car hire and hotel rooms, the concept is known as dynamic packaging.

## 2.2. Journey Purpose

According to Stephen Shaw (2011), the basic form of journey purpose is between business and leisure travel. Business travel usually aims to attend meetings, conferences, training, etc., and can further divided into independent and corporate business travelers. Corporate travelers are those who employed by a medium or large company, and who are able to put the price of the tickets and other business travel costs onto the company's expense account. They may placing importance on high product standards (Stephen Shaw, 2011). While independent business travelers are those who are entrepreneur or who work for smaller companies. Self-employed business travelers might be more price-sensitive (Holloway, 2008). Leisure travel can further divided into holiday and Visiting-Friends-and-Relatives (VFR) travel. Holiday can be further sub segmented into traditional one – two week vacation, short break, travel to cultural or sports event, etc.

Journey purpose continues to be used to represent the duration of the trip, booking pattern, travel frequency and demand elasticity that are important considerations when airline wants to create a marketing program or determine marketing targets (Holloway, 2008). Based on the previous statement, the hypothesis is formulated as follow:

**H<sub>1</sub>**: Journey purpose has an impact on willingness to pay (WTP) for ancillary products and services.

## 2.3. Type of Cabin Class

Generally, there are four types of cabin class, economy, premium economy, business, and first class. This study focuses on two types of cabin class, economy class and business class. Economy class is the lowest flight class or most basic class of airlines. This class designed for budget traveler. Between the most basic class and first class is business class. Business class usually designed for business traveler. Airlines increases the quality in this class and everything is better than the economy class. With the cabin service differences between both classes, it might make a difference in the willingness to pay for ancillary products and services. Based on the previous statement, the hypothesis is formulated as follow:

**H<sub>2</sub>**: Type of cabin class has an impact on willingness to pay (WTP) for ancillary products and services.

## 2.4. Length of Flight

The basic differences between the lengths of flight are the short haul and the long haul. The cut-off point between short haul and long haul is debatable. Presumably, no one would dispute 45 minutes as a short haul and 10 hours as a long haul flight. The confusing area is the three or four hours flight (Stephen Shaw, 2010).

Long haul travelers are more likely to travel alone or with spouse, while short haul travelers are more likely to travel with family, relatives or friends, and business partners (McKercher, 2008). Long haul travelers are less likely to have previous travel experience to the particular destination compared to short haul travelers (C. Bianchi et al., 2017). In terms of travel expenditures, McKercher (2008) found significant differences in how the two groups of travelers spend their money. Considering that the total trip duration for long haul travelers, in total, is four to five times higher than the short haul travelers, it is estimated that the total expenditure for the entire trip is, at minimum, four to five times higher for the long haul travelers than the short haul travelers.

Profile, behavior, and motivation vary significantly between short and long haul travelers. Long haul markets behave more consistently than the short haul markets (J. Ahn & McKercher, 2015). Thus, the length of flight may show differences regarding the purchase or purchase intention of airline's ancillary products and services. Based on the previous statement, the hypothesis is formulated as follow:

**H<sub>3</sub>**: Length of flight has an impact on willingness to pay (WTP) for ancillary products and services.

## 2.5. Type of Journey

Author divides the type of journey into domestic and international flight. Domestic journey is a flight between two stations to which the same country code applies. International journey is flight where the place of departure and any place of landing situated in more than one state (IATA Passenger Glossary Terms, 2018).

People who travel abroad (international route) frequently are more likely to be willing to pay a higher amount of carbon-offsets (Lu & Shon, 2012). The study found that one of the ancillary revenue's product, preferred seat selection, is a possible revenue stream for airlines, even with the domestic route. According to A. Rouncivell et al. (2018), domestic

market in UK and EU characterized by short length route, intense competition, a number of airline business models (LCC and FSC), and single (economy class) seating. Type of journey may has influence on the willingness to pay for ancillary products and services, hence, the hypothesis is formulated as follow:

**H<sub>4</sub>:** Type of journey has an impact on willingness to pay (WTP) for ancillary products and services.

## 2.6. Willingness to Pay

According to Warnock-smith, O'Connell, Maleki (2017), price is one of the most important flight attributes to passengers. Thus, getting the right price provides an important platform for airline to capture passengers' preferences in relation to ancillary products and services. Being able to know the customer's willingness to pay for the company's products and services may help the company to follow pricing strategy that is appropriate to the company's marketing environment and to get valuable information to increase the products offered profitability (Breidert, Hahsler, & Reutterer, 2006). The willingness to pay for products or services by the customers are reflects their purchase intentions (Li, Li, & Kambele, 2012).

According to Brown et al. (1996), it is more simple to ask the customers to decide whether a particular point of price for a product is acceptable than to directly appoint a price. When the customers is presented the products and their prices, they can be asked to place a preference rating, preference ranking or select their most preferred choice. Willingness to pay that reflecting the purchase intention by the customers is may be different between type of carrier, journey purpose, length of flight, and type of flight class.

## 2.7. Potential New Ancillary Products and Services

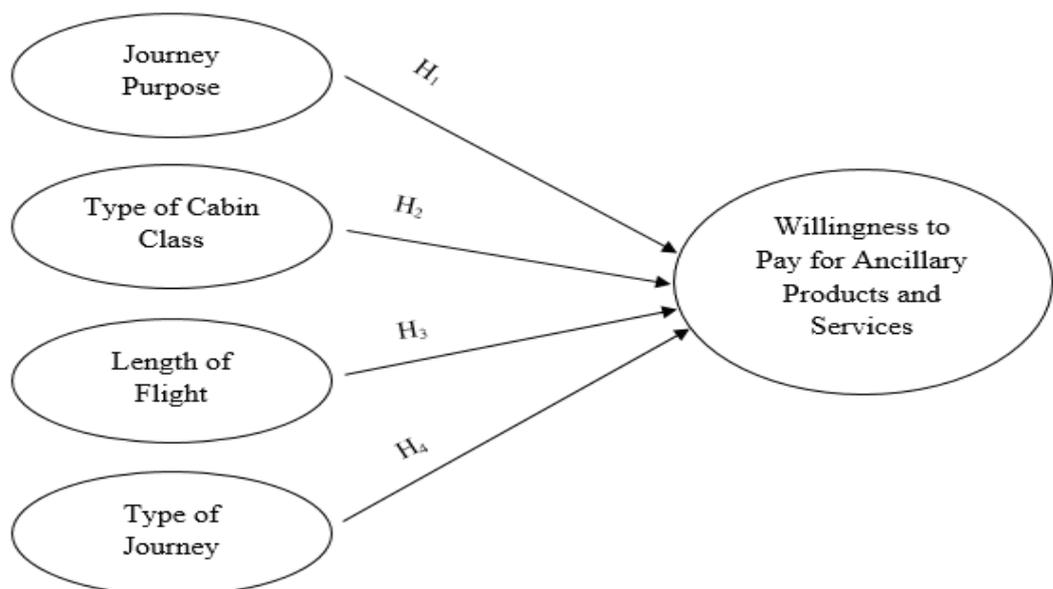
Particularly, WTP information is useful for new products and at the beginning of product development because other sources of estimated demand that are used as the basis for profit or cost-benefit calculations are not available (Voelckner, 2006).

Currently, many airlines sell related to air travel ancillary products and services, but start to get more innovation in the commercialization. Williams and O'Connell, (2011) asks airlines to generates multiple revenue streams in the dynamic packaging such as not only takes passengers to book additional flight and hotel room but also to enjoy the sport of diving by giving diving package when travelling to Florida. Another enormous

opportunities in generating ancillary revenues are mobile phones on board and annual membership fees.

### 3. Methodological Approach

This study has two levels of questions. For the aggregate question, aside from question related to overall willingness to pay for a range of unbundled and commission based ancillary products and services, there is also question related to customer preference of potential new ancillary products and services to offer by Garuda Indonesia. For the disaggregate questions, whether type of cabin class (economy and business class), journey purpose (business and leisure), length of flight (short haul and long haul), and type of journey factor (domestic and international) of passengers lead to any variation in willingness to pay. This study adapts research model used in a previous study entitled “An Analysis of Ongoing Trends in Airline Ancillary Revenues” by Warnock-Smith, O’Connell, and Maleki (2017).



**Figure 1:** Adapted Research Model of “Analysis of Ongoing Trends in Airline Ancillary Revenues” by Warnock-Smith, O’Connell, and Maleki (2017).

This study uses conclusive research design, namely research that aims to test certain hypotheses and see the influence between variables. The type of conclusive research conducted is descriptive research. Descriptive research used is a cross-sectional study (sample survey) where data collection about the predetermined sample from the population taken only once. Descriptive research carry out in this study is by distributing questionnaire to respondents.

Data used in this study is primary data. Primary data is original data from author for specific purposes to solve the research problems. In this study, primary data obtained by conducting an online survey to respondents, namely by distributing questionnaires to passengers of Garuda Indonesia to reveal their purchases and purchase intentions for their previous flight. In general, the questionnaire divided into 2 parts; First Part consists of information regarding the respondents' profile and demography. Second part, questions related to four research variables in this study (Journey Purpose, Type of Carrier, Length of Flight, and Type of Journey).

Respondents in this study were required to have flying experience with Garuda Indonesia. All questionnaires distributed in this study reached 222 questionnaires, but only 204 respondents can be used as data since 18 respondents did not have experience flying with Garuda Indonesia. The profile section of respondents in the questionnaire include gender, age, occupation, income, and frequency of flying in a year. Out of 168 respondents, 55% were women and 45% were men. In terms of age, the results showed that 51%, more than half of the population, was >30 - 40 years old or born in 1979 – 1988, 29% of respondents were 21-30 years old or born in 1989 - 1998. The two biggest occupation demography were 43% Private company employee and 33% government / state-owned company employees. For household income, 38% of the respondents has income >100 – 300 million Rupiah and for income >60 – 100 million Rupiah per year there are 25% of respondents. Out of 168 respondents, 66% of respondents stated their frequencies of flying 2 – 10 times per year.

Since the independent and dependent variables of this study are categorical. A chi-square test was applied to examine the impact of flight related factors on willingness to pay for ancillary products and services and evaluate the significance of any differences. For the aggregate level question this study used descriptive statistics.

## 4. Result and Analysis

### 4.1. Analysis of recent purchase or purchase intention behavior

Respondents were asked what ancillary products and services they purchased or they intent to purchase on their most recent flight with Garuda Indonesia. Figure 2 shows that 28.4% of the respondents stated they did not purchase or intent to purchase any ancillaries on their recent flight. The most popular categories purchased or intent to purchase by the respondents are excess baggage 17.6%, seat selection 10.8%, upgrade to business/first class 21% and Wi-Fi onboard 9.3%, all of which can be considered

as unbundled products. While the commission-based products, car rental and hotel package, are only 3.9% purchase or intent to purchase by the respondents. This finding is consistent with previous studies by Warnock-smith, O’Connell, Maleki (2017).

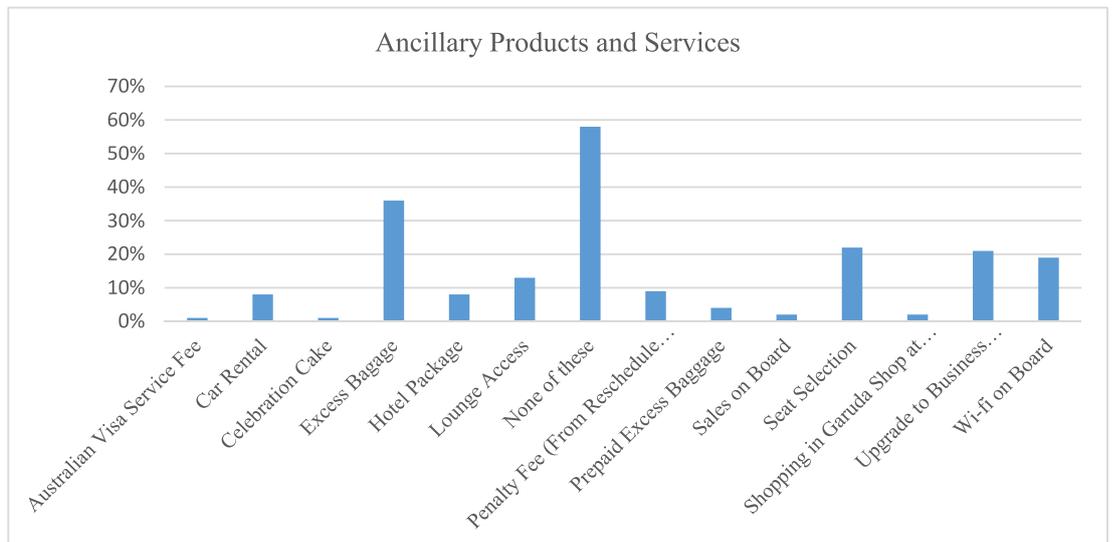


Figure 2: Ancillaries purchased or intent to purchase by respondents on their most recent flight.

#### 4.2. Analysis of responses of new potential product

Respondents were also asked about whether they are willing to purchase for some ancillaries products that may be offered by Garuda Indonesia in the future such as annual travel pass, mobile phone on board, priority baggage handling, snack bar, and wi-fi on board. The majority of the respondents are willing to purchase wi-fi onboard (39%) and annual travel pass (27%).

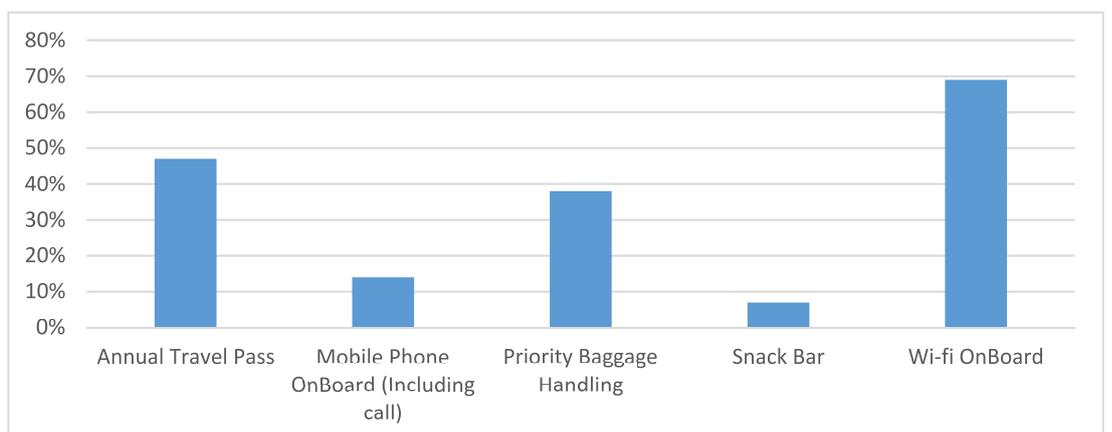


Figure 3: Respondent's willingness to purchase new ancillary products and services.

### 4.3. Hypothesis test results

#### 4.3.1. Hypothesis 1: Journey purpose has an impact on willingness to pay (WTP) for ancillary products and services.

Figure 4 shows that the top items of ancillary products and services purchased by holiday travelers in this study were upgrade to business/first class, excess baggage, lounge access and seat selection. The top items of ancillary products and services purchased by business travelers were excess baggage, seat selection, and wi-fi on board. The VFR group mostly purchased excess baggage and wi-fi onboard, is which not completely in line with the holiday travelers.

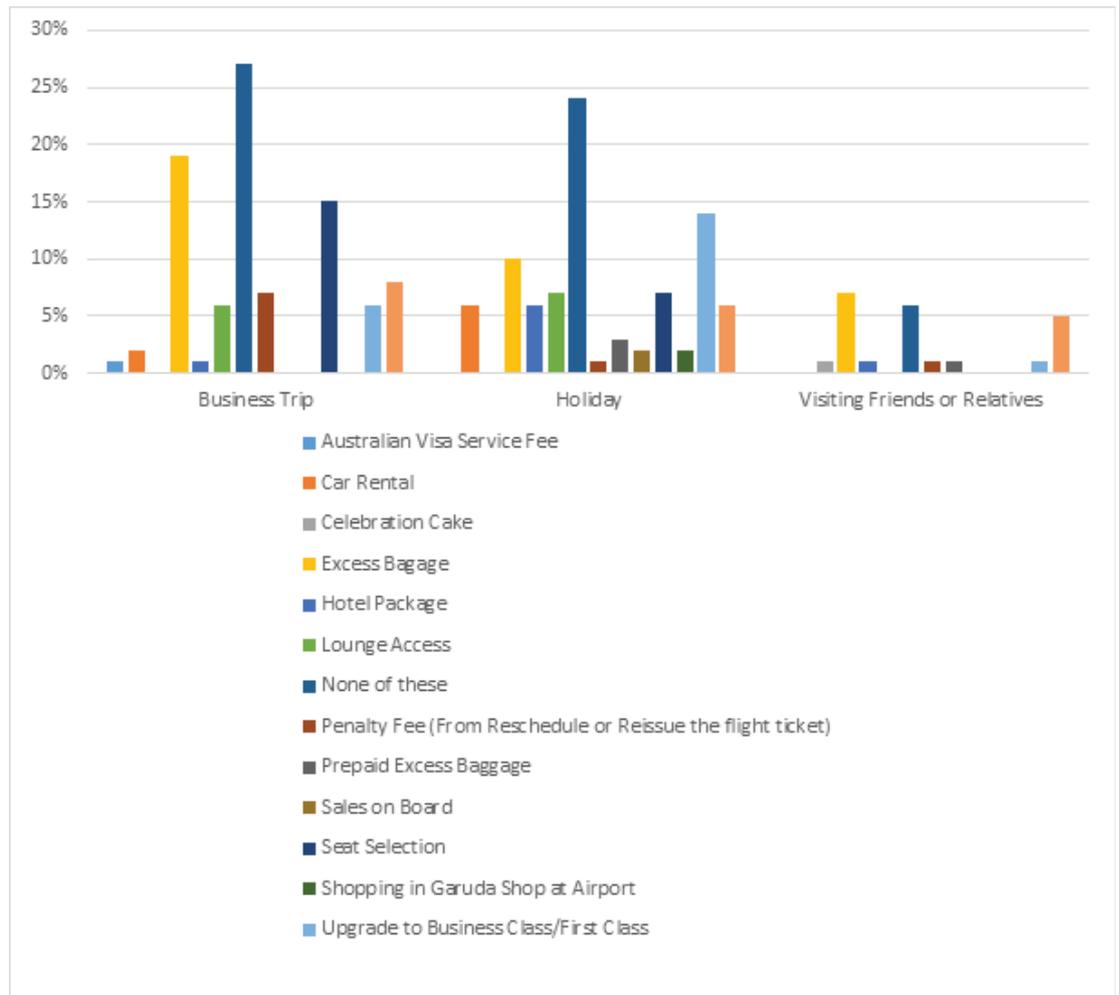
Table 1 shows that there is a significant influence between journey purpose and willingness to pay for excess baggage, seat selection, and commission based items (car rental and hotel package) therefore accept the hypothesis that journey purpose has an impact on willingness to pay for excess baggage, seat selection, and car hotel and hotel package.

TABLE 1: Chi-square test for purpose of flight and WTP for ancillary products and services.

	Value	df	P-value
<b>Pearson Chi-Square for Excess Baggage</b>	<b>6.039</b>	<b>2</b>	<b>0.049</b>
Pearson Chi-Square for Lounge Access	1.996	2	0.369
Pearson Chi-Square for Penalty Fee	4.728	2	0.094
<b>Pearson Chi-Square for Seat Selection</b>	<b>7.127</b>	<b>2</b>	<b>0.028</b>
Pearson Chi-Square for Upgrade for Business/First Class	5.316	2	0.07
Pearson Chi-Square for Upgrade for Wi-Fi on Board	4.815	2	0.09
<b>Pearson Chi-Square for Car Rental and Hotel Package</b>	<b>7.111</b>	<b>2</b>	<b>0.029</b>

However since the p-value of the rest ancillary products and services listed in the above table is > 0.05 consequently H0 hypotheses for these products are not rejected. Thus, it can be concluded that there is no significant influence between purpose of flight and WTP for these items.

Previous research from Warnock-smith, O’Connell, Maleki (2017) shows that there is significant influence between journey purpose and WTP for one piece of checked-in baggage and excess baggage. Since this study using FSC’s ancillary products where there is no checked-in baggage, the result that is accordance with the previous research is for the excess baggage ancillary product.



**Figure 4:** Respondent’s purchase of ancillary products and services based on purpose of flight.

Compared to the descriptive result, it follows that business trip traveler and VFR travelers place a greater value on excess baggage, which is part of unbundled products. Table 4 shows that from 204 respondents, 92 respondents have business trip purpose on their most recent flight, 92% of the business trip travelers took economy class, and more than half of the respondents are 31 – 41 years old, which is part of millennial generation.

Business trip travelers who took economy class can be classified as independent business travelers since they tend to make sacrifices in terms of product frills, such as travelling in economy cabin rather than business or first class. According to Stephen Shaw (2011), independent business travelers segment is increasing relative to the size of corporate travelers (Stephen Shaw, 2011). Today, business trip is not only about attend meetings, conferences, training but also sell stuffs from abroad such as by doing “live shopping” especially for millennial independent business travelers. Open purchase order for abroad stuffs require the sellers to have a large luggage capacity.

TABLE 2: Demographic Respondents of Business Trip Travelers.

Business Trip Travelers		
Age	Seat	
	Business Class	Economy Class
21 - 30	0	17
31 - 40	6	52
41 - 50	1	14
51 - 60	0	2
<b>Total</b>	<b>7</b>	<b>85</b>

Seat selection is the second most ancillary products valued by business trip travelers and proved to have an impact on WTP. Since 92% of business trip travelers seat in economy class, they may put a greater value on seat selection. Overall, business traveler is assumed less price sensitive than the leisure traveler.

Car rental and hotel package, which are part of commission-based income ancillary products and services, may has significant impact for the holidaymakers. Among the 164 respondents who purchase or intent to purchase ancillary products and services, 54% have holiday purpose on their most recent flight and 14% purchase or intent to purchase car rental or hotel package. While for business trip travelers and VFR travelers there are 3% and 4% respectively purchase or intent to purchase the commission-based products. This is accordance with the theory where usually VFR travelers get meals and accommodation for free and business travelers' accommodation is taken care by someone else and in the expense of the company.

**4.3.2. Hypothesis 2: Type of flight class has an impact on willingness to pay (WTP) for ancillary products and services.**

Figure 5 shows very few of business class passengers purchase or intent to purchase ancillary products and services, since out of 204 respondent, only 15 respondents who took business class in their most recent flight. Among the business class passengers, only 20% does not purchase or intent to purchase ancillary products and services. The top purchases for the business class passengers is wi-fi onboard (20%). The top purchases of economy class passengers were excess baggage (17%), seat selection (11%), upgrade to business class (9%) and wi-fi on board (8%). Even though the number of business class passengers are much smaller than the economy class passengers, the business class passengers are more willing to purchase or intent to purchase ancillary products and services.

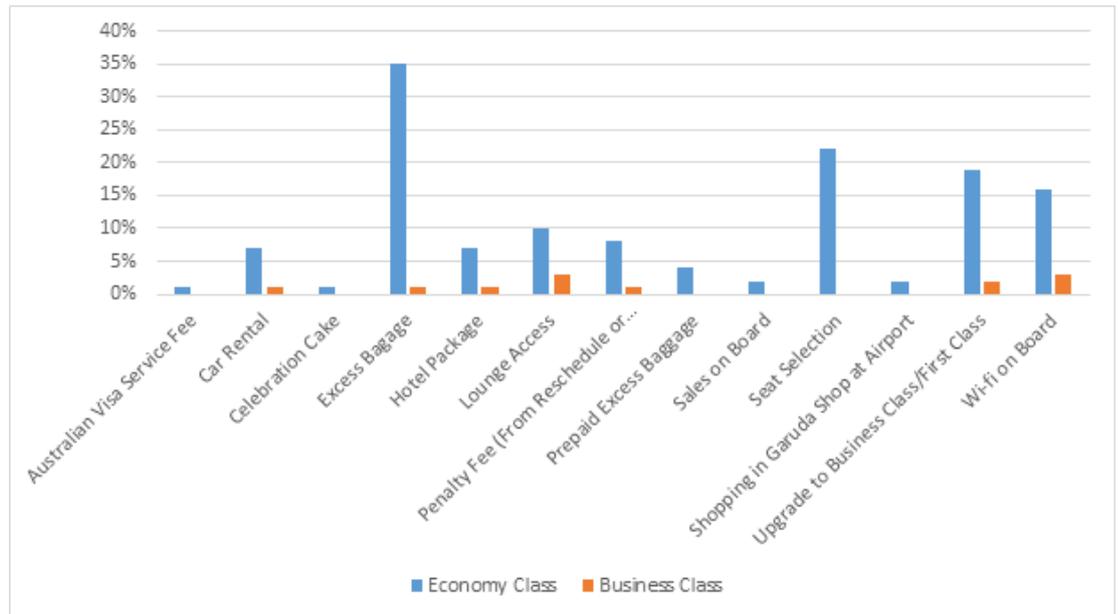


Figure 5: Distribution of ancillary products and services by type of flight class.

TABLE 3: Chi-square test for type of flight class and WTP for ancillary products and services.

	Value	df	P-value
Pearson Chi-Square for Excess Baggage	1.875	1	0.171
<b>Pearson Chi-Square for Lounge Access</b>	<b>4.176</b>	<b>1</b>	<b>0.041</b>
Pearson Chi-Square for Penalty Fee	0.106	1	0.744
Pearson Chi-Square for Seat Selection	2.320	1	0.128
Pearson Chi-Square for Upgrade for Business/First Class	0.055	1	0.814
Pearson Chi-Square for Upgrade for Wi-Fi on Board	1.659	1	0.198
Pearson Chi-Square for Car Rental and Hotel Package	0.437	1	0.509

Table 3 shows that there is significant influence between type of flight class, whether the passengers seat in economy class or business class, and willingness to pay for lounge access ( $P\text{-value} \leq 0.05$ ). Therefore, hypotheses for these two items is accepted that type of flight class has an impact on willingness to pay only for lounge access. There is no significant impact for both economy and business class passengers in willingness to pay for the remaining ancillary products and services

Lounge access may has a great value for the economy class passengers since in the airport, business class passengers are eligible for lounge and 189 respondents or 92% of respondents in this study were seat in economy class.

### 4.3.3. Hypothesis 3: Length of flight has an impact on willingness to pay (WTP) for ancillary products and services.

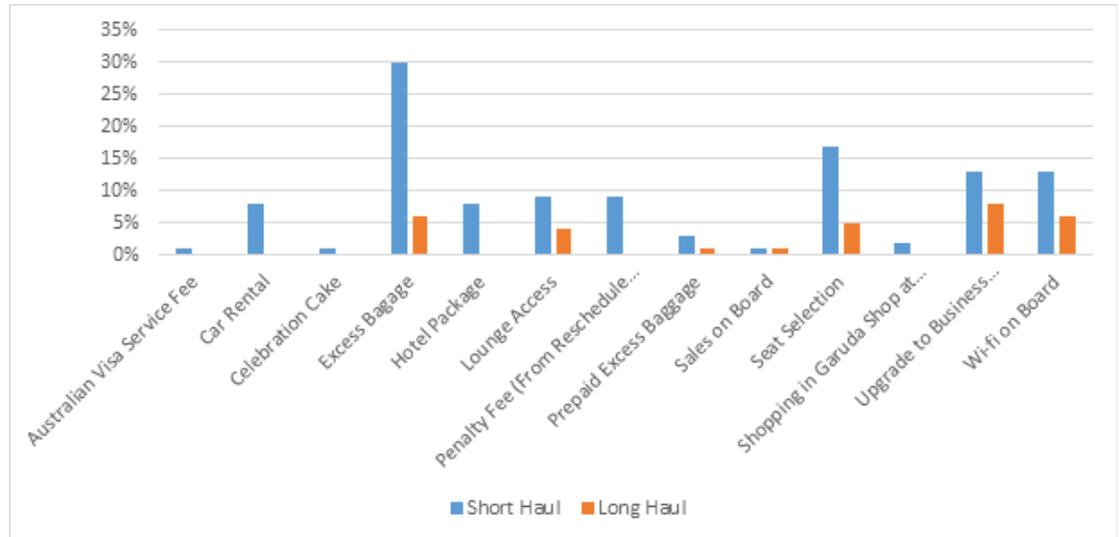


Figure 6: Distribution of ancillary products and services by length of flight.

Figure 6 shows that the majority of respondents on short-haul flight would buy an excess baggage while on long-haul flight would buy an upgrade to business/first class. Very few of respondents would be willing to purchase prepaid excess baggage on a long-haul flight (0.6%) and sales on board on short-haul flight (0.6%). Apparently, there are different values placed on specific ancillary products and services for long-haul and short haul passengers, which must be borne by the airline’s commercial departments.

TABLE 4: Chi-square test for length of flight class and WTP for ancillary products and services.

	Value	df	P-value
Pearson Chi-Square for Excess Baggage	0.596	1	0.440
Pearson Chi-Square for Lounge Access	0.776	1	0.378
Pearson Chi-Square for Penalty Fee	2.585	1	0.108
Pearson Chi-Square for Seat Selection	0.035	1	0.852
<b>Pearson Chi-Square for Upgrade to Business/First Class</b>	<b>4.170</b>	<b>1</b>	<b>0.041</b>
Pearson Chi-Square for Upgrade for Wi-Fi on Board	1.398	1	0.237
<b>Pearson Chi-Square for Car Rental and Hotel Package</b>	<b>4.844</b>	<b>1</b>	<b>0.028</b>

Table 4 shows that there is a significant influence ( $P\text{-value} \leq 0.05$ ) between length of flight (short haul and long haul) and willingness to pay for upgrade for business/first class and car rental and hotel package. Therefore, hypotheses is accepted that length of flight has an impact on willingness to pay for upgrade to business/first class and

the commission based products, car rental and hotel package. The p-value of the rest ancillary products and services listed in table 5 is  $> 0.05$ , consequently, there is no significant impact between length of flight and WTP for these ancillary items.

Previous research from Warnock-smith, O'Connell, Maleki (2017) shows that the majority of long haul passengers would buy in-flight hot meal and the majority of short haul passengers would buy a non-alcoholic drink, which both of the products are complimentary in Garuda Indonesia's flight. Long haul passengers may have total trip duration four to five times higher compare to the short haul passengers. It might lead the long-haul passengers to upgrade its seat to business class since business class inflight- service ranges from wider seat that reclines back but not lie flat, full meal service, amenity kit to lie-flat seat, personal bar, and multi-course meals.

Long haul passengers are more likely to travel with family, relatives, friends, business partners and less likely to have previous travel experience. It might make long haul passengers put a greater value on the commission based ancillary products and services, which comprises of car rental and hotel package than the short haul passengers. By purchase car rental and hotel package directly from the airline website or distribution channel, the long haul passengers are no need to put extra effort to search car rental and hotel in the city or country they have never been before. In terms of expenditure, long haul passengers also have higher percentage on hotel spending compare to short haul passengers.

#### **4.3.4. Hypothesis 4: Type of journey has an impact on willingness to pay (WTP) for ancillary products and services**

Figure 7 shows descriptive statistisc of the top items of ancillary products and services purchased in domestic route passengers were excess baggage, seat selection, upgrade to business/first class, and wi-fi onboard. The top items of ancillary products and services purchased by international route travelers were excess baggage and wi-fi on board. All of the top items purchase or intent to purchase from both type of flight are unbundled products.

Table 5 illustrates that there is no significant influence between types of flight whether passengers fly domestic route or international route to willingness to pay for ancillary products and services. The p-value for all ancillary products and services is  $> 0.05$ . Consequently, hypotheses for all items are rejected. It can be concluded that there is no significant association between type of carrier and WTP for ancillary products and services.

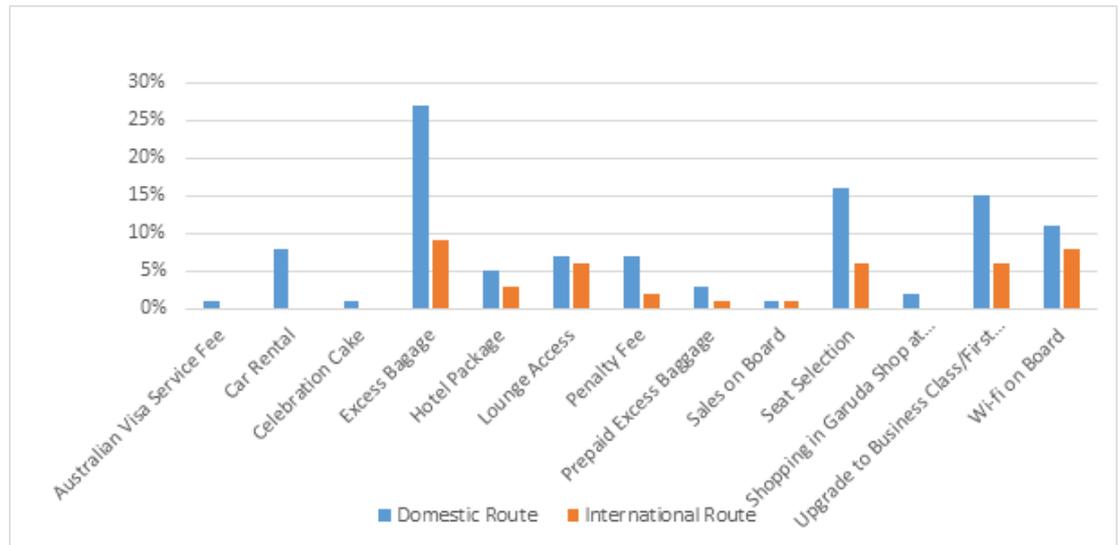


Figure 7: Respondent’s purchase of ancillary products and services based on type of flight.

TABLE 5: Chi-square test for type of flight and WTP for ancillary products and services.

	Value	df	P-value
Pearson Chi-Square for Excess Baggage	0.331	1	0.565
Pearson Chi-Square for Lounge Access	2.105	1	0.147
Pearson Chi-Square for Penalty Fee	0.200	1	0.654
Pearson Chi-Square for Seat Selection	0.028	1	0.867
Pearson Chi-Square for Upgrade for Business/First Class	0.000	1	0.983
Pearson Chi-Square for Upgrade for Wi-Fi on Board	1.896	1	0.168
Pearson Chi-Square for Car Rental and Hotel Package	0.880	1	0.348

## 5. Conclusion and Recommendation

From the research that has been done on the model, the results of 3 (three) hypotheses support the initial hypothesis and 1 (one) other hypothesis does not support the initial hypothesis. Willingness to pay for ancillary products and services were shown to differ between economy and business class passengers, short-haul and long-haul flights, and overall journey purpose (business trip, holiday, and VFR).

Significant statistical differences were found concerning the purchase of excess baggage, seat selection, lounge access, and upgrade to business/first class with business trip travelers on economy class much more willing to purchase excess baggage and seat selection. Passengers with long haul trip much more likely to value the convenience offered by upgrade to business/first class and car rental or hotel package.

Together with the SkyTeam alliance, Garuda Indonesia provides 672 of the world's best lounges accessible for passengers. This may made the passengers value more on the lounge access especially for economy class passengers. Even though Garuda Indonesia operates a broad domestic routes and regional network of services throughout Asia, Australia, Middle East and Europe, but the passengers of both routes are not differ by the preference to buy ancillary products and services.

It was also found that unbundled products and services receive a higher willingness to use than some commission-based ancillary products and services. Narrow range of unbundled products appear to be commonly purchased, namely excess baggage, seat selection, and upgrade to business/first class. Even though Garuda Indonesia already including free baggage in the ticket price, excess baggage still the most popular ancillary products purchased by the passengers. Airlines could use this information to undertake more accurate marketing target and activity and to determine which categories of ancillary products and services to focus on.

Further study is expected to have a greater number of respondents and not only examine respondents from one airline but all airlines in Indonesia or Asia, modify the research model and hypotheses such as including the GarudaMiles member as moderation variable and adding more variables such as type of aircraft, and incorporate all ancillary products and services of the airline including frequent flyer programs and advertising categories. Since they represent a significant proportion of total ancillary revenues for some airlines.

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