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THE PRACTICE OF DIGITALIZATION IN IMPROVING CUSTOMER EXPERIENCE OF INDONESIAN COMMERCIAL AVIATION INDUSTRY

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Abstract. The paper examines the relation between tangible dimension (direct evidence) or facilities to customer satisfaction and how the practice of digitalized facilities could increase customer experience during air travel in Indonesia. Relating tangible dimension with customer touchpoints adopted from (Glab, 1998), (Sykes and Desai, 2009), (Mattig and Hausweiler, 2017), (Barich et al., 2016) resulted to factors that create air travel experience, such as: booking process, check-in process including boarding pass and baggage handler, immigration, airport transportation, airport connectivity such as wi-fi and in-flight entertainment. Opinions from 180 passengers were gathered and analyzed with quantitative approach such as one-way Anova and Spearman's rank correlation. The findings show that regardless the frequency of flights taken in the past year, passengers are mostly dissatisfied with the wi-fi in Indonesian airport and Indonesian airlines in-flight entertainment. Moreover, the practice of digitalized facilities of passenger's touchpoints has a positive significant impact toward passengers' experience. The paper also offers some suggestions that the practice of digitalization should be implemented effectively in the facilities or touchpoints examined.

Keywords: Customer experience; Passenger touchpoints; Digitalization; Airports and Airlines Facilities

INTRODUCTION

In the commercial aviation industry, processes such as customers booking, check-in, passport checks, baggage handling and flight updates have been digitalized in many parts of the world, except Indonesia. Aviation sector is facing a competition in terms of developing new technology into their business, with an aim to increase capacity, remove bottlenecks and increase customer experience. This is important because now parties like airports, airlines and key stakeholders must collaborate to win the market if they wish to survive in the business while competing with competitors (OECD, 2010), especially in Indonesia with its South-East Asian region aviation market. Moreover, PWC report in 2016 concluded that "Air travel remains for many a disappointing, grumble-worthy experience".

This research is aimed to give comprehensive insight regarding passengers' experience while using air transportation in Indonesia and the minimum effort that the industry has put to maximize customer experience. The insight is achieved by connecting past studies, findings and list of touchpoints play an important role toward passenger experience. A primary data is gathered via online questionnaires and analysed using nonparametric approach, overview of the main results of the research states that many passengers are still dissatisfied with the current Indonesian airports and airlines facilities, as well as almost all passengers agree that the practice of digitalization can increase their travel experience.

LITERATURE REVIEW

This research relies on frameworks and findings from previous studies such as (Ben Akpoyomare et al., 2016), (Curtis et al., 2012), (Munusamy et al., 2011). segmented into two topics to be gathered in order to support the research itself. The two topics are; creation of passengers' experience during air travel and digitalization in aviation industry. To understand the underlying theories and basic background of passengers' experience during air travel. We must understand what experience is, and what makes it different to service. Thus, service involves the company giving treatment towards their customers and the experience they are receiving is a connotation of the service process and also their engagement which includes their satisfaction during their journey or as they go through a series of touchpoints (Johnston and Clark, 2008), (Pullman and Gross, 2004). Adopted from Glab (1998) as well as Sykes and Desai (2009), a series of touchpoints in air travel are booking including choosing a desired seat, pre-trip including airport transfers, airport touchpoints or facilities including check ins, passport control, security screening, wi-fi and last touchpoint is during flight which is in-flight entertainment.

Digital transformation is the main variable in the research. Fostering a digitalization strategy, firms mainly highlight the digital transformation of service processes, business models as well as the implementation of new technologies (Reis et al., 2018), in

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which the Indonesian aviation sector is lacking at. Furthermore, this research argues that creating digitalization in Indonesian aviation sector could influence all aspect of passengers' experience and allow business improvement, as backed by (Changi Airport Group, 2018). According to various sources, the touch points that have been digitalized and implemented effectively in modern aviation industry, but not in Indonesia, are choosing your own seat feature, e-boarding pass, self-service luggage, automated immigration, integrated transfer between airport and city, synchronised and rapid Wi-Fi, as well as a more modern in-flight entertainment. (Mattig and Hausweiler, 2017), (Barich et al., 2016)

METHODOLOGY

There are three particular research questions: What are the least satisfying factors that passengers face during air travel in Indonesia acknowledging the flight frequency? Is there a correlation between each digitalized facility toward the overall passenger experience? Do air travel passengers agree on the digital implementation? This research uses a casual research design, it is adopted due to the researcher's interest on the cause and effect relationship between the variables in the investigation. The author has gathered a primary data via online questionnaires, with a sample of Indonesian that is 18 years old and above and have flown internationally within the past year. The content of the questionnaires are as such, firstly by asking respondents on how satisfied are they with the current tangible or facilities they use during their air travel journey (measured in 5 LIKERT scale: Very dissatisfied, dissatisfied, neither, satisfied and very satisfied), second by addressing respondents that each of the facilities can be digitalized, then we ask on whether respondents agree or disagree if the digitalized facilities can increase their journey experience (measured in 5 LIKERT scale: Strongly disagree, disagree, neither, agree, strongly agree). Lastly, we asked whether they think that each of the digitalized facilities should be implemented effectively or not in Indonesia. Collected responses is analysed via Statistical Package for Social Sciences (SPSS) by nonparametric statistic, analyzed with quantitative approach such as one-way Anova and Spearman's rank correlation. This paper explores a methodology useful for Indonesian airports and airlines service quality by taking into account the passenger's point-of-view.

FINDINGS AND ARGUMENT

The findings of the first research question and hypothesis is shown in *Table 1*. *F*(df1, df2) = *F*-statistic, p = p-value, if p > .05 (Hancock and Klockars, 1996) means that there is no statistically significant differences between overall customer satisfaction (labelled as Mean_Satisfaction) and the different group of frequent flyers (occasionalist, regular, road warriors). The result then shows *F*(2, 177) = 2.29, p = .104. Understanding this, it is safe to say that the opinion on customer satisfaction is general, no matter how frequent the participant flies in the past year. Therefore, it is more suitable to analyze the process that passengers find most dissatisfying or below standard. 52% respondents travelling in Indonesia felt a dissatisfaction in the airport Wi-Fi, followed by in-flight entertainment with 46% respondents, on the other hand, passengers seem to be satisfied in the booking process with a satisfied percentage of 53% respondents as shown in *Table 2* below. Therefore, it is recommended that the Angkasa Pura Group should prioritize on improving the WI-FI and connection in the airports. On the other hand, a relatively satisfied score on immigration process, check-in process and airlines booking process means that the quality of service must be maintained, if not improved.

Table 1. One-way Anova analysis

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Mean_Satisfaction	Between Groups	2.155	2	1.078	2.290	.104
	Within Groups	83.292	177	.471		
	Total	85.447	179			

Table 2. Dissatisfaction categories ordered from biggest to lowest (left to right)

	WI-FI	In-Flight Entertainment	Transportation Connecting Airports	Immigration	Check-in	Booking process
Dissatisfied	95	84	62	40	20	14
Neither	50	57	66	84	85	70
Satisfied	35	39	52	56	75	96

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The findings of the second research question and hypothesis is shown in *Table 3* below. It shows that an increase experience of each digitalized facility was strongly associated in an increase of the overall experience if p < .0005, one example is that an integrated shuttle service is strongly associated in an increase of overall experience rs(98)= .642, p < .0005. Further interpretation shown in the full research paper, we can identify 70.6% strongly agree and 25.6% agree that the practice of digitalized facilities can increase customer experience as a whole, there was no single participant that disagree nor strongly disagree that digitalization can increase his or her experience as a whole, there is only 3.9% of participants who stand neither (not agree nor disagree). Moreover, in every digitalized facility shows that at least 80% of the responses agree and strongly agree that digitalization increases their experience. Connecting the current overall satisfaction in air travel in Indonesia, self-service baggage handle and electronic boarding pass shows the biggest significant correlations. Yet the urgency to be digitalized is questionable as many participants are still satisfied with the current check-in process

Table 3. Analysis of Spearman's correlation

Correlations

			Personalised seat during booking	Electronic boarding pass	Self-service baggage	Integrated shuttle service	Automated gate immigration	Fast and stable Wi-Fi	In-Flight Entertainment	Avg_Digitalized
Spearman's rho	Personalised seat during booking	Correlation Coefficient	1.000	.500**	.449**	.295**	.349**	.384**	.433**	.499**
		Sig. (2-tailed)	.	.000	.000	.000	.000	.000	.000	.000
		N	180	180	180	180	180	180	180	180
	Electronic boarding pass	Correlation Coefficient	.500**	1.000	.728**	.473**	.492**	.393**	.388**	.576**
		Sig. (2-tailed)	.000	.	.000	.000	.000	.000	.000	.000
		N	180	180	180	180	180	180	180	180
	Self-service baggage	Correlation Coefficient	.449**	.728**	1.000	.435**	.482**	.345**	.344**	.529**
		Sig. (2-tailed)	.000	.000	.	.000	.000	.000	.000	.000
		N	180	180	180	180	180	180	180	180
	Integrated shuttle service	Correlation Coefficient	.295**	.473**	.435**	1.000	.490**	.556**	.372**	.605**
		Sig. (2-tailed)	.000	.000	.000	.	.000	.000	.000	.000
		N	180	180	180	180	180	180	180	180
	Automated gate immigration	Correlation Coefficient	.349**	.492**	.482**	.490**	1.000	.404**	.293**	.553**
		Sig. (2-tailed)	.000	.000	.000	.000	.	.000	.000	.000
		N	180	180	180	180	180	180	180	180
	Fast and stable Wi-Fi	Correlation Coefficient	.384**	.393**	.345**	.556**	.404**	1.000	.492**	.642**
		Sig. (2-tailed)	.000	.000	.000	.000	.000	.	.000	.000
		N	180	180	180	180	180	180	180	180
	In-Flight Entertainment	Correlation Coefficient	.433**	.388**	.344**	.372**	.293**	.492**	1.000	.604**
		Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.	.000
		N	180	180	180	180	180	180	180	180
	Avg_Digitalized	Correlation Coefficient	.499**	.576**	.529**	.605**	.553**	.642**	.604**	1.000
		Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.
		N	180	180	180	180	180	180	180	180

**. Correlation is significant at the 0.01 level (2-tailed).

Lastly, the author wants to dig deeper on where the Indonesian passengers stand on the new technology acceptance curve, they could either be in the denial stage, resistance, exploration or commitment stage. more than 90% respondents stated that digitalized facilities should be implemented effectively in Indonesia. As it stands, the sample of this research then lies on the exploration stage where people think new technology could become the answer to many problems (Scott & Jaffe, 1991).

CONCLUSIONS

The response can be generalised regardless of the frequency of flight taken, showing that there are several touchpoints and facilities that passengers are dissatisfied with. The result also shows an increasing experience of each digitalized facilities was strongly associated in an increase of overall experience. However, the research sample is limited to author's personal contact and within the Indonesian commercial aviation industry, the output might be different if the research has participants with more frequency of flights taken in the past year. Further academic implication is needed with participants from different scope and setting. For managerial implications, managers must observe the significant relationship between facilities toward customer experience as a whole, in order to avoid any touchpoints that might decrease an air travel experience.

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