

# Security Concern of Financial Technology for Online Transportation Passenger in Indonesia

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**Abstract**—The use of online transportation in Indonesia is growing, people feel a lot of positive benefits felt, together with the development of online transportation, the development of financial technology as a means of payment for online transportation makes passengers easier to transact. However, the development of financial technology (FinTech) is still in the development stage or not yet stable where there are still problems with transactions using financial technology such as TopUp balances, failure to pay. Therefore, this study aims to find out how security concerns passengers of usage financial technology for online transportation transaction? The research using quantitative method by using SPSS with correlation bi-variate function to see the relationship of passenger security concerns factor. The research found several significant correlations factors from 202 respondents. The factors found are very important for development of FinTech in the future.

**Keywords**—Online Transportation passenger; Passenger Financial Technology; Security Concern Financial Technology

## I. INTRODUCTION

The development of online transportation in Indonesia rapidly growing [1]. Based on early research that was conducted by ecommerceIQ Southeast Asian market research that payment option (5% respondent) as one of the important aspect for the online transportation passenger [1][2]

Financial Technology or commonly known as FinTech used by the passenger to pay the fare for online transportation contemporary. However, the development of FinTech on in the mature stage, there were several problem in doing transaction by using the FinTech as reported at CNN Indonesia

payment problem using FinTech [3] the other problem facing by the passenger such as problem in top up balance of FinTech[4]

Early research found that the FinTech application has inherent risk where the risk cannot be avoided by the customer such as application problem, communication problem[5]. The other research of FinTech also stated that security and privacy as one of the issues of FinTech system[6]

The passenger of online transportation comes from various level in Indonesia from high school, university student, professional employee, house wife, and entrepreneur. For university student no doubt that the usage of smartphone by university student is common recently for educational and social activities[7][8]. However, the security concern of the passenger of online transportation still in question mark.

Therefore, the research aims to find out on how the security concern of passenger that use FinTech to perform the transaction of online transportation. The quantitative method research performed, and SPSS used as tool to validate and process the data. The 202 respondents answer the questioner by using snow ball random sampling method. The research found there are 8 bi-variate Pearson correlation between 2 factors.

## II. LITERATUR REVIEW

### A. Online Transportation

The online transportation is one of the famous economic sharing in Indonesia, online transportation is one of m-

commerce where customer only using their smartphone to perform the transaction for ride, delivery things, buy food, end so on[5]

### B. Financial Technology (FinTech)

Financial Technology that commonly known as FinTech is an industry that focus on financial aspect and the product or service commonly using technology to make more efficient the transaction[5][9]. The usage of FinTech makes customer more easy, comfortable[10]

### C. SPSS correlation Bi-variate

SPSS is abbreviation from statistic packet for social science own by IBM. SPSS as tools that used to validate the questioner (validity and reliability test), and process the relationship between 2 factors (correlation bi-variate)

## III. DATA CHARACTERISTIC

The data characteristic shows on table 1 is based on 202 respondent that use online transportation. The data collection using google form and using snow ball random sampling method.

TABLE I. DATA CHARACTERISTIC

No	Respondent		
	Description	#n	%
1	Gender (D1)		
	Male	74	36.63%
	Female	128	63.37%
2	Education Background (D2)		
	Senior High	94	46.50%
	Under Graduated (S1)	101	50.00%
	Graduate (S2)	6	3.00%
	Doctoral (S3)	0	0.00%
	Others	1	0.50%
3	Age (D3)		
	<17 years	3	1.49%
	17 – 24 years	150	74.26%
	25 – 34 years	40	19.80%
	35 – 44 years	8	3.96%
	45 – 54 years	1	0.50%
4	Frequently used (FU)		
	Very Rarely	17	8.42%
	Rarely	11	5.45%
	A little rare	24	11.88%
	A little often	56	27.72%

No	Respondent		
	Description	#n	%
	Often	40	19.80%
	Very Often	54	26.73%

N=202

The respondent will answer 13 questionnaires that use 6 scale of Likert-scale from very disagree for value 1 and very agree for value 6, the 6 scales used to minimize the ambiguity of the answer because no middle score.

### A. Data Validation

Before analyzing the data, as the first process is validation of questioners, the validation using SPSS tool, by comparing the value of corrected item-total correlation with Pearson r-table. The r-table value for 202 respondent alpha 5% is 0.1161 for detail validation can be seen at table II.

TABLE II. DATA VALIDATION

No	Validation		
	Description	Corrected Item-Total Correlation	Status (r = 0.1161 0.05)
1	Gender (D1)	0.060	Invalid
2	Educational background (D2)	0.035	Invalid
3	Age (D3)	0.215	Valid
4	Frequently Use (FU)	0.264	Valid
5	I know backup function really helps me if the application has problem (P1)	0.474	Valid
6	I use an updated anti-virus to protect my mobile device and applications (P2)	0.323	Valid
7	I feel comfortable and safe using FinTech to transact (P3)	0.528	Valid
8	I feel that the security factor in making transactions is important (P4)	0.563	Valid
9	I use my personal contact number when registering in a FinTech account (P5)	0.456	Valid
10	I always double-check transactions on the applications after transacting with FinTech (P6)	0.486	Valid
11	I always keep my FinTech applications Personal Identification Number (PIN) (P7)	0.487	Valid
12	The security of FinTech application in transactions is not in doubt (P8)	0.552	Valid

n = 202 (dF = 200)

### B. Data Reliability Test

After data validity test then data need to test for reliability of data. The SPSS tool requirement to check the reliability of data. The value of Cronbach's Alpha as the indicator of reliability score, the common value used for the Cronbach's Alpha is above 0.60[11]. The detail of the reliability test can be seen at table III. The reliability test show that all factors of the reliability test above 0.60 (>0.60). It is mean the data is reliable.

TABLE III. DATA RELIABILITY TEST RESULT

No	Reliability Test		
	Description	Cronbach's Alpha if Item Deleted	Status
1	Gender (D1)	0.730	Reliable
2	Educational background (D2)	0.732	Reliable
3	Age (D3)	0.722	Reliable
4	Frequently Use (FU)	0.725	Reliable
5	I know backup function really helps me if the application has problem (P1)	0.689	Reliable
6	I use an updated anti-virus to protect my mobile device and applications (P2)	0.714	Reliable
7	I feel comfortable and safe using FinTech to transact (P3)	0.691	Reliable
8	I feel that the security factor in making transactions is important (P4)	0.684	Reliable
9	I use my personal contact number when registering in a FinTech account (P5)	0.696	Reliable
10	I always double-check transactions on the applications after transacting with FinTech (P6)	0.690	Reliable
11	I always keep my FinTech applications Personal Identification Number (PIN) (P7)	0.688	Reliable
12	The security of FinTech application in transactions is not in doubt (P8)	0.679	Reliable

N = 202

### C. Correlation Bi-variate factors

SPSS tools also used to show the relationship of 2 factors by using Correlation Bi-variate function. Table IV show that there are 8 important correlations security concern factors found as novelty for this research.

TABLE IV. SIGNIFICANT CORRELATION RESULT

	FU	D1	D2	D3	D4
FU	--	0.215** 0.002	NA	NA	NA
P1	0.150* 0.033	NA	NA	NA	NA
P2	NA	NA	NA	NA	NA
P3	0.451** 0.000	NA	NA	NA	NA
P4	0.165* 0.019	NA	NA	0.149* 0.034	NA
P5	0.237** 0.001	NA	-0.171* 0.015	NA	NA
P6	NA	NA	NA	NA	NA
P7	NA	NA	NA	NA	NA
P8	0.144* 0.040	NA	NA	NA	NA

\* significant level 0.05

\*\* significant level 0.01

NA – Not Significant value

The first correlation found between the passenger who frequently used (FU) online transportation have significant correlation with gender factor, from the table IV can be seen that the value of Pearson correlation shown 0.215 with alpha 0.01 and the significant indicator show 0.002 (< 0.05). It is mean the female passenger most frequently used the online transportation system, compare then male.

The second correlation factor found is the passenger aware with backup function(P1) has correlation with frequently used factor (FU), the value of Pearson correlation shown 0.150 with alpha 5% and significant indicator value is 0.033(<0.05). It is mean the most frequent passenger of online transportation concern about backup function of the system.

The third correlation factor found is the passenger feel comfortable and safe using FinTech to pay the fare(P3) with the frequently used online transportation (FU). The value of Pearson correlation shown 0.451 with alpha 1% and significant indicator value is 0.000 (<0.05). It is mean the most frequent passenger more feels safe using FinTech to pay the transaction.

The fourth correlation factor found is the passenger feel that the security factor while performing transaction is important (P4) with the frequently used online transportation (FU). The value of Pearson correlation shown 0.165 with alpha 5% and significant indicator value is 0.019 (<0.05). It is mean the most frequent passenger feels the security is the important factor while performing the transaction.

The fifth correlation factor found is the passenger feel that the security factor while performing transaction is important (P4) with passenger age (D3). The value of Pearson correlation shown 0.149 with alpha 5% and significant indicator value is 0.034 (<0.05). It is mean the older age of passenger has more concern about important of security while performing transaction.

The sixth correlation factor found is the passenger of online transportation use own personal contact number when registering in a FinTech account(P5) with the frequently used online transportation (FU). The value of Pearson correlation shown 0.237 with alpha 1% and significant indicator value is 0.001 (<0.05). It is mean the most frequent passenger will use the real contact identity to register in FinTech application.

The seventh correlation factor found is the passenger of online transportation use own personal contact number when registering in a FinTech account(P5) with educational background(D2). The value of significant indicator value is -0.171 (minus sign) alpha 5% and significant indicator value is 0.015 (<0.05). It is mean the younger age passenger of online transportation tend to not use the real contact number to register the FinTech applications.

The eighth correlation factor found is the passenger of online transportation have no doubt with the security system of FinTech application while performing transaction (P8) with the frequently used online transportation (FU). The value of significant indicator value is 0.144 alpha 5% and significant indicator value is 0.040(<0.05). The most frequent passenger of online transportation tends to believe the security of FinTech application.

## IV. DISCUSSION

The similar research result found for the first correlation that the mostly customer of online transportation is female[12][13] even though the difference method used for the research.

The third correlation result show similar result with early research that mostly passenger of online transportation used FinTech technology and feel safe to perform the transaction[14]

The fourth correlation result show that the most frequent passenger of online transportation and mostly use FinTech to perform the transaction concern about the important of security factor.

## V. CONCLUSION

The several conclusions of our research can be described as

- The security as the important factor while performing the transaction using FinTech in online transportation.
- Mostly the frequent passenger online transportation feels safe to perform the transaction by using FinTech
- Mostly the frequent passenger of online transportation is female.
- The older passenger online transportation has more concern about the security while performing the transaction.

This research can be used for future research why the passenger convenience of the using the FinTech for the online transportation even though the problem still occurred, is it due to the total problem insignificant? Or other influence factor.

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