

Statistics for Analytics

Assignment

Semester 2
Academic Year 2021-2022

We hereby declare that every member of this group has contributed equally to the successful completion of this project in accordance with the job scope and responsibilities that we have discussed and agreed upon. The following are the responsibilities of our group:

ACKNOWLEDGEMENT

This project taught our team how to successfully use IBM SPSS software, as well as the various types of analysis and situations they encountered.

We would like to express our heartfelt appreciation in this way. Thanks to those who have offered us unconditional assistance in carrying out this research.

We would like to thank Dr. Majid Ghasemy for his complete guidance and advice on our project. With his clear guidance, we were able to successfully complete this project without major issues or time-consuming issues. We can use IBM SPSS software to work on our research and data analysis thanks to his patient guidance.

Finally, we would like to express our heartfelt appreciation to our classmates and friends who have assisted and advised us on this project. We can solve our problems and doubts about this project thanks to their sharing of information and experience.

Contents

Contribution:	1
ACKNOWLEDGEMENT	2
1. List of Tables and Figures	4
1.1. List of Tables.....	4
1.2. List of Figures	5
2. Data Analysis	1
2.1. inspect if age variable is distributed normally	1
2.2. Computed the reliability of the main variables in the study	4
2.3. Computed variables sum	5
2.4. Sample profile	6
2.5. Cross Tabulation	9
2.6. Categorize the behavior intention variable to use internet banking into two categories; low intention and high intention in a different variable called BI_CAT.	10
2.7. ONE WAY ANOVA	11
2.8. Independent sample t-test	12
2.9. ONE WAY ANOVA	14
2.10. Chi square test	15
3. Research case	18
3.1. Correlation	18

4. Recommendation and conclusion 22

4.1. Limitation of study 22

4.2. Suggestion for future research 22

4.3. Recommendation 23

1. List of Tables and Figures

1.1. List of Tables

Table 1 descriptive analysis 1

Table 2 variable reliability 4

Table 3 explains the sample profile in term of gender and level of education 6

Table 4 explain cross_tabulation result about gender and education level 9

Table 5 Anova Age 11

Table 6 group statics 12

Table 7 independent sample t-test 13

Table 8 Anova education level 14

Table 9 chi square test gender 15

Table 10 Gender Participant gender * BI_CAT Intention Level Crosstabulation 16

Table 11 Chi-Square Tests 16

Table 12 Descriptive Statistics 18

Table 13 Correlations 19

Table 14 Variables Entered/Removed 19

Table 145 model summary 20

Table 16 Anova 20

Table 17 predictor not signification 21

Table 18 stronger predictor 21

Table 19 weakest predictor 22

1.2. List of Figures

Figure 1 Histogram Age	2
Figure 2 Age skewness and kurtosis	3
Figure 3 explain gender participant	7
Figure 4 explain the department of participant	8
Figure 5 explains behavioral intention	10

2. Data Analysis

2.1. inspect if age variable is distributed normally

- After making sure that there are no blank rows in the data by calculating the COUNTBLANK function in Excel and making sure that there are no straight lines by calculating the standard deviation for all lines for non-demographic variables in Excel, we imported the data to SPSS to start the analysis.
- Conduct descriptive statistics to see if there are any missing values to be handled by reviewing the number of values in each variable and if there are values out of the appropriate range by reviewing maximum and minimum values for each variable. There are no missing values or out-of-range values included in the data Table 1. It also shows that the average age of participants is 33.39 it seems that most of the participants are young, and the average experience is 9.04.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Participant gender	192	1	2	1.25	.434
Participant age	192	19	53	33.39	8.823
Participant working years in the organization	192	1	18	5.36	4.435
Participant years of experience	192	1	28	9.04	7.276
In which department participant work	192	1	10	5.75	2.519
Participants current position	192	1	5	2.53	1.063
Participant education level	192	2	5	2.96	.595
Perceived usefulness 1	192	2	5	2.55	.879
Perceived usefulness 2	192	2	5	2.57	.924
Perceived usefulness 3	192	2	5	2.57	.901
Perceived usefulness 4	192	2	5	3.43	.675
Perceived usefulness 5	192	2	5	3.33	.775
Perceived usefulness 6	192	3	6	4.84	.714
Perceived ease of use 1	192	2	5	3.45	.707
Perceived ease of use 2	192	3	6	4.57	.815
Perceived ease of use 3	192	2	5	3.74	.698
Perceived ease of use 4	192	2	5	3.73	.745
Perceived ease of use 5	192	2	5	3.74	.635
Behavioral intentions 1	192	2	5	3.77	.686
Behavioral intentions 2	192	2	5	3.74	.683
Behavioral intentions 3	192	3	4	3.16	.364
Behavioral intentions 4	192	3	4	3.22	.414
Perceived behavior of control 1	192	3	4	3.17	.374
Perceived behavior of control 2	192	2	5	3.81	.652
Perceived behavior of control 3	192	2	5	3.81	.684
Perceived behavior of control 4	192	2	5	3.80	.688
Perceived risk 1	192	2	5	3.81	.668
Perceived risk 2	192	2	5	3.85	.709
Perceived risk 3	192	2	5	3.51	.779
Perceived risk 4	192	3	6	4.62	.871
Perceived risk 5	192	2	5	3.45	.842
Perceived Credibility 1	192	2	5	3.35	.856
Perceived Credibility 2	192	2	5	3.39	.873
Valid N (listwise)	192				

Table 1 descriptive analysis

- Recoding PU6, PEU2, and PR4 into the same variables so that all items in each variable are using the same scale.

```

RECODE PU6 PEU2 PR4 (7=1) (6=2) (5=3) (4=4) (3=5) (2=6) (1=7).
EXECUTE.
RELIABILITY
/VARIABLES=PU1 PU2 PU3 PU4 PU5 PU6
/SCALE('ALL VARIABLES') ALL
/MODEL=ALPHA
/STATISTICS=DESCRIPTIVE SCALE
/SUMMARY=TOTAL.

```

- Normality

Normality is the assumption that the data of a variable is distributed equally into the two sides of the mean. This could be tested visually using the histogram plot.

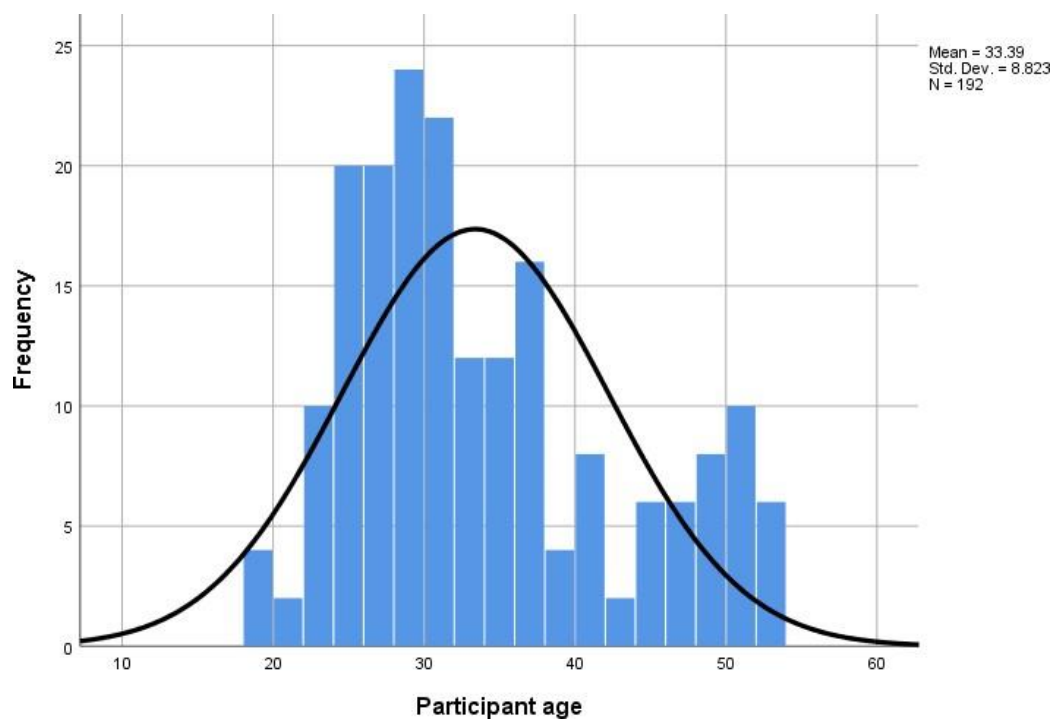


Figure 1 Histogram for age

Figure.1 shows that the age is normally distributed Normality also could be determined by the kurtosis and skewness measures.

Output of skewness and kurtosis calculation

```
Sample size: 192
Number of variables: 1

Univariate skewness and kurtosis
      Skewness SE_skew Z_skew Kurtosis SE_kurt Z_kurt
Age      0.667   0.175  3.801   -0.557   0.349 -1.596

Mardia's multivariate skewness and kurtosis
              b          z      p-value
Skewness 0.4375929 14.002972 0.0001825219
Kurtosis 2.4260925 -1.623256 0.1045347723
```

Figure 2 Age skewness and kurtosis

Figure.2 shows calculations conducted on webpower which emphasize that the age data is normally distributed

2.2. Computed the reliability of the main variables in the study

Variable Name	Number of Items	Item deleted	Alpha
Perceived usefulness	6	—	0.79
Perceived ease of use	5	—	0.846
Behavior intention	2	2	0.882
Perceived behavior of control	4	—	0.819

Perceived risk	5	—	0.758
Perceived credibility	2	—	0.833

Table 2 variable reliability

From Table.2 Cronbach's Alpha for perceived usefulness, perceived ease of use, perceived behavior of control, perceived risk, and perceived credibility shows that these variables are reliable and there is no need to delete any items from them. As they meet the criteria more than or equal 0.7-0.9.

The behavioral intention variable showed unreliability. At the first time its cronbach's alpha was 0.621 so we deleted BI3 as it has the least corrected item correlation then calculated reliability again. The second time for calculating behavior intention reliability, the cronbach's alpha equaled 0.642 so we deleted BI4 as it has the least corrected item correlation. After that the behavioral intention variable became reliable.

2.3. Computed variables sum

Sum PU1, PU2, PU3, PU4, PU5, PU6 and assign them to BU_sum

Sum PEU1, PEU2, PEU3, PEU4, PEU5 and assign them to PEU_sum,

After deleting the unreliable items BI3 & BI4, Sum BI1 and BI2 and assign them to BI_sum.

Sum PBC1, PBC2, PBC3, PBC4 and assign them to PBC_sum,

Sum PR1, PR2, PR3, PR4, PR5 and assign them to PR_sum, Sum

PC1, PC2 and assign them to PC_sum.

2.4. Sample profile

The following are sample profiles in terms of gender and department using frequency tables and bar charts:

Construct	Frequency	Percentage
Gender:		
Female	144	75
Male	48	25
Department:		
Sales & purchasing	8	4.5
R & D	22	11.5
Subcon Management	6	3.1
Production	36	18.8
Test	12	6.3
QA	24	12.5
Material	16	8.3
Engineering	50	26
HR	6	3.1
Marketing	12	6.3

Table 3 explains the sample profile in term of gender and level of education

Comment:

The sample profile shows behavioral intention toward using internet banking that the majority will be female holding a position in an engineering department, the following bar charts show that (Fig.3)(Fig.3):

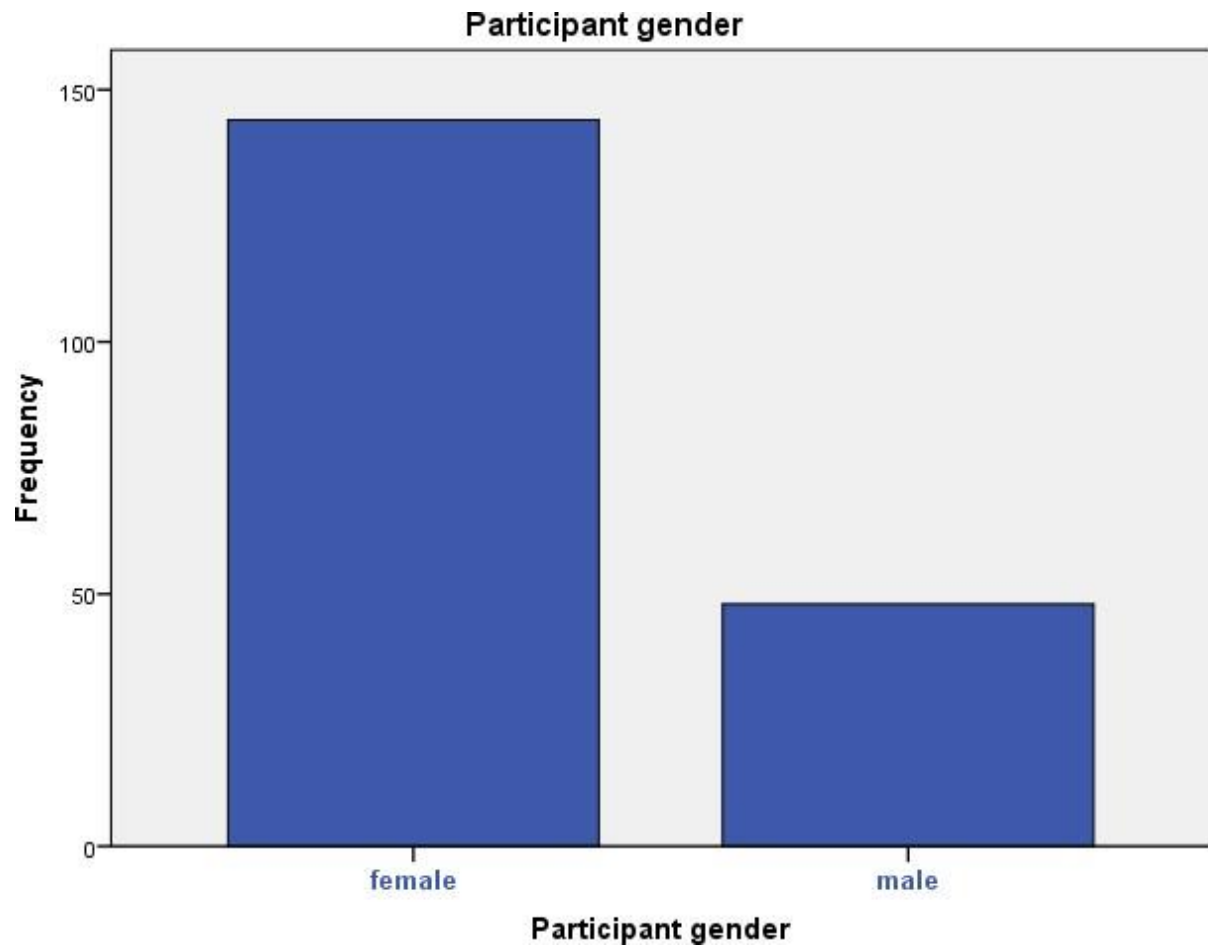


Figure 3 explain gender participant Comment:

As shown in (Fig.3), most participants that will pay attention to using internet banking will be female, and as shown in (Table.3) sample profile the percentage of their participation from the total users will be 75%.

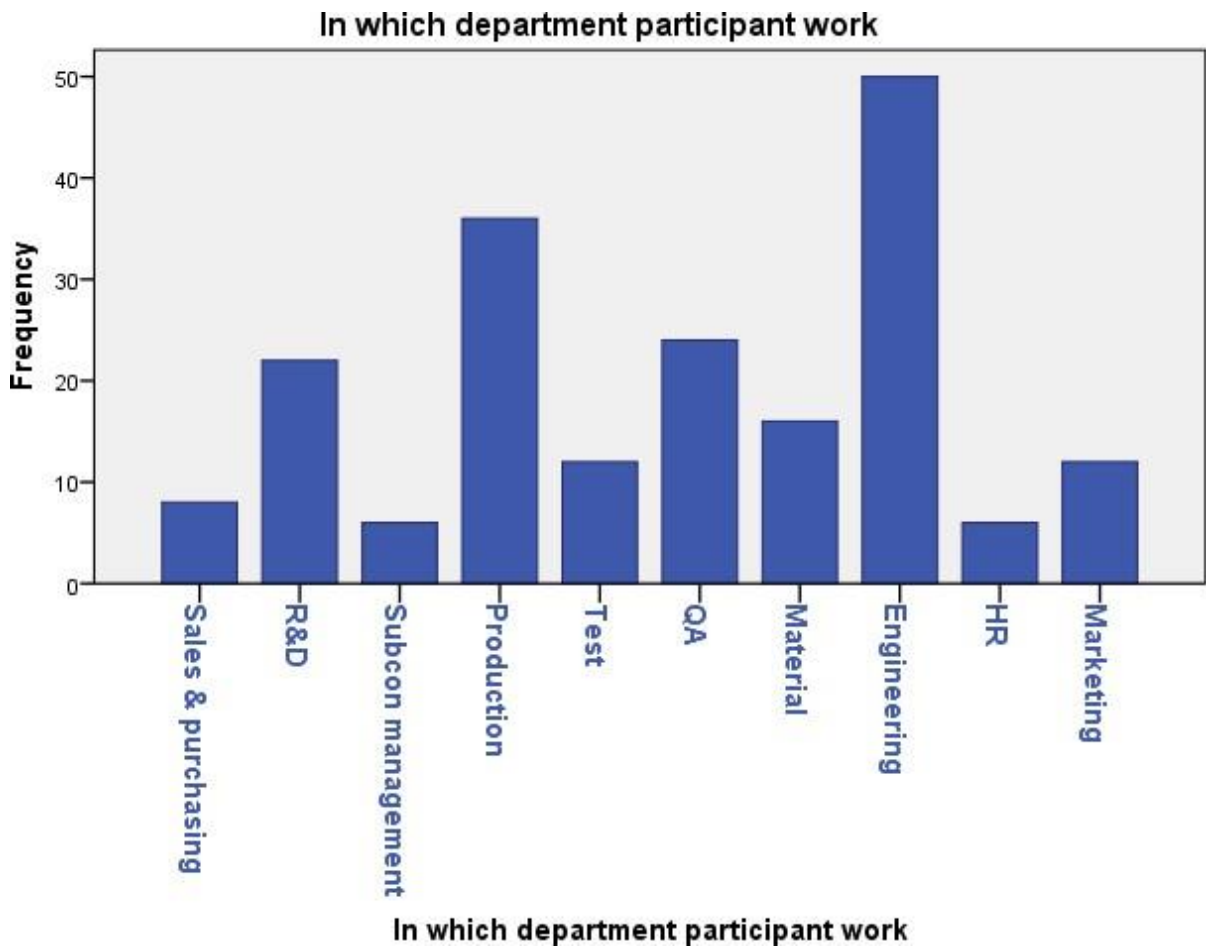


Figure 4 explain the department of participant **Comment:**

As shown in (Fig.4), the engineering department will pay a higher intention than another department toward using internet banking, and as shown in (Table.3) sample profile the percentage of their participation from the total users will be 26%.

2.5. Cross Tabulation

Construct		Diploma	First Degree	Master Degree	PHD	Total	X ²	P-value
Gender								
	Female	30	100	10	4	144	2.823	0.093

	%	(20.8)	(69.4)	(6.9)	(2.8)			
	Male	4	36	8	0	48		
	%	(8.3)	(75)	(16.7)	(0)			

Table 4 explain cross_tabulation result about gender and education level

Comment:

The cross-tabulation as shown in (Table.4). Explains that the first-degree education level has the highest degree of participants paying attention to using internet banking. As that 69.4% of females will pay more attention to using internet banking holds a first degree as an education level than males holding the same education level. thus, females with a “first degree “level of education will pay great attention to using internet banking compared to other education levels

2.6. Categorize the behavior intention variable to use internet banking into two categories; low intention and high intention in a different variable called BI_CAT.

Statistics

BI_sum

N	Valid	192
	Missing	0
Median		8.0000

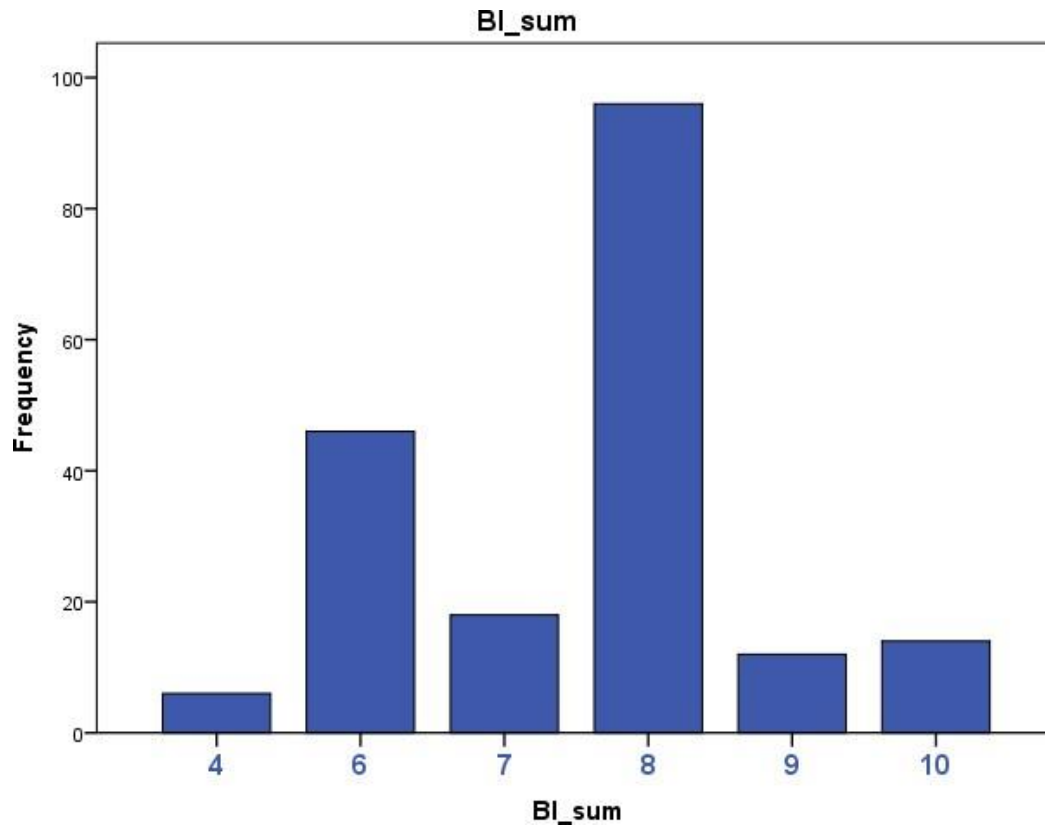


Fig.5 explains behavioral intention

RECODE BI_sum (Lowest thru 8=1) (8.01 thru Highest=2) INTO BI_CAT.
 VARIABLE LABELS BI_CAT 'Intention Level'.

2.7. ONE WAY ANOVA

ANOVA

Participant age

Sum of Squares	df	Mean Square	F	Sig.
----------------	----	-------------	---	------

Between Groups	182.095	1	182.095	2.356	.126
Within Groups	14687.385	190	77.302		
Total	14869.479	191			

Table 5 Anova Age

Since our confidence level of 95%. So, $p\text{-value} < \alpha = 0.05 \rightarrow \text{Reject } H_0$

$H_0: \mu_1 = \mu_2 = \mu_3 = \mu_4$ On at

least one point, I disagree.

Select the level of importance.

Numerator = $c - 1 = 2 - 1 = 1$

Denominator degree of freedom = $n - c = 189 - 1 = 190$

Select the test statistic

Use the F-statistic to account for test variation.

Decide rule.

H_0 rejected if p-value is greater than 5%

Calculate the F-statistic, decide, and interpret the results.

comments:

According to Table 4, the null hypothesis is failed to reject at the 95 percent level of confidence, and the mean age of respondents is equal. As a result, the decision is not to reject the null hypothesis because the computed p-value of 0.126 with the degree of freedom of 1 is greater than the level of significance (0.05), indicating that the intention to use Internet Banking does not vary by age. The mean values for those variables are nearly identical.

2.8. Independent sample t-test

Group Statistics					
	Participant gender	N	Mean	Std. Deviation	Std. Error Mean
Intention Level	female	144	1.1667	.37398	.03116
	male	48	1.0417	.20194	.02915

Table 6 group statics

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
Intention Level	Equal variances assumed	25.519	<.001	2.208	190
	Equal variances not assumed			2.929	151.017

Independent Samples Test t-test for Equality of Means

		Sig. (2-tailed)	Mean Difference	Std. Error Difference
Intention Level	Equal variances assumed	.028	.12500	.05661
	Equal variances not assumed	.004	.12500	.04267

Independent Samples Test t-test for Equality of Means 95% Confidence Interval of the Difference

		Lower	Upper
Intention Level	Equal variances assumed	.01334	.23666
	Equal variances not assumed	.04069	.20931

Independent Samples Effect Sizes

			Point	95% Confidence	
			Estimate	Interval	
		Standardizer ^a		Lower	Upper
Intention	Cohen's d	.33963	.368	.039	.696
Level	Hedges' correction	.34098	.367	.039	.694
	Glass's delta	.20194	.619	.266	.966

Table 7 independent sample t-test

$H_0: \sigma^2_{\text{Male}} = \sigma^2_{\text{Female}}$

$H_1: \sigma^2_{\text{Male}} \neq \sigma^2_{\text{Female}}$ t-distribution

$\alpha = 0.05$

accept the null hypothesis if p-value is greater than 5%

If the p value is less than, reject the null hypothesis. p-value = .001, 0.05

When the p-value is greater than, the null hypothesis is not rejected. Male and female variances are equal. As a result, we employ the first row of equally variance assumed.

Finally, the intention to use Internet Banking does not differ by gender.

comments:

Based on table 6, we assume equal variances at the 95 percent level of confidence because the significant value for Levene's Test for Equality of Variances (0.001) is greater than the level of significance (0.05). Using the independent samples T-test, the p - value is .028 with a degree of freedom of 190, which is greater than the level of significance of 0.05. This demonstrated that the intention to use Internet Banking does not differ between male and female respondents. So, the null hypothesis fails to reject, and the means are roughly the same at the 95 percent confidence level.

2.9. ONE WAY ANOVA

ANOVA Participant education level

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.423	1	.423	1.195	.276
Within Groups	67.244	190	.354		
Total	67.667	191			

Table 8 anova education level

Since our confidence level of 95%. So, $p\text{-value} < \alpha = 0.05 \rightarrow \text{Reject } H_0$

$H_0: \mu_1 = \mu_2 = \mu_3 = \mu_4$

On at least one point, I disagree.

Select the level of importance.

Numerator = $c - 1 = 2 - 1 = 1$

Denominator degree of freedom = $n - c = 189 - 1 = 190$

Select the test statistic

Use the F-statistic to account for test variation.

Decide rule.

H_0 rejected if p-value is greater than 5%

Calculate the F-statistic, decide, and interpret the results.

comments:

According to Table 4, the null hypothesis is failed to reject at the 95 percent level of confidence, and the mean education level of respondents is equal. As a result, the decision is not to reject the null hypothesis because the computed p-value of 0.267 with the degree of freedom of 1 is greater than the level of significance (0.05), indicating that the intention to use Internet Banking does not vary by education level. The mean values for those variables are nearly identical.

2.10. Chi square test

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender Participant gender * BI_CAT Intention Level	192	100.0%	0	0.0%	192	100.0%

Table 9 chi square test gender

Gender Participant gender * BI_CAT Intention Level Crosstabulation

			BI_CAT Intention Level		Total
			1.00	2.00	
Gender Participant gender	1 female	Count	120	24	144
		% within Gender Participant gender	83.3%	16.7%	100.0%
		% within BI_CAT Intention Level	72.3%	92.3%	75.0%
	2 male	Count	46	2	48
		% within Gender Participant gender	95.8%	4.2%	100.0%
		% within BI_CAT Intention Level	27.7%	7.7%	25.0%
Total	Count		166	26	192
	% within Gender Participant gender		86.5%	13.5%	100.0%
	% within BI_CAT Intention Level		100.0%	100.0%	100.0%

Table 10 Gender Participant gender * BI_CAT Intention Level Crosstabulation

Chi-Square Tests

Value	df	Asymptotic Significance (2- sided)	Exact Sig. (1sided)
		Exact Sig. (2sided)	

Pearson Chi-Square	4.804 ^a	1	.028	
		1	.051	
Continuity Correction ^b	3.796	1	.015	
Likelihood Ratio	5.888			.029
Fisher's Exact Test				.019
Linear-by-Linear Association	4.779	1	.029	
N of Valid Cases	192			

Table 11 Chi-Square Tests

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.50.

b. Computed only for a 2x2 table

By looking to the Chi Square Test, we can conclude that their significant relationship between gender and intention to use internet banking as the P-value is higher lower the 0.05

3. Research case

3.1. Correlation

By mentioning our six hypothesizes:

H1: Perceived usefulness will be positively related to intention to use Internet banking H2:

Perceived ease of use will be positively related to intention to use Internet banking

H3: Perceived credibility will be positively related to intention to use Internet banking

H4: Perceived risk will be negatively related to intention to use Internet banking H5:

Perceived behavioral control will be positively related to intention to use Internet banking

H6: Male respondents have higher Intention to use compared to female respondents

○

Descriptive Statistics

	Mean	Std. Deviation	N
BI_sum	7.5104	1.29433	192
PU_sum	17.6146	3.42265	192
PEU_sum	18.0833	2.84197	192
PBC_sum	14.5938	1.97671	192
PR_sum	18.0000	2.77234	192
PC_sum	6.7396	1.60003	192
Gender_Male the participant is male	.25	.434	192

Table 12 Descriptive Statistics

○ We can tell from the descriptive statistics the mean of each variable and their standard deviation moreover; we can see that we don't have any missing values in our data **Correlations**

Correlations		BI_sum	PU_sum	PEU_sum	PBC_sum	PR_sum	PC_sum	Gender_Male the participant is male
Pearson Correlation	BI_sum	1.000	.392	.811	.519	.210	-.168	-.061
	PU_sum	.392	1.000	.430	.491	.319	.110	-.146
	PEU_sum	.811	.430	1.000	.655	.379	-.055	-.051
	PBC_sum	.519	.491	.655	1.000	.554	.056	-.186
	PR_sum	.210	.319	.379	.554	1.000	.701	-.070
	PC_sum	-.168	.110	-.055	.056	.701	1.000	.094
	Gender_Male the participant is male	-.061	-.146	-.051	-.186	-.070	.094	1.000
Sig. (1-tailed)	BI_sum		.000	.000	.000	.002	.010	.202
	PU_sum			.000	.000	.000	.065	.021
	PEU_sum				.000	.000	.224	.242
	PBC_sum					.000	.221	.005
	PR_sum						.000	.169
	PC_sum							.097
	Gender_Male the participant is male							
N	BI_sum	192	192	192	192	192	192	192
	PU_sum	192	192	192	192	192	192	192
	PEU_sum	192	192	192	192	192	192	192
	PBC_sum	192	192	192	192	192	192	192
	PR_sum	192	192	192	192	192	192	192
	PC_sum	192	192	192	192	192	192	192
	Gender_Male the participant is male	192	192	192	192	192	192	192

Table 13 Correlations

From our correlation table we can see that our variable (Perceived ease of use) has the strongest correlation with our dependent variable (Behavioral intention) where the predictor have a correlation value > 0.8

For the second row (Sig) the **green** field as their p-value is lower than alpha 0.05 indicates that the correlation is significant between these two values

Variables Entered/Removed^a

Model	Variables		Method
	Variables Entered	Removed	
1	Gender_Male the participant is male, PEU_sum, PC_sum, PU_sum, PBC_sum, PR_sum ^b	.	Enter

Table 14 Variables Entered/Removed^a

a. Dependent Variable: BI_sum

b. All requested variables entered.

○ Here in this table, it shows us that all variables were taking into consideration and that there aren't any variables were removed

Model Summary ^a										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Sig. F Change	Durbin-Watson
					R Square Change	F Change	df1	df2		
1	.824 ^a	.678	.668	.74604	.678	64.986	6	185	.000	1.564
a. Predictors: (Constant), Gender_Male the participant is male, PEU_sum, PC_sum, PU_sum, PBC_sum, PR_sum										
b. Dependent Variable: BI_sum										

Table 15 model summary

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	217.014	6	36.169	64.986	.000 ^b
	Residual	102.965	185	.557		
	Total	319.979	191			

Table 16 anova

a. Dependent Variable: BI_sum

b. Predictors: (Constant), Gender_Male the participant is male, PEU_sum, PC_sum, PU_sum, PBC_sum, PR_sum

- 1- R-Squared value of 0.678 would indicate that 67.8% of the variance of the dependent variable being studied is explained by the variance of the independent variable, the regression model becomes more useful for making predictions when the value of R squared is close to 1
- 2- By comparing the p-value(.000) for the F-test(64.986) to our significance level. as the pvalue is less than the significance level, our sample data provide sufficient evidence to conclude that this regression model fits the data better than the model with no independent variables, our sample provides sufficient evidence to conclude that our

model is significant, but not enough to conclude that any individual variable is significant.

3.2. Explain which predictors are not significant and why.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.468	.482		3.047	.003	.517	2.418					
	PU_sum	.031	.019	.082	1.657	.099	-.006	.068	.392	.121	.069	.718	1.392
	PEU_sum	.361	.027	.792	13.532	.000	.308	.413	.811	.705	.564	.508	1.967
	PBC_sum	-.013	.046	-.019	-.275	.784	-.103	.078	.519	-.020	-.011	.357	2.798
	PR_sum	-.012	.041	-.025	-.286	.775	-.092	.069	.210	-.021	-.012	.228	4.383
	PC_sum	-.093	.060	-.115	-1.543	.125	-.211	.026	-.168	-.113	-.064	.316	3.169
	Gender_Male the participant is male	-.008	.129	-.003	-.065	.948	-.264	.247	-.061	-.005	-.003	.923	1.083

a. Dependent Variable: BI_sum

Table 17 predictor not signification

- 1- Perceived behavior control
- 2- Perceived Risk
- 3- Gender = Male
- 4- Perceived usefulness
- 5- Perceived control

As their p value is more than the 0.5, which means that they are not statistically significant and should put into consideration

3.3. Explain which predictor the strongest and which predictor is the weakest in the model and why.

By looking to our model, we can say that the **(Ease-of-Use predictor)** is our strongest predictor according to its beta value which is the greatest (0.792), moreover we saw that it has the lowest significant value .000 < 0.05 and the highest correlation value (.811)

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.468	.482		3.047	.003	.517	2.418					
	PU_sum	.031	.019	.082	1.657	.099	-.006	.068	.392	.121	.069	.718	1.392
	PEU_sum	.361	.027	.792	13.532	.000	.308	.413	.811	.705	.564	.508	1.967
	PBC_sum	-.013	.046	-.019	-.275	.784	-.103	.078	.519	-.020	-.011	.357	2.798
	PR_sum	-.012	.041	-.025	-.286	.775	-.092	.069	.210	-.021	-.012	.228	4.383
	PC_sum	-.093	.060	-.115	-1.543	.125	-.211	.026	-.168	-.113	-.064	.316	3.169
	Gender_Male the participant is male	-.008	.129	-.003	-.065	.948	-.264	.247	-.061	-.005	-.003	.923	1.083

a. Dependent Variable: BI_sum

Table 18 stronger predictor

Moreover, from the same table we can indicate that our **weakest predictor** is the **(Gender = male)**, where its beta scored (0.03) which is the lowest, moreover it's p value

was .948 which was the highest among the predictors, and it had the lowest correlation with the dependent variable

Model		Unstandardized Coefficients		Standardized Coefficients		t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta				Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.468	.482			3.047	.003	.517	2.418					
	PU_sum	.031	.019	.082		1.657	.099	-.006	.068	.392	.121	.069	.718	1.392
	PEU_sum	.361	.027	.792		13.532	.000	.308	.413	.811	.705	.564	.508	1.967
	PBC_sum	-.013	.046	-.019		-.275	.784	-.103	.078	.519	-.020	-.011	.357	2.798
	PR_sum	-.012	.041	-.025		-.286	.775	-.092	.069	.210	-.021	-.012	.228	4.383
	PC_sum	-.093	.060	-.115		-1.543	.125	-.211	.026	-.168	-.113	-.064	.316	3.169
	Gender_Male the participant is male	-.008	.129	-.003		-.065	.948	-.264	.247	-.061	-.005	-.003	.923	1.083

a. Dependent Variable: BI_sum

Table 19 weakest predictor

4. Recommendation and conclusion

4.1. Limitation of study

Several limitations that must be acknowledged during the completion of this study.

- encountered the issue of using the SPSS software, which we had never seen before in our educational journey and was unfamiliar with
- we had trouble recoding because all the numbers were negative.
- we encounter a problem when we begin to analyze the data or results obtained from SPSS. The procedure for using it is quite difficult for us, such as using various statistical methods on our various research questions.
- We attempted several times to use SPSS to compute the data into tables and graph charts for us to analyze.
- Fortunately, with the sincere assistance of our lecturer, Dr. Majid Ghasemy, we were able to complete all the tables and graph charts.
- The data is only collected from Malaysia banking and from small population

4.2. Suggestion for future research

- given more resources to students to help them learn SPSS faster
- Another time-consuming issue was recoding
- understanding more about each type of analysis.

- Future investigations for the data may also investigate and change the specific strategy for analyzing data to allow the method to run smoothly.
- Have data from bank from more region and increase the population

4.3. Recommendation

- Adding new features to online chat: The addition of this new feature is one of the current solutions for customers to directly interact with bank agents to solve their problems. The conversation was also designed to include several links to tutorial instructions, either in the form of e-books or videos.
- Perform server maintenance: Server maintenance is performed on a regular basis to ensure the performance of internet banking services and the quality of services in terms of speed and ease of access. In the long run, it is necessary to consider replacing server hardware at least once every ten years to keep up with advances in IT technology.
- Enroll in new internet banking features: new internet banking features that are in line with customer wishes must be implemented in order for the new menu to be in line with customer expectations.
- The ease with which this menu can be navigated can improve customer perceptions of overall internet banking performance and speed.
- Customers' perceptions of internet banking speed will improve if these new features are simple to use.
- Evaluate the process speed of each application feature: The process speed evaluation for each application feature must be implemented on a regular basis. This is done to find bugs or to create a shortcut to each application's features' processes.
- To increase speed, it is necessary to consider the possibility of process changes.
- Every quarter, conduct regular website feature evaluations: Website feature evaluation can be performed on a regular basis by utilizing big data obtained from online chat features, which allows customers to provide direct input to improve website features such as the process of features, displays, and navigation menus on internet banking.
- The following stage of development is a customized menu in the form of shortcuts or initial navigation on the website display to meet the needs of the customer.
- Perform network repair: Because the network is a determining factor in the quality of internet banking services, an accurate calculation and review of the network used is

required. This is, of course, related to network costs, which must be carefully considered. Analysis and evaluation are required to maintain service quality not only with a single layer backup, but also with the concept of a double layer backup.

- Financial institutions must constantly update customer data to prevent scams and improve relationships with customers by making them feel secure in their financial transactions when using internet banking services.
- here the financial institutions must apply high level of cyber security technologies to ensure that the client's transactions through internet banking services more secure.

1.1. Conclusion

after analysis we concluded after finishing our study on the intention of using Internet Banking. Through this research study, we can gain a clear understanding of consumers' behavioral intentions to use Internet Banking. We can also identify differences in behavioral intention to use Internet Banking among respondents based on various characteristics such as age, gender, and education level. We learned how to use SPSS software to model the effect of perceived usefulness, perceived ease of use, perceived credibility, perceived risk, and perceived behavioral control on respondents' intention to use Internet Banking. Overall, without considering all the different characteristics of the respondents, the intention of using Internet Banking is not that different among them, and it can be concluded that almost every respondent is satisfied and willing to use Internet Banking as part of their financial management. Some respondents believe that using Internet Banking is a convenience for them because people nowadays do not have as much time to go to the bank for financial management. It may be difficult and difficult for us to conduct a research study and conduct a survey just to study the intention to use Internet Banking, but it is worthwhile because we have learned how SPSS software was used to organize and analyses the data that we collected. We finally succeeded with the assistance of our lecturer, Dr. Majid Ghasemy Complete this study on the intention of using Internet Banking