CHAPTER IV

DATA ANALYSIS AND DISCUSSIONS

This chapter contains the research findings and discusses about the result of this research. Data analysis that are used in this research are validity test, reliability test, descriptive statistical analysis, normality test, multi-collinearity test, heteroscedasticity test, and hypothesis test. Multiple regression analysis is used to test hypothesis by using a computer program of SPSS (Statistical Product and Service Solution) for windows 21. Meanwhile, discussion are provided in the last part of this chapter. The result of test using SPSS 21 are attached on Appendix 3 – 7.

4.1 Data Description

The data needed for this research are quantitative data. Data were collected by distributing 60 questionnaires to SMEs on Culinary Field that are located in Yogyakarta. The questionnaires that can be analyzed are 42 data. The results of the questionnaire are attached on Appendix 2.

4.2 Validity Test and Reliability Test

4.2.1 Validity Test

Validity test is used to measure whether the questionnaire is valid or not. A questionnaire is considered valid if the question in the questionnaire is able to reveal something that will be measured by the questionnaire. So the validity test aims to measure whether the questions in the questionnaire which have created really measure what researcher wants to measure (Ghozali, 2013).

The result of the validity test can be seen in the table 4.1 and the summary of validity test result is in Appendix 3:

Table 4.1

Validity Test Result

Variable	Question	R count	R table	Explanation
Technology Utilization	**Q1**	0.506	0.257	Valid
	Q2	0.564	0.257	Valid
	Q3	0.457	0.257	Valid
	Q4	0.329	0.257	Valid
User Training	**Q1**	0.354	0.257	Valid
	Q2	0.416	0.257	Valid
	Q3	0.612	0.257	Valid
	Q4	0.412	0.257	Valid
User Expertise	**Q1**	0.470	0.257	Valid
	Q2	0.656	0.257	Valid
	Q3	0.491	0.257	Valid
	Q4	0.550	0.257	Valid
Accounting Information System Implementation	**Q1**	0.773	0.257	Valid
	Q2	0.700	0.257	Valid
	Q3	0.556	0.257	Valid

Source : Primary data processed, 2018

Validity test is done by comparing the value of r count and r table. In this research the r table is 0.257, because the freedom is 40, and the value of alpha is 0.05. If r count ≥ r table and has positive value, so the indicator is valid. Conversely, if r count < r table, it means the indicator is invalid (Ghozali, 2013).

Based on the table 4.1, it can be seen that the validity test of technology utilization (TU), user training (UT), user expertise (UE), and Accounting Information System Implementation (AISI) results r count which are higher than r table and have positive value. So, the data is suitable to be a measuring tool in this research.

4.2.2 Reliability Test

Reliability test is a tool to measure a questionnaire which is an indicator of the variable. A questionnaire is said to be reliable if someone who answers the statements is consistent or stable over time, and the answer should not be random because each question is going to measure the same thing (Ghozali, 2013).

This test is tested using Cronbach Alpha statistical test. A variable is said to be reliable if the value Cronbach Alpha > 0.60. If the value of Cronbach Alpha ≤ 0.60, the variable is said to be not reliable (Ghozali, 2013).

The result of the reliability test can be seen in the table 4.2 and summary of reliability test result in Appendix 4:

Table 4.2

Reliability Test Result

Variable	Cronbach's Alpha	Explanation
Technology Utilization	0.671	Reliable
User Training	0.659	Reliable
User Expertise	0.744	Reliable
Accounting Information System Implementation	0.818	Reliable

Source : Primary data processed, 2018

Based on the tables above, it can be seen that the consistency in variable technology utilization (TU) is 0.671, user training (UT) is 0.659, user expertise (UE) is 0.744, and accounting information system implementation (AISI) is 818. All the variables are reliable, because all variables have cronbach alpha value >0.60.

4.3 Descriptive Statistical Analysis

Descriptive statistical analystsis describes calculation about minimum, maximum, mean, and the standard deviation of each variable used. The description statistics can be seen in the table 4.3 and the summary of descriptive statistical analysis results in Appendix 5:

Table 4. 3

Descriptive Statistical Analysis

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Technology Utilization	42	6	16	10.21	2.125
User Training	42	4	13	9.21	2.055
User Expertise	42	6	16	10.60	2.369
Accounting Information System Implementation	42	3	12	6.95	1.999
Valid N (listwise)	42				

Source : Primary data processed, 2018

Based on table 4.3, the total data used in this study are 42 SMES on Culinary Field that are located in Yogyakarta, which are shown by N value. The minimum data shows the smallest value, the maximum data shows the highest value, and the mean shows the average value for each variable. The standard deviation is a measurement

of the dispersion of a set data from its mean. The broader the data spread, the higher deviation.

Based on the table 4.3, it can be seen that variable technology utilization (TU) has minimum value as much as 6 and maximum value as much as 16, with the mean is 10.21 and the standard deviation is 2.125. Variable user training (UT) has minimum value as much as 4 and maximum value as much as 13, with the mean is 9.26 and the standard deviation is 2.061. Variable user expertise (UE) has minimum value as much as 6 and maximum value as much as 16, with the mean is 10.60 and the standard deviation is 2.369. Variable accounting information system implementation (AISI) has minimum value as much as 3 and maximum value as much as 12, with the mean is 6.95 and the standard deviation is 1.999.

4.4 Classical Assumption

Classical assumption test consists of normality test, multi-collinarity test, and heteroscedasticity test. Classical assumption is used to determine whether the data to be used in the study is free from classical assumption or not. The result of the classical assumption test is attached on Appendix 6.

4.4.1 Normality Test

Normality test in this research is done by seeing the value of kurtosis of the residual. Z-statistical value for the kurtosis can be calculated by the formula as follows:

$$Z\ kurtosis = \frac{Kurtosis}{\frac{\sqrt{24}}{N}}$$

This test was used in order to know whether the residual of this research data are normally distributed or not. The result of the normality test can be seen in the table 4.4 as follows :

Table 4.4

Normality Test

Variable	Kurtosis	Z kurtosis	Z table	Explanation
TU	.479	0.63	1.96	Normal
UT	-.132	-0.17	1.96	Normal
UE	-.785	-1.04	1.96	Normal
AISI	-.061	0.08	1.96	Normal

Source : Primary data processed, 2018

If the value of Z count (Z kurtosis) > Z table, the distribution is not normal. Meanwhile, if the Z count < Z table, the distribution is normal (Ghozali, 2013). Based on the result, it can be seen that all the of the Z count < Z table. Theredore, it can be concluded that the distribution of data is normal.

4.4.2 Multi-collinearity Test

Testing can be performed by analyzing the calculation of the value of tolerance and the Variance Inflating Factor (VIF). If the VIF value > 10 and the tolerance value < 0.1, then the regression model multi-collinearity occurs. Meanwhile, if the VIF value < 10 and the tolerance value > 0.1, then there is no multi-collinearity (Ghozali, 2013). The result of multi-collinearity test can be seen in table 4.5.

Table 4.5

Multicollinearity Test

Variable	Tolerance	VIF
Technology Utilization	0.550	1.818

User Training	0.576	1.737
User Expertise	0.735	1.361

Source : Primary data processed, 2018

Table 4.5 shows that there is no multi-collinearity in all of independent variables that is used in the regression model. It can be seen from the tolerance value > 0.1 for variable of technology utilization, user training, and user expertise. While the value of VIF in all of independent of technology utilization, user training, and user expertise is < 10.

4.4.3 Hetereoscedasticity Test

Heteroscedasticity test aims to test whether there is inequality variance from residual of one observation to another observation in the regression model. For detecting the presence or absence of heteroscedasticity, it can be obtained with a significant level of 5%. The result of heteroscedasticity test can be seen in table 4.6.

Table 4.6

Heteroscedasticity Test

Variable	**P-value**
Technology Utilization	0.883
User Training	0.353
User Expertise	0.791

Source : Primary data processed, 2018

Based on the table 4.6, it can be seen that all the variables have P-value > 0.05 or 5%. So, it can be concluded that there are no symptoms of heteroscedasticity in regression models.

4.5 Hypothesis Test

4.5.1 Regression Analysis

Multiple regression analysis is used to know the influence of independent variables toward dependent variable. The result of the multiple regression analysis can be seen in the table 4.7 as follows:

Table 4. 7

Regression Analysis

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.501	.804		-3.108	.004
	Technology Utilization	.701	.090	.744	7.769	.000
	User Training	-.031	.091	-.032	-.343	.733
	User Expertise	.244	.070	.289	3.488	.001

a. Dependent Variable: Accounting Information System Implementation

Source : Primary data processed, 2018

Based on table 4.7, the equation of multiple regression can be written as follow:

AISI = -2.501 + 0.701 (TU) – 0.031 (UT) + 0.244 (UE) + ε

Regression equation above shows that technology utilization (TU) and user expertise (UE) have positive coefficient. Meanwhile, user training (UT) has negative coefficient. Based on this regression equation, it can be interpreted that :

1. Constant value of -2.501 means that if technology utilization (TU), user training (UT) and UE are constant so that the value of accounting information system implementation (AISI) is -2.501.
2. Technology utilization (TU) has positive regression coefficient or slope (B) value of +0.701. It means that if TU increases in one point, the other independent variables are constant so that AISI will increase 0.701.
3. User Training (UT) has negative regression coefficient or slope (B) value of -0.031. It means if UT decreases in one point, the other independent variables are constant so that AISI will increase 0.031.
4. User Expertise (UE) has positive regression coefficient or slope (B) value of +0.244. It means that if UE increases in one point, the other independent variables are constant so that AISI will increase 0.244.

4.5.2 Coefficient of Determination (R^2)

The coefficient of determination (R^2) essentially measures how far the ability of the model to explain variations in independent variable.

The greater R^2(close to 1), the better the results for the regression model and the closer to 0, than the independent variables as a whole cannot explain the dependent variable.

The result of coefficient of determination test can be seen in the table 4.8.

Table 4.8

Coefficient of Determination

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.899[a]	.808	.793	.910

a. Predictors: (Constant), User Expertise, User Training, Technology Utilization

b. Dependent Variable : AISI

Source : Primary data aprocessed, 2018

Table 4.8 above shows the coefficient of determination ($R^{2)}$ by considering the adjusted R square has the value of 0.793 or 79.3%. It shows that the independent variables used in the regression models (technology utilization, user training, user expertise) are able to explain its influence towards accounting information system implementation by 79.3%, while the influence of 20.7% is explained by other factors that are not used in this regression model research.

4.5.3 F-Test

Simultaneous regression test (F test) is a test used to determine whether there is influence shared of the independent variables toward the dependent variables.

F-test can be obtained with a significant level of 5%. If P-value ≤ 5%, it means that there is a simultaneous effect of independent variables toward the dependent variable. The result of the simultaneous regression test can be seen in the table 4.9 as follows:

Table 4.9

Simultaneous Regression Test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	132.459	3	44.153	53.356	.000[b]
	Residual	31.446	38	.828		
	Total	163.905	41			

a. Dependent Variable: Accounting Information System Implementation

c. Predictors: (Constant), User Expertise, User Training, Technology Utilization

Source : Primary data processed, 2018

Table 4.9 presented that the resul of F count 53.356 and p-value is 0.000. It can be seen that the p-value is less than 0.05 (0.000 < 0.05). Therefore, it can be concluded that technology utilization, user training, and user expertise simultaneously have significant influence toward accounting infromation system implementation.

4.5.4 T-Test

Partial regression test (t test) is a test used to determine whether there is the effect partially of each independent variable toward the dependent variable.

T-test in this research uses a significance level of 5%. According to Ghozali (2013), the criteria of T-test are as follow :

a. If P-value ≤ 5%, the hypothesis is accepted. It means that the independent variable is said to have a significant effect toward the dependent variable.

b. If P-value > 5%, the hypothesis is rejected. It means that the independent variable is said to have no significant effect toward the dependent variable. The result of the partial regression test can be seen in the table 4.10 as follows:

Table 4.10

Partial Regression Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.501	.804		-3.108	.004
	Technology Utilization	.701	.090	.744	7.769	.000
	User Training	-.031	.091	-.032	-.343	.733
	User Expertise	.244	.070	.289	3.488	.001

a. Dependent Variable: Accounting Information System Implementation

Source : Primary data processed, 2018

There is the effect partially of each independent variable toward dependent variable from t-test:

1. Technology Utilization

   Based on the result t-test in table 4.10, TU variable has positive effect to accounting information system implementation. The coefficient of TU has value 0.701 with p-value is 0.000. It means hypothesis 1 that stated "Technology utilization positively influences accounting information system implementation" is accepted. So, it can be concluded that there is positive effect of technology utilization to accounting information system implementation.

2. User Training

Based on the result of t-test in the table 4.10, UT variable has negative effect to accounting information system implementation. The coefficient of UT has value 0.031 with p-value is 0.733 (0.733 > 0.05). It means hypothesis 2 that stated "User Training positively influences accounting information system implementation" is rejected. This hypothesis is rejected because the p-value > 0.05.

3. User Expertise

Based on the t-test result in table 4.10, UE variable has positive effect to accounting information system implementation. The coefficient of UE has value 0.244 with p-value 0.001. It means hypothesis 3 that stated "User Expertise positively influences accounting information system implementation" is accepted. So, it can be concluded that there is positive effect of user expertise to accounting information system implementation

4.6 Discussions

This section will discuss about the result that the researcher found. Moreover, the researcher will explain and highlight the findings related to the previous research. The summary of hypothesis testing can be seen in the table 4.11 as follow:

Table 4.11

Summary of Hypothesis Testing

H No	**Variable**	**Hypothesis**	**Result**		**Decision**
			B	Sig.	

H1	Technology Utilization	Technology utilization positively influences accounting information system implementation	.701	.000	Supported
H2	User Training	User Training positively influences accounting information system implementation	-.031	.733	Not Supported
H3	User Expertise	User Expertise positively influences accounting information system implementation	.244	.001	Supported

a. Effect of technology utilization (TU) to the accounting information system implementation

From the hypothesis testing of H1, it was found that technology utilization (UT) has positive significant influence toward accounting information system implementation (AISI). It indicates that the financial manager in implementing accounting information system in business that is using the use of accurate technology, is able to present reliable financial statements, and can achieve excellence for the company. It needs to be better developed from the managers in utilizing the existing technology. This opinion is reinforced by the results of the respondent's answer to the statement where the majority of respondents agree that the current utilization of technology in Indonesia is good, but still need to be developed again from the company manager.

This result is in line with previous studies of Hossein, Najaf, Kermani, & Zoqian (2013), which showed that technology utilization has positive and significant impact to accounting information system implementation.

b. Effect of user training (UT) to the accounting information system implementation

From the hypothesis testing of H2, it was found that user training (UT) has negative insignificance influence toward accounting information system (AISI). It indicated that although financial manager did not conduct user training, accounting information system implementation remains good. This opinion is reinforced by the results of respondents' answers to the statement in which the majority of respondents did not agree that implementation of accounting information system is considered good if conducting training for users on how to use the system. This result is not equal with the previous studies conducted by Fitrios (2016) which showed that user training has positive and significant to accounting information system implementation.

c. Effect of user expertise (UE) to the accounting information system implementation

From the hypothesis testing of H3, it was found that user expertise (UE) has positive significance influence to accounting information system implementation (AISI). According to Ramli (2013) user expertise is an estimation of a person's ability to carry out a job successfully, someone who considers himself capable of performing a task tends to succeed. Users need to know and understand the information technology used by companies in their information systems. If the user has the expertise and understanding of the system, the user uses will be more capable to used it,

so they can use the system well. With a good understanding of the user, the flow of information will be conveyed and can be interpreted well, and expected quality of the resulting information is also good. Implementation of accounting information systems may include information systems used to be useful in accordance with user needs and difficulties. This results is in line with the previous study conducted by Rahmi (2013), which showed that user expertise has positive and significant effect toward accounting information system implementation.