#### **CHAPTER III**

#### **RESEARCH METHODS**

#### 3.1. Research Object, Location, and Time

The object of research selected was active students in the 2018/2019 academic year Accounting Study Program in Semarang. Data collection is carried out from 19 June 2019 until 18 November 2019. The object will be chosen randomly without exclusive selection. Questionnaires were distributed in Indonesian, to be more easily understood by respondents.

### **3.2. Population and Sample**

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The participants in this study are all active students in Semarang's Accounting Study Program for the 2018/2019 academic year. The number of samples is calculated using the Slovin formula, which has a 10% error rate.

Table	3.1.	Popul	lation
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University	Number of Accounting Study Program Students
Soegijapranata Catholic University	1,083
Diponegoro University	1,006
Pandanaran University	335
17 August 1945 University	645
Widya Manggala Institute of Economic Science	506
Semarang State University	837
Wahid Hasyim University	540
Sultan Agung Islamic University	1,430
Semarang University	3,859

Stikubank University	1,272
AKI University	76
Dian Nuswantoro University	1,058
Dharmaputra Institute of Economic Science	553
Bank BPD Central Java Institute of Economic Science	582
Muhammadiyah University of Semarang	184

Source: forlap.risetdikti.go.id

The population of Accounting Study Program students in Semarang is 13,966 students (forlap.ristekdikti.go.id). Universities in Semarang that have undergraduate accounting courses are Soegijapranata Catholic University, Diponegoro University, Pandanaran University, 17 August 1945 University, Widya Manggala Institute of Economic Science, Semarang State University, Wahid Hasyim University, Sultan Agung Islamic University, Semarang University, Stikubank University, AKI University, Dian Nuswantoro University, Dharmaputra Institute of Economic Science, Bank BPD Central Java Institute of Economic Science, and Muhammadiyah University Semarang. The number of samples needed is calculated using the Slovin formula. The sample will be processed using a purposive sampling method, in which the sample will be chosen based on a set of criteria. The criteria used are based on the judgment (judgment) that the sample must be able to define what a CPA is and have already taken an audit practicum course.

$$n = \frac{N}{1 + N(e)^2}$$
$$n = \frac{13,996}{1 + 13,996(0.10)^2}$$
$$n = 99.29 \approx 100$$

Information:

n = minimum sample

N = population

e = percent error

Based on the total population of 13,966 with a 90% confidence level and 10% error, The minimum number of samples is 100 students, with consideration of proportions according to population.

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### **3.3. Variable Definition and Measurement**

3.3.1. Goal

For self-efficacy, outcome expectations, and interest, the aim serves as the dependent variable. The goal in this study is to examine the likelihood of students to set goals to become certified public accountants after graduation. Measurement of this variable is done by asking, "Now, what percentage do you think are likely that you will become a certified public accountant?" The answer to this questionnaire is a 5 point interval scale (scale 1 for intervals of 0-20%, scale 2 for intervals 21-40%, scale 3 for intervals 41-60%, scale 4 for intervals 61-80% and scale 5 for intervals 81-100%) (Jerry Schoenfeld, Gerry Segal & Borgia, 2017). The higher the score reflects the higher tendency of students to set goals to become a certified public accountant after graduating from college.

#### 3.3.2. Self-Efficacy

Self-efficacy is an independent variable for the outcome expectations, interests, and goals variables. Self-efficacy is defined as students' perceptions about their ability to do things according to planned targets. In this study, the measurement was carried out by giving 8 items to the questionnaire questions from Chen G., Gully SM, & Eden D. (2001), who asked respondents' perceptions of their level of confidence in meeting the things needed to become a certified public accountant. Answer from this questionnaire in the form of a 5-point interval scale which includes a scale of 1 (strongly disagree) to a scale of 5 (strongly agree). The higher the score reflects the higher students' perception of their ability to do something according to the planned target.

#### 3.3.3. Outcome Expectations

Outcome expectations are independent variables for interest and goal variables. Outcome expectations are also the dependent variable for self-efficacy variables. Expected results are defined as students' perceptions of the importance of expected results when they set goals to become certified public accountants. Expected outcomes are crucial in encouraging people to work toward their objectives. Individual expectations about the repercussions of their behavior shape expected outcomes (Vroom, 1964 in Jerry Schoenfeld, Gerry Segal, & Dan Borgia, 2017). (1) better income, (2) job stability, (3) advancement possibilities, (4) status and prestige, (5) interesting work, (6) working independence, and (7) difficult work are all variables in the outcome expectations variable (Jerry Schoenfeld, Gerry Segal, & Dan Borgia, 2017). When they set goals to become a certified public accountant, they are asked how relevant the seven projected results are. Questions will be answered using a 5 point interval scale, which includes a scale of 1 (not important at all) to a scale of 5 (extremely important). The higher the score reflects

the higher students' perception of the importance of the expected results when they set goals to become public accountants.

#### 3.3.4. Interest

Goals are determined by the independent variable interest, whereas selfefficacy and outcome expectancies are determined by the dependent variable. Interest is described as one's preferences for or dislikes for engaging in activities and jobs that are related to a career as a public accountant. When individual interests are linked to work or the world of work, we talk about vocational interests (Layton, 1958 [pages 3-4]). The creation of interests is heavily influenced by self-efficacy and outcome expectations. (Lent, 1994). Someone tends to choose a career that suits their interests. The interest variable will be measured by seven-question items (adopted from Harackiewicz et al., 2008) regarding their interest in participating in the audit practicum lectures. The 7 items are (1) I have always been fascinated by auditing (2) I am really excited about taking this class (3) I think the lectures are interesting (4) I look forward to coming to this class (5) I like my instructor (6) I enjoy come to lecture (7) Auditing fascinates me (8) I think what we are learn about auditing is important. The answer to this question is in the form of a 7-point interval scale that covers a scale of 1 (strongly disagree) to a scale of 7 (strongly agree). The higher the score, the more interested students are in engaging activities to become a public accountant.

#### **3.4.** Method of Collecting Data

#### 3.4.1. Data Types and Sources

The data used in this study is primary data (data obtained directly), namely Active Students in Accounting Study Programs in Semarang 2018/2019 academic year. Data sources were generated through questionnaires distributed to participants.

3.4.2. Data Collection Technique

Data collection techniques used in this study using a computer-delivered survey through Google Form to active students in the Accounting Study Program in Semarang in the academic year 2018/2019.

3.4.3. Data Collection Tool

Data collection tools used in the form of questionnaires. The questionnaire distributed contained questions about participants' responses regarding their confidence in their abilities, how important the results expected after becoming a certified public accountant, how interested in taking the audit practicum course, how likely they were participants to become certified public accountants.

- 3.4.4. Research Design
  - Hypothesis-testing research is the method employed. Nine hypothesis will be investigated by the researchers. This is a sort of causal research in which the influence of existing factors is investigated.

- The time dimension of this research involves a specific time with many samples (cross-sectional), namely Active Students of Accounting Study Programs in Semarang 2018/2019 academic year.
- 3. The depth of this research is less profound, but the level of generalization in the model is high (statistical studies).
- 4. This research collected data using indirect methods, namely through mail surveys, with the help of the Google Form.
- 5. This research is in a non-contrived environment, namely the real environment (field setting) at universities in Semarang.
- The unit of analysis in this research was for each active student in Semarang.

### 3.5. Data Collection Testing Tools

- 3.5.1. Validity and Reliability Test
- 3.5.1.1. Questionnaire Validity Test

The accuracy of the measuring instruments used to achieve the measurement objectives is measured using a validity test (Jogiyanto, 2013). Validity Test in this study is used to measure whether the questions regarding Self-efficacy, Outcome Expectations, and Interest are valid or not. If the error probability level (sig) was less than 0.10 and the r count was greater than r table, the questionnaire instrument was pronounced valid; if the error probability level (sig) was less than 0.10 and the r count was less than r table, the instrument was deemed invalid (Ghozali, 2011).

#### 3.5.1.2. Questionnaire Reliability Test

The reliability test is used to assess the consistency and reliability of variable measurement instruments (Jogiyanto, 2013). If the questionnaire demonstrated stability and consistency throughout the investigation, it means reliable (Sekaran, 2003: 203). Cronbach's coefficient alpha was used to assess questionnaire reliability. The questionnaire is regarded to be reliable if the Cronbach's coefficient alpha is greater than 0.70. (Ghozali, 2011).

### 3.6. Determination Coefficient Test (R<sup>2</sup>)

The coefficient of determination test  $(\mathbb{R}^2)$  is used to assess a model's capacity to explain variance in a dependent variable (Ghozali, 2011). The coefficient of determination ranges from 0 to 1. The ability of the independent variables to explain the variation of the dependent variable is low when the  $\mathbb{R}^2$  value is low. If the result is near to 1, it suggests that the independent variables can supply almost all of the information needed to predict the dependent variables (Ghozali, 2011).

### **3.7.** F Test (Simultaneous)

The F test is used to see if all of the independent/independent variables in a model have an effect on the dependent/dependent variable (Ghozali, 2011).

A significance level of 10%, or 0.10, was used in this test. The F test is then performed as follows:

- 1. If the F value is greater than 2.76 at a 10% confidence level, Ho is rejected; in other words, the alternative hypothesis, which claims that all independent factors affect the dependent variable simultaneously and strongly, is accepted.
- 2. Using the table to compare the calculated F value with F. Ho is rejected, and Ha is accepted, if the estimated F value is higher than the table F value.

### 3.8. Hypothesis Testing



3.8.1. Equation

# Hypotheses 1, 3, 4, 7, 8, & 9 will use the equation

$$G = \rho_0 + \rho_1 SE + \rho_2 OE + \rho_3 I + e$$

G	= Goal
$ ho_0$	= Constant
$\rho_1 SE$	= Coefficient of self-efficacy
$\rho_2 OE$	= Coefficient of outcome expectations
$\rho_{3}I$	= Coefficient of interest
e	= Error

### Hypothesis 2

$$OE = \beta_0 + \beta_2 SE + e$$

OE	= Outcome expectations
$\beta_0$	= Constant
$\beta_2 SE$	= Coefficient of self-efficacy
e	= Error

### Hypotheses 5 & 6 will use the equation

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$$=\beta_0+\beta_1SE+\beta_2OE+\epsilon$$

Ι	= Interest
$\beta_0$	= Constant
$\beta_1 SE$	= Coefficient of self-efficacy
$\beta_2 OE$	= Coefficient of outcome expectations
е	= Error

3.8.2. Hypothesis Statement

### Hypothesis 1

H<sub>01</sub>:  $\rho_1 SE < 0$ , t count value <t table, & not significant; there is no positive effect of self-efficacy on goals

H<sub>a1</sub>:  $\rho_I SE > 0$ , t value> t table, & significant; there is a positive effect of selfefficacy on goals

### **Hipotesis 2**

H<sub>02</sub>:  $\beta 2SE < 0$ , t count value <t table, & not significant; there is no positive

effect of self-efficacy on outcome expectations

H<sub>a2</sub>:  $\beta_2 SE > 0$ , t value> t table, & significant; there is a positive effect of self-

efficacy on outcome expectations

#### **Hipotesis 3**

- H<sub>03</sub>:  $\rho_2 OE < 0$ , t count value <t table, & not significant; there is no positive effect of outcome expectations on goals
- H<sub>a3</sub>:  $\rho_2 OE > 0$ , t value> t table, & significant; there is a postive effect of outcome expectations on goals

#### **Hipotesis 4**

- H<sub>04</sub>:  $\rho_1 SE < 0$ ,  $\rho_2 OE < 0$ ,  $\rho_1 SE \ge \rho_2 OE < \rho_1 SE$ , t count value <t table, & not significant; outcome expectations do not mediate the relationship between self-efficacy on goals
- H<sub>a4</sub>:  $\rho_1 SE > 0$ ,  $\rho_2 OE > 0$ ,  $\rho_1 SE \ge \rho_2 OE > \rho_1 SE$ , t value> t table, & significant; outcome expectations mediate the relationship between self-efficacy on goals

### Hipotesis 5

- H<sub>05</sub>:  $\beta_1 SE < 0$ , t count value <t table, & not significant; there is no positive effect of self-efficacy on interest
- H<sub>a5</sub>:  $\beta_1 SE > 0$ , t value> t table, & significant; there is a positive effect of selfefficacy on interest

#### **Hipotesis 6**

- H<sub>06</sub>:  $\beta_2 OE < 0$ , t count value <t table, & not significant; there is no positive effect of outcome expectations on interest
- H<sub>a6</sub>:  $\beta_2 OE > 0$ , t value> t table, & significant; there is a positive effect of outcome expectations on interest

#### **Hipotesis 7**

- H<sub>07</sub>:  $\rho_3 I < 0$ , t count value <t table, & not significant; there is no positive effect of interest on the goal
- H<sub>a7</sub>:  $\rho_3 I > 0$ , t value> t table, & significant; there is a positive effect of interest on goals

#### **Hipotesis 8**

- H<sub>08</sub>:  $\rho_I SE < 0$ ,  $\rho_3 I < 0$ ,  $\rho_I SE \ge \rho_3 I < \rho_I SE$ , t count value <t table, & not significant; interest does not mediate the relationship between self-efficacy on goals
- H<sub>a8</sub>:  $\rho_1 SE > 0$ ,  $\rho_3 I > 0$ ,  $\rho_1 SE \ge \rho_3 I > \rho_1 SE$ , t value> t table, & significant; interest mediates the relationship between self-efficacy and goal

### Hipotesis 9

- H<sub>08</sub>:  $\rho_2 OE < 0$ ,  $\rho_3 I < 0$ ,  $\rho_2 OE \ge \rho_3 I < \rho_2 OE$ , t count value <t table, & not significant; interest does not mediate the relationship between outcome expectation to goal
- H<sub>a8</sub>:  $\rho_2 OE > 0$ ,  $\rho_3 I > 0$ ,  $\rho_2 OE \ge \rho_3 I > \rho_2 OE$ , t value> t table, & significant; interest mediates the relationship between outcome expectation and goal

### 3.9. Statistics Test Equipment

The author wants to see how the dependent variable interacts with the independent variable. A regression test was employed to examine this effect statistically (Jogiyanto, 2013). This regression test was performed using the SmartPLS 3.0 statistical application. This test is done by regressing the independent

and dependent variables. Then the regression results will indicate the level of significance of the relationship between variables.

### **3.10.** Determine the level of confidence

The confidence coefficient used in this study is 90%, so the error rate that can be tolerated is 10%.

## 3.11. Calculate statistical values using SmartPLS 3.0

SmartPLS (Smart Partial Least Squares) is a computer program that the author will use in calculating statistical values from the data obtained.

