FACTORS INFLUENCING UNEMPLOYMENT AMONG FRESH GRADUATES: A CASE STUDY IN YOGYAKARTA

AN UNDERGRADUATE THESIS

Arranged and submitted to fulfill one of the requirements to achieve a bachelor's degree in the Economic Study of International Program at the Faculty of Business and Economics, UII

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I, the undersigned, declare that this thesis has been written seriously and there are no parts that can be categorized as plagiarism as intended in the thesis writing guidebook for the Economics Study Program Faculty of Business and Economics UII. If in the future it is proven that this statement is not true, then I am willing to accept any punishment/sanctions in accordance with applicable regulations.

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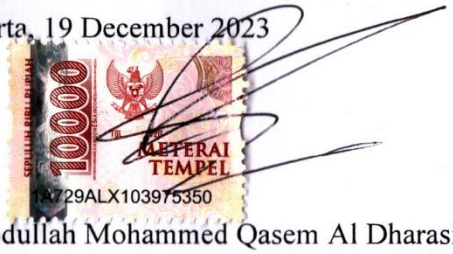

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THE APPROVAL PAGE

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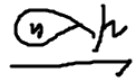

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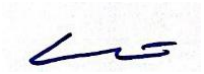

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ABSTRACT

This research aims to identify factors that cause unemployment among fresh graduates in Yogayakarta. This research uses quantitative methods with primary data through questionnaires. This research was processed using SPSS. The sample in this company is unemployed fresh graduates in Yogyakarta. Data analysis was carried out using classic assumption tests, hypothesis testing using the multiple regression method. The results of this research show that education level and job mismatch have a significant effect on unemployment. Meanwhile, graduate attributes and employability skills do not have a significant effect on unemployment.

Keywords: Unemployment, Fresh Graduate, Education Level, Graduates Attributes, Employability Skills, Job Missmatch

CHAPTER I
INTRODUCTION

1.1. Background

Unemployment is a problem that often occurs, especially in developing countries. Unemployment is a condition where someone who has the ability and desire to work cannot find a job that suits their abilities and desires, and they are actively looking for work (Prasetyo & Cahyani, 2022). Basically, rapid population growth is one of the main factors that increases pressure on the labor market. However, the qualification gap between job seekers and the needs of the job market is also a serious problem. Many graduates lack the skills that match job market demands. Additionally, regional inequalities in economic development and structural problems in some economic sectors also contribute to unemployment. (Brown & Otero, 2018). Unemployment in Indonesia is an economic and social issue that has a significant impact on society and the country's economic growth. Indonesia is one of the largest countries in the world, with a population of more than 278 million people. However. Even though it has large human resource potential, the level of poverty in Indonesia also continues to be a concern.

The unemployment rate in Indonesia is an important parameter to reflect the country's economic stability although several times there have been changes in economic conditions and changes in government policies that can affect the unemployment rate in Indonesia. The following is the number and level of open unemployment in Indonesia in the period February 2019 – February 2023.

Figure1. 1. Number and Level of open Unemployment in Indonesia

Source: BPS-Statistics Indonesia

Based on the Indonesia Central Statistics Agency (BPS-Statistics Indonesia) report in Figure1.1, in February 2023 the number of unemployed people in Indonesia reached 7.99 million people and decreased by around 410 thousand people compared to February 2022. From this diagram, the Open Unemployment Rate (TPT) in February 2023 reached 5.45% down compared to February 2022 which was still 5.86%. The unemployment rate in Indonesia tends to vary. Basically, the unemployment rate measures the percentage of the labor force that is unemployed and actively looking for work. In recent years, Indonesia has tried to reduce the unemployment rate in Indonesia through various programs such as economic development, infrastructure investment, and developing workforce skills. In addition, sectors such as tourism, manufacturing and the digital economy are significant contributors to the field. One of the factors that influences the unemployment rate in Indonesia is economic growth which is not always in line with job growth. Apart from that, unemployment in Indonesia is also influenced by regional disparities, such as in Java and Bali which are economically more advanced and offer more job opportunities compared to areas outside Java. Therefore, some regions face higher unemployment rates while large cities face challenges related to overcrowding and limited infrastructure. Additionally, regional inequalities in economic development and structural problems in some economic sectors also contribute to unemployment.

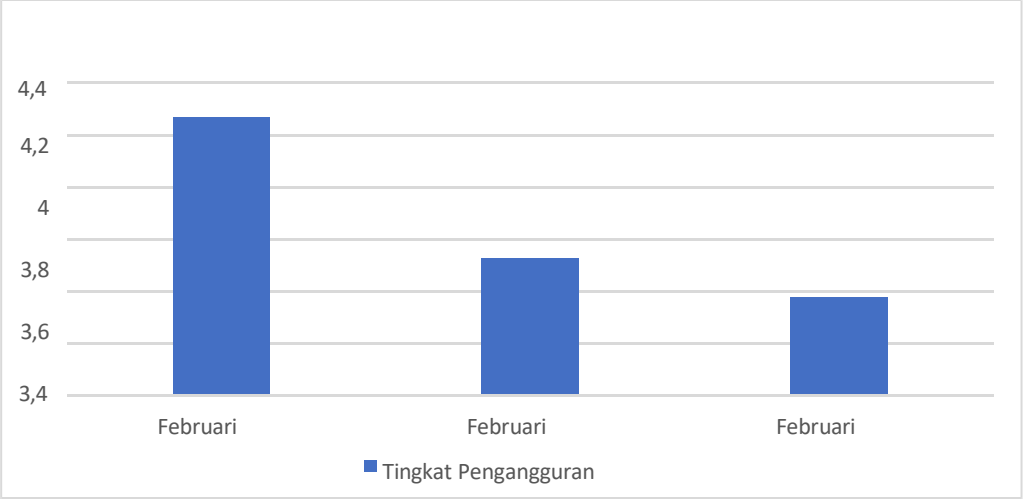

Figure 1.2. The Level of Open Unemployment

Source: BPS-Statistics Yogyakarta

The BPS-Statistics noted that the open unemployment rate (TPT) in the Special Region of Yogyakarta had decreased by 3.73 percent in February 2022 to 3.58% in February 2023. This indicates that the economy is getting better after the COVID-19 pandemic. Based on place of residence, the open unemployment rate in urban areas is higher, namely 3.9%, compared to only 2.75% in rural areas. This is because urban areas have more formal sectors than rural areas.

Yogyakarta is known as an education city in Indonesia which is a destination for prospective new students to continue their education. Quoted from the Yogyakarta Higher Education Report from the Yogyakarta City Education Office, the growth in the number of universities in Yogyakarta is one of the factors that can influence unemployment among new graduates in the area. Currently, quoted from Jogjaprov.go.id, there are around 128 universities, both public and private. The rapid growth of higher education in Yogyakarta means an increase in the number of fresh graduates entering the job market every year. Apart from that, the growth in the number of universities also has an impact on tighter competition among graduates to get jobs. One of the problems that fresh graduates often face is a mismatch between the skills they have and the jobs available. Some graduates may have skills that are less relevant to market

demand, making it difficult for them to find suitable work.

Fresh graduates from college or high school face special challenges in finding their first job. This is caused by several reasons, including a lack of relevant work experience and a mismatch between the skills possessed by graduates and job demands in the job market. Conditions like this often affect their ability to compete in the competitive world of work. Apart from that, unemployment among fresh graduates is also influenced by economic dynamics and developments in the industrial sector (Fenta, Asnakew, Debele, Nigatu, & Muhaba, 2019). When the economy is experiencing instability or a reduction in jobs in certain sectors, new graduates experience difficulties in finding jobs that match their education. For example, during an economic crisis or situations such as the COVID- 19 pandemic, many companies may reduce the recruitment of new workers or postpone hiring plans.

Meanwhile, there is the issue of regional inequality which influences the unemployment rate among fresh graduates. Some regions may have more job opportunities than others, especially in large cities and business centers. This encourages migration of new graduates to these areas, which sometimes has a negative impact on their home regions, which may face higher unemployment rates. Efforts to overcome unemployment among fresh graduates often require collaborative efforts between the government, universities and the private sector. Education should focus more on developing practical skills and preparing for the world of work. Internship and job training programs can also help fresh graduates gain the practical experience needed by many companies. Apart from that, the government and related organizations must also work to create more job opportunities, especially in sectors that have the potential for growth such as technology, the creative economy and innovation.

Unemployment among fresh graduates in Yogyakarta is a relevant and complex subject. Yogyakarta, as a leading educational center in Indonesia, produces significant graduates every year. However, the unemployment rate among fresh graduates in the city has become a major concern. One of the factors influencing this situation is the mismatch between the skills possessed by

graduates and job demands in the local labor market. The growth in the number of universities and education enthusiasts in Yogyakarta has also increased competition in the job market, adding to the challenges for graduates looking for work. Other significant factors are economic and industrial growth in the region as well as government policies that influence employment opportunities. External factors, such as national and global economic uncertainty, also have an impact on the unemployment rate for fresh graduates. Further research in this context could provide a deeper view of the challenges and opportunities facing new graduates in Yogyakarta and help design more effective strategies to address their unemployment problem.

From the news that researchers quoted from Radar Jogja, it was revealed that the Central Statistics Agency for the Special Region of Yogyakarta recorded that there were 2.23 million people in the labor force as of February 2023, of which 2.15 million people were employed, while 79.91 thousand people were unemployed. Head of BPS DIY Herum Fajarwati said that the largest contributors to unemployment were university graduates, in fact unemployment for university graduates reached 4.91 percent. Followed by high school graduates at 4.54 percent. He also revealed that the higher the education, the more selective you are in choosing a job, so it is better to be unemployed than (work) carelessly (Agus, 2023).

In previous research written by Mohammad Imtiaz Hossain with the title "Factors Influencing Unemployment among Fresh Graduates: A Case Study in Klang Valley, Malaysia" stated that fresh graduates need to change their demanding attitudes and they must adopt more work skills in order to get work. Based on the problems above, many studies have examined large cities abroad. However, no one has conducted research in the Yogyakarta area. In this study, the researcher uses the same variables, the only thing that differs is the region, because Yogyakarta, that is also known as an education city which has many fresh graduates every year. This research is entitled “Factors that influence unemployment for fresh graduates, a case study in Yogyakarta”.

1.2. Problem Formulation

Based on the background of the problem above, the main problems in this research are formulated as follows:

a. Does the Education Level affect the Unemployment among fresh graduates in Yogyakarta?
b. Does Graduates Attributes affect the Unemployment among fresh graduates in Yogyakarta?
c. Does Employability Skills affect the Unemployment among fresh graduates in Yogyakarta?
d. Does the Job Mismatch affect the Unemployment among fresh graduates in Yogyakarta?

1.3. Research Objectives

Based on the formulation of the problem that has been stated, the objectives of this study are:

a. To analyze whether the Education Level affect the Unemployment among fresh graduates in Yogyakarta
b. To analyze whether Graduates Attributes affect the Unemployment among fresh graduates in Yogyakarta
c. To analyze whether Employability Skills affect the Unemployment among fresh graduates in Yogyakarta
d. To analyze whether the Job Mismatch affect the Unemployment among fresh graduates in Yogyakarta

1.4. Research Benefits

This research provides benefits theoretically and practically.

a. Theoretically, this research will make a significant contribution to the economic sector, especially the factors that influence unemployment among fresh graduates. Furthermore, it can become a reference for other researchers to conduct further research.
b. Practically, fresh graduates can take advantage of the findings of this

research. Research findings can also be used as an illustration for fresh graduates regarding unemployment as reference material for getting a job.

1.5. Sytematics of Writings

CHAPTER I: INTRODUCTION

Chapter I consists of study background, research problem formulation, research objectives, research limitation and research contribution of the research.

CHAPTER II: LITERATURE REVIEW

Chapter II presents theories related to the research topic, and the previous research as an overview for this research and the research hypothesis.

CHAPTER III: RESEARCH METHOD

Chapter III contains the population and sample used in this research, explanation of research variables such as independent, dependent, input and output variables, and how the data are collected and analyzed.

CHAPTER IV: DATA ANALYSIS AND DISCUSSIONS

Chapter IV consists the process and the result of the data that previously have been collected and analyzed by using the proposed research method which are panel data regression model selection, classic assumption test, and significant test.

CHAPTER V: CONCLUSIONS AND RECOMMENDATIONS

Chapter V presents the conclusions and recommendations for future research.

CHAPTER II
LITERATURE REVIEW

2.1 Theoretical Basic

2.1.1 Unemployment

Unemployment is a condition where individuals who want to work cannot find work that suits their skills, education or experience. Unemployment is a major problem faced by all countries. Sukarno (1994) expressed unemployment as a situation where individuals who are part of the workforce want to work but have not been able to find a job. According to employment indicators o in BPS-Statistics Indonesia, unemployment is defined as people who are not working but are looking for work or are preparing a new business or it could be said to be people who are not looking for work because they have started working but have not yet started working. The main factor that causes unemployment is a lack of aggregate expenditure (Shimer, 2012). When entrepreneurs produce goods and services, their main goal is to make a profit. However, these profits can only be achieved if entrepreneurs can sell the goods and services they produce. The higher the demand, the greater the amount of goods and services they produce. This increase in production will have a positive impact on labor absorption. Unemployment is also called a situation where a person who has the ability and desire to work cannot get a job that suits his skills and preferences.

Unemployment is divided into 3 types:

1. Disguised Unemployment

   Disguised unemployment occurs when someone has a job, but the job does not take full advantage of their abilities, skills, or level of education. This could be caused by a lack of job opportunities that match their qualifications, so they accept less relevant jobs. An example is an engineering graduate who works as a waiter in a restaurant is an example of disguised unemployment

because the job does not utilize his qualifications.

2. Underemployment

   Underemployment is a situation where someone works less than their expected full hours or only works part-time, even though they would like to work more hours or full-time. This may be due to a lack of full-time work available or due to the individual's choice to work part-time. An example is Someone qualified for full-time work, but he/she can only find part-time work in a relevant field, and experiences underemployment.

3. Open Unemployment

   Open unemployment is a type of unemployment where a person has no job at all and is actively looking for a job that suits his or her skills and preferences. People in this category are generally listed in official unemployment statistics. An example of someone in an open unemployment is a person who has lost his job and is looking for a new job by submitting a job application or taking part in an interview.

Unemployment is a situation where a person who is qualified to work cannot find a suitable job. Many factors can cause unemployment, and these factors can vary greatly from country to country. The followings are several factors that can cause unemployment in detail (Romer & Romer, 2010):

1. Economic Recession

   Economic recession is a major factor in rising unemployment rates. When the economy is experiencing a contraction, companies tend to reduce the number of workers or not to recruit anymore. This results structural unemployment, meaning people lose their jobs due to structural changes in the economy. An economic recession is an economic condition characterized by a significant decline in the economic activity of a country or region. This occurs when there is a prolonged decline in economic growth, economic

contraction, and a decline in several key economic indicators such as GDP, investment, and consumption. During a recession, businesses tend to experience a decline in revenue, which results in cost cuts, including workforce cuts and hiring delays. The followings are several ways the economic recession affects the unemployment rate in Indonesia, including:

a) Decline in Business Activity

   During a recession, many companies experience a decline in revenue and profits, so they tend to reduce costs by cutting the workforce or stopping new hiring. This results in unemployment caused by changes in economic conditions

b) Lack of Investment and Business Expansion

   During a recession, companies tend to be reluctant to invest in business expansion or opening new factories. This means there is a lack of new job creation, which has a negative impact on the unemployment rate (C Haltiwanger et al, 2002).

c) Decline in Consumer Demand

   During a recession, consumers tend to reduce their spending due to concerns about an uncertain economic future. This decrease in demand can reduce a company's need for additional work, resulting in unemployment.

d) Lack of Access to Financing

   During a recession, financial institutions may be more cautious about providing loans to both companies and individuals. This can hinder business growth and investment, which in turn impacts job supply.

e) Changes in Consumption Patterns

   During a recession, consumers may be more inclined to switch to cheaper goods and services, which may result in decreased demand for certain types of jobs. This can lead to sector-specific unemployment.

2. Technology and Automation

Technological advances and automation in production can reduce the demand for human labor. Advanced machines and software can replace human workers in certain tasks, leading to structural unemployment for workers without new skills (Kurt, 2019). Technology and automation have a significant impact on unemployment rates. In many cases, this impact depends on the extent to which technology is implemented in an economy and how society and governments respond to it. Here are some ways technology and automation are affecting unemployment.

a) Reduction in Labor Demand

The use of technology and automation in production can reduce dependence on human workers. Automated machines, robots and intelligent software can replace human workers in routine or repetitive tasks. As a result, there is a decrease in demand for labor in these jobs.

b) Increased Productivity

Technology and automation often increase productivity in various sectors of the economy. While this may lead to a decrease in the number of jobs in certain sectors, it can also allow companies to increase their production volumes. This can create opportunities for economic growth and the creation of new jobs in related sectors.

c) Structural Unemployment

Technology and automation can be the cause of structural unemployment, meaning that human jobs become obsolete or replaced by technology. This can result in workers who lose their jobs having to face difficulties in finding new ones because they may not have the skills to match the jobs available.

d) New Job Creation

While technology can eliminate some jobs, it also often creates new jobs. This job is often related to the development, maintenance, and operation of new technology. For example, the information technology industry and other emerging technologies are creating jobs in software development, data analysis, and technical support.

e) Job Shift

The impact of technology on unemployment also includes shifts in existing jobs. Some jobs may experience changes in responsibilities or skill requirements as a result of technology. Workers may need to upskill or adapt to these changes to remain relevant in the labor market.

3. Skills and Education

Lack of relevant skills and adequate education can be a factor in unemployment. Workers who do not have the skills required by the labor market have difficulty in finding work. Skills and education have a significant impact on unemployment rates (Oreopoulos, von Wachter, & Heisz, 2012). The skill levels and education levels of individuals and the population as a whole influence their ability to compete in the labor market. Here are some ways skills and education affect unemployment:

a. Access to Paid Work

A higher level of education often opens the door to access to better quality and well-paid jobs. Workers who have more education tend to have access to more stable and more profitable jobs, which can reduce unemployment rates.

b. Required Competencies and Skills

Relevant skills and competencies that match labor market demands are essential. Workers who have the skills needed by growing industries and sectors tend to have more job opportunities. Conversely, a lack of skills that match labor

market demand can lead to unemployment.

c. Training and Further Education

Workers who invest in training and further education tend to be better prepared to deal with changes in labor demand resulting from technological developments or changes in the labor market. They have the ability to upgrade their skills according to market demands.

d. Skills Mismatch

Sometimes there is a mismatch between the skills possessed by workers and the skills required by the labor market. This can lead to unemployment because workers who have skills that do not match market demands have difficulty in finding suitable work.

4. Demographic Change

Factors such as population growth, increased life expectancy, and other demographic changes can influence unemployment rates. An increase in the number of job seekers that exceeds job offers can increase unemployment. Demographic changes can have a significant impact on unemployment rates. These changes involve changes in age structure, population growth, and other demographic factors that can influence labor supply and demand. There are some ways demographic changes affect unemployment(Cohen, 2003):

a) Population Growth

If population growth exceeds economic growth or job creation, then labor supply will exceed demand, which could result in higher unemployment rates. Likewise, low population growth can create an imbalance in which there are more jobs available than workers looking for work.

b) Changes in Age Structure

Changes in the age composition of the population can also affect unemployment. An increase in the number of

young people entering the labor market may increase youth unemployment, as they look for their first jobs. On the other hand, population aging may create an increase in demand for health care and age-related services.

c) Population Migration

Changes in population migration, both internal and external, can influence unemployment levels in certain areas. For example, urbanization and migration from rural to urban areas can create an imbalance between labor supply and demand in certain urban areas

5. Macroeconomic Conditions

High inflation or currency fluctuations can affect the labor market. Economic instability can make companies hesitant to hire more workers. Macroeconomic conditions, including factors such as economic growth, inflation, interest rates, and fiscal and monetary policy, have a significant impact on the unemployment rate (Ademola & Badiru, 2016). Here are some ways macroeconomic conditions affect unemployment:

a) Economic growth

Strong economic growth tends to create more job opportunities and reduce unemployment rates. When the economy grows rapidly, companies tend to expand their business and hire more workers.

b) Inflation

A low inflation rate can provide economic stability and allow companies to plan long-term investments. On the other hand, high inflation can reduce people's purchasing power and result in economic uncertainty, which can affect job demand.

c) Interest rate

Low-interest rates can encourage investment and

economic growth. However, interest rates that are too low can also reduce incentives to save and invest, which can affect the labor market. High-interest rates can make loans more expensive, which can reduce investment and economic growth.

d) Fiscal and Monetary Policy

Government policies, such as fiscal spending and taxes, as well as central bank policies regarding interest rates and money supply, can have a major impact on the unemployment rate. Appropriate actions from governments and central banks can stimulate economic growth and create jobs.

e) Aggregate Demand and Supply

Macroeconomic conditions also influence aggregate demand and supply in the economy. A decrease in aggregate demand can result in economic contraction and job reductions. Conversely, an increase in aggregate demand can create economic growth and job opportunities.

f) Economic Crisis

An economic crisis, such as a recession or depression, can cause a sharp drop in the unemployment rate as companies cut jobs and halt hiring to cope with economic uncertainty.

In each case, the above factors may interact and influence each other. A better understanding of these factors can help governments, businesses, and individuals take steps to reduce unemployment rates.

2.1.2 Fresh Graduates

Fresh graduate is a term that refers to individuals who have recently completed their formal education, such as graduating from a college or university, and do not yet have significant work experience in a particular industry or job field. They usually have an academic degree

that suits the job they are seeking, but they have not entered the job market or have relevant experience in the workforce. Fresh graduates are often faced with the challenge of entering the labor market and starting their professional careers. They may have to compete with other applicants who are also recent graduates, and they often need to build their portfolio of work from scratch. However, some companies and industries provide internship or special training programs to help fresh graduates develop the necessary skills and experience (Savickas & Porfeli, 2012).

The first challenge faced by fresh graduates is inexperience. They do not yet have practical work experience that they can showcase to potential employers. This often makes them less competitive competitors in finding the desired job. Additionally, there is a difference between academic knowledge and practical skills required in a work environment. Fresh graduates often need to adapt to the demands of the real world of work. Overcoming inexperience, fresh graduates often need to develop social and communication skills, as well as build a strong professional network. They can look for internship opportunities, temporary work, or volunteer projects to gain practical experience and expand their network of contacts. Apart from that, fresh graduates must also focus on developing "soft skills" such as leadership, problem- solving, teamwork, and adaptability. This is important because these skills are not only necessary on the job, but can also help them compete in the job market.

On the positive side, fresh graduates often bring enthusiasm, creativity, and a high enthusiasm for learning into the world of work. Many companies recognize the added value they bring in the form of fresh ideas and different views. Therefore, some companies tend to offer special training and development programs for fresh graduates to help them overcome the challenges early in their careers. In an ever-changing economic environment, the role of fresh graduates in the world of work

is becoming increasingly important in bringing innovation and new thinking to various sectors. While they may need time to adapt, they have great potential to become successful leaders and professionals in the long term.

2.1.3 Education Level

Educational level is a measure that reflects the extent to which a person has completed their formal education at various stages. Educational level reflects an individual's progress in education, the level of qualifications they have achieved, and their understanding of various subjects or areas of study (Psacharopoulus & Patrinos, 2018). It plays an important role in evaluating an individual's qualifications, skills, and opportunities in society.

Education levels include several levels, including:

b. Basic education

This covers the early stages of education, from kindergarten to primary education (SD/MI). This basic education forms the basis of an individual's education and basic skills.

c. Secondary education

This includes education at the secondary level, such as junior high school (SMP/MTs) and senior high school (SMA/SMK) or equivalent. This level prepares students with more in-depth knowledge in a variety of subjects.

d. Higher education

This includes education obtained at higher education institutions such as colleges and universities. Higher education levels include bachelor's (S1), master's (S2), and doctoral (S3), which indicate a higher level of specialization.

e. Non-formal education

This includes training, courses, or certifications that can be

obtained outside the formal education system. The focus is often on developing practical skills relevant to a particular job.

Education level has an important role in determining an individual's access to employment opportunities, income level, and social mobility. A high level of education is often associated with better job opportunities, higher income, and the possibility of occupying a managerial or professional position. Apart from that, the level of education also has an impact on an individual's intellectual development

2.1.4 Graduate Attributes

Graduate attributes are a collection of qualities, skills, knowledge, and attitudes that graduates from higher education institutions are expected to have. It covers various aspects that prepare graduates for success in the world of work and their personal lives. Graduate attributes include strong academic abilities, effective communication skills, teamwork skills, critical and creative thinking abilities, and technological abilities (Boud & Falchikov, 2006). Additionally, these attributes include problem-solving abilities, good time management, and the ability to adapt and learn independently throughout life. Ethics and social responsibility are also an integral part of graduate attributes, reflecting the importance of integrity and social awareness in personal and professional behavior. These graduate attributes help prepare individuals to face the challenges of the modern world and contribute positively to society and economic and social development.

f. Academic Skills

Academic skills include a deep understanding of a field of study, critical thinking skills, analysis, and use of research methods. Graduates must have a strong understanding of the subjects they study, which includes mastery of relevant concepts and theories.

g. Communication Ability

Communication skills include the ability to speak and write

clearly and effectively, as well as the ability to listen well. Graduates who are good at communication can articulate their ideas and information well to colleagues, superiors, and clients.

h. Teamwork Skills

Teamwork skills involve the ability to collaborate with others, resolve conflicts, and achieve common goals. Graduates should be able to contribute to a collaborative work environment and understand their roles and responsibilities within a team.

i. Critical and Creative Thinking Ability

Critical thinking skills include the ability to analyze problems, evaluate arguments, and make decisions based on evidence and good reasoning. Creative thinking skills include the ability to come up with new ideas and innovative solutions.

j. Technology Skills

In an increasingly digitalized world, graduates must have a strong understanding of modern technology, including hardware and software, as well as the ability to use it effectively. They must also be able to adapt to new technological developments.

k. Problem Solving Ability

The ability to identify, analyze, and solve problems is an important attribute in many professions. Graduates must be able to face challenges and find effective solutions.

l. Time Management Ability

The ability to manage time efficiently is key to avoiding stress and maintaining high productivity. Graduates must be able to manage schedules, prioritize tasks, and work efficiently.

m. Adaptability and Independent Learning

Graduates must be able to adapt to changes in their work and environment and have the motivation to learn independently throughout their lives. Independent learning involves developing new skills and understanding new concepts over time.

2.1.5 Employability Skills

Employability skills are a set of skills, knowledge, and attributes that make someone a desirable candidate for employers. These skills are not only related to technical skills specific to a particular job, but also include aspects of communication, leadership, creativity, work ethic, and the ability to adapt and learn. Appropriateness skills are critical in helping individuals get a job, keep a job, and progress in their careers. Some examples of feasibility skills include the ability to communicate well, work together in a team, solve problems, and adapt to change (Kuijpers, Meijers, & Gundy, 2011).

2.1.6 Job Mismatch

Job mismatch is a condition in which an individual's qualifications, skills, or experience do not match the requirements or demands of the job for which they are applying or for which they currently hold. These incompatibilities may include differences in education levels, incompatible skills, irrelevant experience, inappropriate job locations, inadequate salaries, or incompatibility with interests and career goals. When a job mismatch occurs, individuals may feel dissatisfied with their jobs, or may face difficulty in finding or keeping a job that suits their abilities. Job mismatch can also cause high employment fluctuations and contribute to structural unemployment. Therefore, looking for a job that suits your qualifications and career goals is important to achieve optimal job satisfaction and productivity in the world of work (Tzannatos, 1999).

2.2 Previous Literature

In this research, the researcher found several references as useful supports to avoid repetition of similarities in studies and also to avoid plagiarism of previous scientific studies, which is why it is very necessary to have a review of

several previous studies as seen in the following:

First, research written by Hossain, et al (2018) with the title "Factors Influencing Unemployment among Fresh Graduates: A Case Study in Klang Valley, Malaysia". This research aimed to examine the reasons and factors why new graduates face unemployment in the Competitive Market in Klang Vally. This research used a quantitative approach using a self-administered survey. This research uses independent variables, namely Educational level, Graduates Attributes, Employability Skills, Job Mismatch, with the dependent variable being Unemployment Among Fresh Graduates. The results of this research are that good grades do not guarantee that a new graduate will get a job in Malaysia. This research shows that there is a strong relationship between Graduates Attributes, Employability Skills, Job Mismatch. Effective skills training will produce educated and skilled graduates before entering the world of work.

Second, research written by Fenta, et al (2019) entitled "Analysis of Supply Side Factors Influencing Employability of New Graduates: A Tracer Study of Bahir Dar University Graduates". This research aims to determine the job placement profile of Bahir Dar University graduates and the relevance of school-related factors to job placement. This research was conducted at Bahir Dar University involving undergraduate graduates from 2015-2016. This research method uses tiered random sampling with stratification. The results of this research showed that 79% of the surveyed graduates were successfully placed in jobs, and most of them (93%) found jobs that were relevant to their study program. The research also revealed that more than 65% of their graduates used public advertising to find their jobs, and 58% reported that their employers used exams as a selection tool.

Third, research written by Shakur, et al (2020) with the title "Determining Unemployment Factors Among Job Seeking Youth in the East Coast of Peninsular Malaysia". The aim of this research is to examine the unemployment factors and career challenges commonly faced by youth on the East Coast of Peninsular Malaysia. This research used a quantitative approach with descriptive analysis and multiple regression methods which were used to analyze the

demographic distribution of youth to determine the factors that influence unemployment among them. The result is that the majority of youth respondents in the East Coast states of Malaysia are still unemployed and actively looking for work. This research also found that there are differences in the factors influencing youth unemployment in the three East Coast states of Malaysia.

Research written by Huang, et al (2020), entitled "Unemployment and Worker Participation in the Gig Economy: Evidence from An Online Labor Market". This research aims to measure the relationship between online labor supply and offline unemployment, and explore differences in this relationship through various specific characteristics in various regions. This study uses data from one of the leading online labor markets in the United States that combines participation data for workers living in various counties with county unemployment rate data from the BPS-Statistics Indonesia. The results of this study show that there is a positive and significant relationship between the local unemployment rate in the traditional offline labor market and the supply of online workers living in the same district. Additionally, there was a significant increase in the volume of online project bidding activity from workers living in the same district. This research also shows that there are significant differences in the relationship, a greater supply of online labor occurs when unemployment occurs. in districts that have better internet access, younger and more educated populations, and populations that have social ties spread across the wider area.

Research written by Krug et al (2019) entitled "The Social Stigma of Unemployment: Consequences of Stigma Consciousness on Job Search Attitudes, Behavior, and Success". This research aims to examine the impact of social stigma related to unemployment on the expectations of unemployed individuals (stigma consciousness) and the consequences of these negative expectations on job search attitudes and behavior. This research method uses data from the panel study "Labor Market and Social Security ((PASS) to analyze the influence of stigma consciousness on the well-being and well-being of unemployed individuals, as well as to examine the influence of stigma consciousness on job search attitudes and behavior. The results of the research show that individuals

who are unemployed and have a high level of stigma consciousness experience a decline in well-being and health. The results of this study show that social stigma related to unemployment can have a significant impact on the well-being, health, and job search attitudes of unemployed individuals, even though their job search efforts are more intensive.

Research written by Kassem, et al (2019) entitled "Unemployment Rate, Population Density and Crime Rate in Punjab (Pakistan): An Empirical Analysis" aims to examine the impact of unemployment, population density, amount of remittances, and level of industrialization on crime rates among districts in Punjab, Pakistan. This research method used data collected from the Pakistan Bureau of Statistics, Multiple Indicator Survey (MICS), and Punjab Development Statistics (2018). To test the relationship between these variables, this study applies the Johansen cointegration method. The research results show that unemployment and population density have a positive impact on crime rates among districts in Punjab, Pakistan. The results also show that the amount of remittances, level of industrialization, and social infrastructure have a negative and significant impact on the crime rate in Punjab districts. The study recommends that to reduce crime rates, the Punjab government should control unemployment and overcrowding, while increasing the level of industrialization and social infrastructure, as well as the amount of remittances. Based on previous literature and our findings, it can be concluded that unemployment has a significant role in increasing crime rates.

Furthermore, research written by Merino, et al (2019) with the title "Is There Any Relationship between Unemployment in Young Graduates and Psychological Resources? An Empirical Research from the Conservation of Resources Theory". The aim of this research is to explore the role of psychological resources, well-being, distress, and eustress in young graduates who are employed and unemployed in the midst of an economic recession. This research method used 542 samples with research results showing that there is a fairly large possibility for young graduates to get a job if they have a high level of optimism. The results of this research also have relevance to the development of

training programs that can improve the welfare and quality of life of unemployed individuals, so that they can be better prepared to find work.

2.3 Conceptual Framework

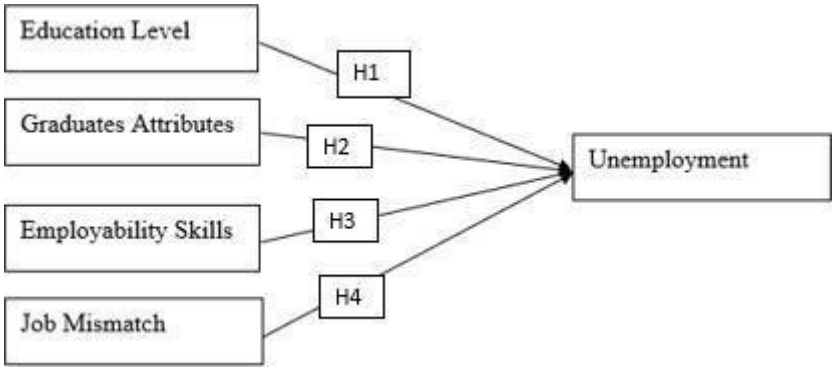

Figure 2. 1 Conceptual Framework

From the framework of thinking, the following hypothesis can be formulated

H1 : Education Level has a negative effect on Unemployment

H2 : Graduates Attributes have a negative effect on Unemployment

H3 : Employability Skills has a negative effect on Unemployment

H4 : Job Mismatch has a positive effect on Unemployment

CHAPTER III
RESEARCH METHODS

3.1. Design Research

Research design is the basis or guideline for carrying out research starting from determining research instruments, determining population and sample, collecting data, and analyzing data. This research is quantitative research, namely the data used in this research is primary data originating from distributing questionnaires conducted via Google Form.

The data that has been collected will then be tested for validity and reliability and then analyzed using multiple linear regression. The linear regression test stages include classic assumption tests including data normality tests, autocorrelation tests, multicollinearity tests, and heteroscedasticity tests. Then the coefficient of determination (R2) and hypothesis testing were carried out, namely the T test and F test with the help of SPSS software.

3.2. Population and Sample

The data source in this research is primary data, namely data collected by the researcher, is directly from the first source using questionnaire questions given to research respondents, namely

3.1.1. Population

Population is a generalized area consisting of objects or subjects that are certain quantities and characteristics determined by researchers to be studied and then conclusions drawn (Sugiyono, 2016). Population is used to express a group of objects that are the aim of a research. The population used in this research is in Indonesia.

3.1.2. Sample

A sample is a part of a population that is considered representative of the population. Meanwhile, according to Sugiyono (2016), the sample is part of the characteristics and number of parts included in the population. The sampling technique in this research is Non-Probability Sampling, so not all elements in the population have the same

opportunity to become respondents. The sample in this study was taken based on

1. Fresh Graduates graduating in 2021 – 2023
2. Fresh Graduates are university graduates in Yogyakarta.
3. Fresh Graduates come from all majors

Because the population size in this study is uncertain, the Wibisono (2003) formula was used to calculate the sample size in (Riduwan & Akdon, 2007).

$$n = (\frac{Z_{a/2}\sigma}{e})^2$$

Information:

n = number of samples

Za/2 = Z table value (value obtained from the normal table for the confidence level with a confidence percentage of 95%

= population standard deviation (25% or 0.25 is the norm e

= sampling error rate (in this study taken 5%)

So the calculation is:

$$n = (\frac{(1{,}96).(0{,}25)}{0{,}05})^2 = 96{,}04 = 100$$

n = ((1.96). (0.25) 0.05) =96.04 = 100

So, the sample used in this research was 100 respondents.

3.3. Data Sources and Data Collection Techniques

A data source is anything that can provide information about the data. Based on how to obtain data, the data source is divided into two, namely primary data and secondary data. The primary data is data obtained directly from the subject or object of research, such as recorded interviews. The secondary data is data obtained indirectly, which can be in the form of documents or archives owned by the research object or subject (Kadir, 2019).

This research focuses on the use of primary data, which is collected directly from the original source, with primary data having the characteristic of always

being updated. The data collection approach in this research uses a non- probability sampling method, which is a procedure where not all elements of the selected population have the same opportunity to become the test sample. Within the framework of the non-probability sampling method, this study applies a purposive sampling technique, where samples are selected based on certain criteria following the phenomenon and research needs (Sugiyono, 2016). The primary data in this research was obtained through the distribution of questionnaires via the Google Forms platform.

3.4. Operational Definition of Variables

Based on this research, the variables used as the main focus are:

3.4.1 Bounded Dependent Variance (Y)

The dependent variable is a variable that is influenced by the independent variable. In this study the dependent variable is unemployment among

3.4.2 Independent Variable (X)

Independent variables are variables that influence the dependent variable. In this research, there are 4 independent variables including:

a. Education Level

Education Level is the level of education that a person has achieved, which is usually measured in the form of a degree or level of education such as bachelor, master, doctorate, or primary, secondary, and tertiary education levels. Education level reflects the extent to which an individual has completed formal education.

b. Graduate Attributes

Graduate attributes are characteristics possessed by individuals who have completed certain education, such as degrees, knowledge, skills, and experience obtained during their education. The graduate attributes usually reflect their competencies and qualifications after completing an educational program.

c. Employability Skills

Employability skills are the skills and attributes that make a person a more attractive candidate for employment by employers. Employability skills include communication, collaboration, problem-solving, creativity, adaptability and interpersonal skills needed to succeed in the world of work.

d. Job Mismatch

Job mismatch is a situation where a worker's skills, qualifications, or experience do not match the requirements or duties of the job they are undertaking. This can happen when someone works in a position that does not suit their background or abilities.

3.5. Research Instrument

Research instruments refer to the tools or facilities used in the data collection process in research. This instrument is designed to measure research variables or to collect information needed to answer research questions. The research instruments can be questionnaires, interviews, checklists, observations, tests, or other methods used to collect data.

This research used a questionnaire, that is, a method of collecting information that will be analyzed to obtain specific results. The aim is to obtain information that is important for research purposes, as well as accurate and reliable information.

In this study, questions and statements in the survey were measured using a Likert scale. This scale is used to measure individual behavior, perceptions, and views regarding certain social activities or events. To use a Likert scale, the variables in the research are broken down into dimensions, then divided into sub-variables, and finally broken down into indicators. This indicator is used as a basis for creating questions or statements that will be answered by respondents. Each survey item has a rating scale and is accompanied by wording like the following.

Table 3. 1 Likert Scale

Positive Statements	Score	Negative Statements	Score

Strongly agree	5	Strongly agree	5
Agree	4	Agree	4
Neutral	3	Neutral	3
Don't agree	2	Don't agree	2
Strongly Disagree	1	Strongly Disagree	1

3.6. Data Analysis Technique

The analysis technique used in this research is the multiple linear regression analysis method. This analysis is used when there is more than one independent variable to measure the influence of the independent variable on the dependent variable. This analysis can use SPSS version 23.

1. Validity Test

   Validity Test is a test of the validity of data in quantitative research. It is said to be valid if a research instrument has the following:

   a. The correlation coefficient is greater than or equal to 0.3
   b. The multiplicative moment correlation coefficient is greater or equal to r table = (a/n-2) with the number of samples denoted by the letter n
   c. The sig value is less than a.

$$^{y} = \frac{\sum y - \sum \sum y}{\sqrt{(\sum)^2 - (\sum)^2 - (\sum y)^2 - (\sum y)^2}}$$

Information:

rxy = correlation coefficient between variables X and Y

N = amount respondents

ΣX = amount question item score

ΣY = amount score total question

ΣX^2 = amount squared score item question

ΣY^2 = amount total score grain square question

2. Reliability Test

   The reliability test is used to describe the extent to which the results

are quite consistent. The formula is used in this analysis to assess its reliability. The formula is as follows:

$$\alpha = [N / (N-1)] * [1 - (\Sigma\sigma^2 i / \sigma^2 t)]$$

Information:

α = Cronbach's alpha value

N = number of items or questions in the instrument

$\Sigma\sigma^2 i$ = number of variants for each item

$\sigma^2 t$ = total variance of all items in the instrument

3. Normality Test

The normality test aims to test whether the dependent variable and independent variable are both normally distributed or not. The regression model is data that is normally distributed or close to normal. This test is carried out by looking at the distribution of data on the axis or diagonal graph. If the diagonal line data is spread out or not in the same direction as the diagonal line, then the regression model does not comply with the assumption of normality. To determine the normality of the data, statistical analysis can be carried out, one of which can be seen using the Kolmorogov-Smirnov (KS) test, namely the asymptomatic value. Signature. greater than or equal to 0.05 then it is normally distributed, whereas if Sig. less than 0.05 then the distribution is not normal.

4. Classic Assumption Test
   a. Multicollinearity Test

The multicollinearity test aims to test whether the regression model has a high or perfect correlation between the independent variables. If there is perfect multicollinearity between the independent variables, then the regression coefficient of the independent variable cannot be determined and the will be infinite. If multicollinearity between independent variables is high, then the regression coefficient of the independent variable can be determined, but having a high

To find out whether multicollinearity can be used to analyze the correlation between variables and perceptions, it is best to tolerate R(VIF). Thus, it can be said that > 0.10 and VIF value < 10 are not the same as the multicollinear value between independent variables in the regression model. If the is < 0.10 and VIF > 10, it can be said that there is multicollinearity between the independent variables in the regression model.

b. Heteroscedasticity

The heteroscedasticity test aims to test whether in the regression model, there is an inequality from the residuals of one observer to another observer. If from the residuals from one observer to another observer is constant, it is called or if it is different it is called A good regression model is a model of or no because this data collects data that represents various measures. If the significance value is above 0.05 then there is no heteroscedasticity in the regression

5. Multiple Linear Regression Analysis

The analysis was carried out to find out how much influence the variables, namely Education Level ($X_{1)}$, Graduates Attributes ($X_{2)}$, Employability Skills (X_3), and Job Mismatch (X_4) had on Unemployment among fresh graduates (Y). The general formula used for multiple linear regression equations is as follows:

$$Y_1 = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + e$$

Information:

Y_1 = Unemployment among fresh graduates

X_1 = Education Level

X_2 = Graduate Attributes

X_3 = Employability Skills

X_4 = Job Mismatch

b_1,b_n= regression coefficient

e=

The regression coefficient value as the basis for analysis is very determining because this research has a basic method. This means that if the coefficient b is positive (+), then it can be said that there is an influence between the independent variable and the dependent variable, because every increase in the independent variable results in an increase in the dependent variable. Even though the coefficient b value is negative (-), it shows a negative influence, where an increase in the value of the independent variable results in a decrease in the value of the dependency.

6. Hypothesis Test
   a. Partial Regression Coefficient Test (T-Test)

      The T test is used to determine the influence of Education Level (X_1), Graduate Attributes (X_2), Employ ability Skills (X_3), and Job Mismatch (X_4) on Unemployment among fresh graduates (Y). The test steps are carried out as follows:

      1) Formulate a hypothesis (Ha)

         Ha accepted states that there is a significant influence between the independent variable and the dependent variable partially

      2) Determine the significance level (α) of 0.05

      3) Compare t count with t table

         If t calculated is greater than t table then Ha is accepted. States that the independent variable individually has an effect on the dependent variable. The calculated t value can be found using the formula

$$t\ count = \frac{Standar\ Deviation}{Regression\ Coefficient}$$

      4) Based on the probability that Ha will be accepted if the probability value is less than 0.05 (α)

5) Determine which independent variable has the most dominant influence on the dependent variable which can be seen from the regression coefficient.

b. Simultaneous Regression Coefficient Test (F Test)

The F test is used to test the significance of the influence of Education Level (X_1), Graduates Attributes (X_2), Employ ability Skills (X_3), and Job Mismatch (X_4) on Unemployment among fresh graduates (Y) simultaneously. The test steps are carried out as follows:

1) Formulate a Hypothesis (Ha)
2) Determine the level of significance, namely the value is 0.05 ($\alpha = 0.05$)
3) Compare Fcount with F table
4)

The calculated F value can be found using the following formula

$$F\ count = \frac{R^2/(k-1)}{(1-R)/(N-K)}$$

Information:
R^2 = Coefficient of Determination
k =Number of regression coefficients
N = Number of Observations
With the following conditions :

- If Fcount < Ftable, then the independent variables do not have any effect on the dependent variable.
- If Fcount > Ftable, then the independent variables jointly influence the dependent variable.

5) Using probability, Ha will be accepted if the probability value is less than 0.05.

c. Coefficient of Determination (R^2)

The Coefficient of Determination (R^2) is used to measure how far the model can explain variations in the dependent variable. The coefficient of determination can be found using the following formula.

$$R^2 = 1 - \frac{ESS}{TSS}$$

The coefficient of determination is used to provide an explanation of the proportion of variables that can be explained by the independent variables. The coefficient of determination value is expressed in a ratio whose value is 0 < R2 < 1. A small R2 value indicates that the ability of the independent variable to execute the variable is very limited. A value close to 1 means a variable provides almost all the information to predict the variable at hand.

CHAPTER IV
ANALYSIS AND DISCUSSIONS

4.1 Data Analysis

1. Characteristics Respondent

Description respondents are used to identify the characteristics of the respondents who have determined in study, they are age, year of graduation, and major or study program. Respondents in study have the following characteristics:

a. Based on Age

Table 4. 1 Age Respondent

Age	Amount	Frequency
18 – 22	46	46%
22 – 25	32	32%
> 25	22	22%
Total	**100**	**100%**

Source: Processed Primary Data

Based on Table 4.1, most respondents' age are between 18-22 with percentage of 46%, then the respondents' whose ages are between 22 – 25 is 32%. Respondents who are >25 are 22%. It can be concluded that most respondents are between 18-22 years old.

b. Based on Graduation Year

Table 4. 2 Year of Graduation of Respondent

Graduation year	Amount	Frequency
2021	13	13%
2022	17	17%
2023	70	70%
Total	**100**	**100%**

Source: Processed Primary Data

Based on Table 4.2, respondents who graduated in 2021 is 13%, then the respondents whose graduation year is 2022 is 17%. For respondents who graduated in 2023 is 70%. It can be concluded that most respondents are graduated in 2023.

c. Based on Departement/Study Program

Table 4. 3 Departement Respondents

Major Respondent	Amount	Frequency
Knowledge Economy	22	22%
Mechanical Engineering	9	9%
Industrial Engineering	11	11%
Informatics	9	9%
Pharmacy	8	8%
Management	8	8%
Accountancy	9	9%
Statistics	8	8%
Sharia Economics	16	16%
Total	**100**	**100%**

Source: Processed Primary Data

Based on Table 4.3, respondents with major study in Economics is 22%, then the Mechanical Engineering 9%, Industrial Engineering is 11%, Informatics is 9%, Pharmaceutical is 8%, Management is 8%, Accounting is 9%, Statistics is 8% and Sharia Economics is 16%. It can be concluded that most respondents study Economics.

2. Validity Test

The researcher conducted a survey of fresh graduates to ensure that the instrument valid research with using 100 respondents. Correlation momentused in validity testing processed research by using the SPSS program. If Sig value < 0.05 is then declared Valid. That matter can be concluded as following based on validity test results

Table 4. 4 Educational Level Validity Test Result (X1)

Item	Sig	Sig	Criteria
1	0.00	0.05	Valid
2	0.00	0.05	Valid
3	0.00	0.05	Valid
4	0.00	0.05	Valid
5	0.00	0.05	Valid

Source: Processed Primary Data

Table 4.4 above shows this research used 5 indicators. The education level variable obtained sig result <0.05 and declared valid.

Table 4. 5 Graduates Attributes Validity Test Result (X2)

Item	Sig	Sig	Criteria
1	0.00	0.05	Valid
2	0.00	0.05	Valid
3	0.00	0.05	Valid
4	0.00	0.05	Valid
5	0.00	0.05	Valid

Source: Processed Primary Data

Based on Table 4.5, it is known that 5 indicators of the education level variable obtained sig result <0.05 and declared valid.

Table 4. 6 Employability Skills Validity Test Result (X3)

Item	Sig	Sig	Criteria
1	0.00	0.05	Valid
2	0.00	0.05	Valid
3	0.00	0.05	Valid
4	0.00	0.05	Valid
5	0.00	0.05	Valid

Source: Processed Primary Data

Table 4.6 shows that five indicators of the education level variable obtained sig result <0.05 and declared valid.

Table 4. 7 Job Mismatch Validity Test Result (X4)

Item	Sig	Sig	Criteria
1	0.00	0.05	Valid
2	0.00	0.05	Valid
3	0.00	0.05	Valid
4	0.00	0.05	Valid
5	0.00	0.05	Valid

Source: Processed Primary Data

Table 4.7 shows that five indicators of the education level variable obtained sig result <0.05 and declared valid.

Table 4. 8 Unemployment Validity Test Result (Y1)

Item	Sig	Sig	Criteria
1	0.00	0.05	Valid
2	0.00	0.05	Valid
3	0.00	0.05	Valid
4	0.00	0.05	Valid
5	0.00	0.05	Valid
6	0.00	0.05	Valid

Source: Processed Primary Data

Based on table 4.5 above, it can be identified that from 5 indicators, the education level variable obtained sig result <0.05 and declared valid

3. Reliability Test

The reliability test is done with valid question, and if the answer statement or question consistent so the variable is said reliable. Cronbach's Alpha formula is used in analysis to determine if there is something that can be reliable or not. If mark Cronbach's alpha > 0.60 was considered reliable and if A Cronbach alpha value < 0.60 was considered as not reliable. The Following is the reliability test results using formula Cronbach's alpha with processed use SPSS application.

Table 4. 9 Reliability Test Result

No	Variable	Cronbach's Alpha	N of Items	Information
1	Education Level (X1)	0.874	5	Reliable
2	Graduates Attributes (X2)	0.754	5	Reliable
3	Employability Skills (X3)	0.840	5	Reliable
4	Job Mismatch (X4)	0.865	5	Reliable
5	Unemployment (Y1)	0.891	6	Reliable

Source: Processed primary data

Table 4.9 shows the variables of reliability test results consist of

education level (X1), Graduates attributes (X2), Employ ability Skills (X3), and Job mismatch (X4) with 5 items each, and Unemployment (Y1) with 6 items. The results above conclude that Cronbach's Alpha value is considered high for every variable from mark limits used namely 0.6. Therefore, the items from each variable are reliable.

4. Normality Test

Normality test is done to find out the data from variable dependent and independent from the regression model is distributed normally or abnormally. If such data own indication not normal then later it will be influential to statistical tests furthermore. According to Ghazali (2011, p.161) normality test can also be tested through testing where if results mark significant is bigger than 5% and 0.05, it means the data have normal distribution. However, if the value is smaller than 5% and 0.05, it means the data are not distributed normally. The following table shows the results from the Normality Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		100
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	2.01627454
Most Extreme Differences	Absolute	.070
	Positive	.041
	Negative	-.070
Test Statistic		.070
Asymp. Sig. (2-tailed)		.200[c,d]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

Table 4. 10 Normality Test Results

Source: Processed primary data

Table 4.10 shows the output of the normality test. The result of mark is if mark significance > 0.05 then that data

are normally distributed, and if mark significance < 0.05 then the data are not distributed normally. In the output results above state that mark is 0.200 which means the mark above 0.05, and it can be concluded that the data are normally distributed.

5. Classic Assumption Test

a. Multicollinearity Test

Multicollinearity Test is used to identify what regression model exists in the correlation between independent variables. According to Ghazali (2016), effects from the multicollinearity test cause the height variable sample. That matter is usually called large standard errors, as a result when coefficient tested t- count will worth smaller than the t- table. This also shows exists linear relationship between variable influenced independent variable dependent (Ghozali, 2016).

The basis for finding whether multicollinearity occurs in a regression model that can be seen from the tolerance value and the Variable Inflation Factor (VIF) value. If the tolerance value is close to 1 and the value of the Variable Inflation Factor (VIF) is around 1 and not more than 10, then it can be concluded that there is no multicollinearity in the data between the independent variables in the regression model.

Table 4. 11 Multicollinearity Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	-.075	1.782		-.042	.967		
	X1.TOTAL	.231	.102	.169	2.256	.026	.495	2.021
	X2.TOTAL	.153	.111	.104	1.383	.170	.493	2.027
	X3.TOTAL	.190	.116	.140	1.642	.104	.384	2.605
	X4.TOTAL	.612	.098	.548	6.268	.000	.364	2.747

a. Dependent Variable: Y.TOTAL

Source: Processed primary data

Based on Table 4.11. it can be seen that mark from Education Level (X1), Graduate Attributes (X2), Employability Skills variables (X3), and Job Mismatch (X4) > 0.10. In table above is also mentioned that Education Level (X1), Graduate Attributes (X2), Employability Skills variables (X3), and Job Mismatch (X4) which has

mark (VIF) more of 10. So it can be concluded that inside Table 4.11 there is multicollinearity between variable in the regression model.

b. Heteroskedasticity Test

Heteroskedasticity Test is used to find out if there is deviation assumption classic. Heteroskedasticity exists when there is inequality variant of the residuals for all observations in the regression model. In a good research heteroskedasticity does not occur. Heteroskedasticity is also possible to identify through the glacier test.

Table 4. 12 Heteroskedasticity Test Result

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.911	1.066		1.793	.076
	X1.TOTAL	.047	.061	.109	.759	.449
	X2.TOTAL	.020	.066	.044	.305	.761
	X3.TOTAL	.008	.069	.018	.112	.911
	X4.TOTAL	-.094	.058	-.270	-1.614	.110

a. Dependent Variable: ABS_RES

Source: Processed primary data

Based on f Table 4.12, there is sig value of more than 0.05 which can be interpreted that all variables do not experience heteroscedasticity. The p fulfils condition from the heteroscedasticity test.

6. Multiple Linear Regression

Linear regression Analysis is a technique in statistics to model and investigate influence between one or a number of free variable to one variable response (Nihayah, 2019). Multiple linear regression aims to measure and identify the influence as well as the direction relationship between free variables that consist of Education Level (X1), Graduate Attributes (X2), Employability Skills variables (X3), and Job Mismatch (X4) against variable bound namely Unemployment (Y1).

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.075	1.782		-.042	.967
	X1.TOTAL	.231	.102	.169	2.256	.026
	X2.TOTAL	.153	.111	.104	1.383	.170
	X3.TOTAL	.190	.116	.140	1.642	.104
	X4.TOTAL	.612	.098	.548	6.268	.000

a. Dependent Variable: Y.TOTAL

Table 4. 13 Multiple Linear Regression

Source: Primary Data Processed

Based on Table 4.13, the formula can be seen below

$$Y = a + b1\ X1 + b2\ X2 + b3\ X3 + b4\ X4 + e$$

So Eq regression formed is

$$Y = -0.075 + (\ 0.231)X\ 1 + (0.153)X\ 2 + (0.190)X\ 3 + (0.612)X\ 4 + e$$

From Eq regression, it can be interpreted that:

a) Constant value -0.075 means that all free variables worth constant (zero), then Unemployment (Y1) is -0.075

b) Coefficient X1 regression value 0.231 means if there is an increase in Education Level (X1) by one unit and independent variables are still/stable, so Unemployment (Y) value will experience increase amounting to 0.231 for one unit, and so do on the contrary.

c) Coefficient X2 regression has a value of 0.153, it means if there is an increase in Graduate Attributes (X2) by one unit and independent variables are still, so Unemployment value (Y1) will experience an increase amounting to 0.153 for one unit, and so do on the contrary.

d) Coefficient X3 regression has a value of 0.190, meaning if there is an increase in Employability Skills (X3) of one unit and independent variables are still, so the Unemployment value (Y1)

will experience an increase amounting to 0.190 for one unit, and so do on the contrary.

e) Coefficient X4 regression has a value of 0.612, meaning there is an increase in Job Mismatch (X4) of one unit and the independent variables are still, so the Unemployment value (Y1) will experience an increase amounting to 0.612 for one unit, and so do on the contrary.

7. Hypothesis Testing

a. T Test

The T test is one of the analytical tests carried out to identify if there is any influence on partial independent variable to dependent variable. The hypothesis used is:

a. H0: Education Level has no significant influence on Unemployment
H1: Education level has a significant negative effect on Unemployment

b. H0: Graduates Attributes has no l significant influence on Unemployment
H2: Graduates Attributes has a significant negative effect on Unemployment

c. H0: Employability Skills has no significant influence on Unemployment
H3: Employability Skills has a significant negative effect on Unemployment

d. H0: Job Mismatch has no significant influence on Unemployment H4: Job Mismatch has significant influence on Unemployment.

The basic value of the T -Test using SPSS is as seen in the following:

a) If the T-- Test Sig > 0.05 then Ho is accepted and H1 is rejected (no influence).

b) If sig < 0.05 then Ho is rejected and H1 is accepted (effect) on the results from the T-test is presented in form Table 4.14 below:

Table 4. 14 T Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.075	1.782		-.042	.967
	X1.TOTAL	.231	.102	.169	2.256	.026
	X2.TOTAL	.153	.111	.104	1.383	.170
	X3.TOTAL	.190	.116	.140	1.642	.104
	X4.TOTAL	.612	.098	.548	6.268	.000

a. Dependent Variable: Y.TOTAL

Source: Processed Primary Data

Table 4. 15 T-Test Hypothesis Results

Variable	**Sig**	**Alpha**	**Conclusion**	**Decision**
Education Level (X1)	0.026	0.05	Influential	H1 is accepted
Graduates Attributes (X2)	0.170	0.05	No effect	H2 is rejected
Employability Skills (X3)	0.104	0.05	No effect	H3 is rejected
Job Mismatch (X4)	0,000	0.05	Influential	H4 is accepted

Source: Processed Primary Data

Based on Table 4. 15, the results from the t-test, the influence of Education Level (X1), Graduate Attributes (X2), Employability Skills (X3), and Job Mismatch (X4) against Unemployment (Y1) can be explained in the following:

1) The variable of Education Level (X1) has a mark significance (sig.) of 0.026. This matter shows that mark significance from a small Education Level of 0.05 (α = 5%) which shows that H_1 Accepted and H_0 is rejected. As a result, the variable of Education Level (X1) has influence on Unemployment (Y1).

2) The variable of Graduates Attributes (X2) has a mark significance (sig.) of 0.170. This matter shows that mark significance from Graduates Attributes is bigger than 0.05 (α = 5%) which shows that H_2 is rejected and H_0 is accepted. As a result, the Graduates Attributes variable (X2) does not have influence on Unemployment (Y1).
3) The Employability Skills variable (X3) has a mark significance (sig.) of 0.104. This shows that mark significance from Employability Skills is bigger than 0.05 (α = 5%) which shows that H_3 is rejected and H_0 is accepted. As a result, the Employability Skills variable (X2) does not have influence on Unemployment (Y1).
4) Variable of Job Mismatch (X4) has a mark significance (sig.) of 0.000. This shows that mark significance from Job Mismatch is small at 0.05 (α = 5%) which shows that H_4 is accepted and H_0 is rejected. As a result, the variable Job Mismatch (X1) has influence on Unemployment (Y1).

b. F Test

F test is used to find out if independent variable of Education Level (X1), Graduate Attributes (X2), Employability Skills (X3), and Job Mismatch (X4) respectively simultaneous or together related with variable dependent namely Unemployment (Y1), with the hypotheses as follows

1) H0: Education Level (X1), Graduate Attributes (X2), Employability Skills (X3), and Job Mismatch (X4) do not have influential significant on Unemployment among fresh graduates in Yogyakarta
2) H5: Education Level (X1), Graduate Attributes (X2), Employability Skills (X3), and Job Mismatch (X4) have an effect in a simultaneous way on Unemployment among fresh graduates in Yogyakarta

The basic value of the f test using SPSS is in the following:

1) If the significance value is more than 0.05, then H_0 is accepted.
2) If the significance value does not reach 0.05, then H_5 is accepted

The followings is the results from the F test:

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1120.489	4	280.122	66.121	.000[b]
	Residual	402.471	95	4.237		
	Total	1522.960	99			

a. Dependent Variable: Y.TOTAL

b. Predictors: (Constant), X4.TOTAL, X1.TOTAL, X2.TOTAL, X3.TOTAL

Table 4. 16 F Test Results

Source: Processed Primary Data

Based on Table 4.16, the results from the F test has mark significance (sig.) of 0.000 which means the mark F significance is smaller than 0.05 (α = 5%), so H_0 is rejected and H_5 accepted. So that free variables which includes Education Level (X1), Graduate Attributes (X2), Employability Skills (X3), and Job Mismatch (X4) affect variable bound namely Unemployment (Y1) simultaneously on a regular basis nor together.

c. Coefficient Determination

Coefficient Determination (R^2) is the size ability of free variable (X) to predict response from variable bound (Y) to a regression model. The results of the coefficient test determination are as follows:

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.858[a]	.736	.725	2.058	2.011

a. Predictors: (Constant), X4.TOTAL, X1.TOTAL, X2.TOTAL, X3.TOTAL

b. Dependent Variable: Y.TOTAL

Table 4. 17 Coefficient Test Determination

Source: Processed Primary Data

Based on Table 4.17, the R value is 0.858 which illustrates the connection between Education Level (X1), Graduate Attributes (X2), Employability Skills (X3), and Job Mismatch (X4) with Unemployment

(Y1) is classified strong. Whereas The R Square value is 0.736, which means 73.6% of unemployment is explained by Education Level, Graduates Attributes, Employability Skills, and Job Mismatch. The remaining 26.4% is influenced by other factors.

4.2 Discussions

Based on the results research tested from each respondent's data that are declared valid. The Sig value < 0.05, with the reliability testing with mark variable Education Level (X1) 0.874 > 0.60, then Graduates Attributes variable (X2) 0.754 > 0.60, Employability Skills variable (X3) 0.840 > 0.60, then variable Job Mismatch (X4) 0.865 > 0.60, and the last Unemployment variable (Y1) 0.891 > 0.60, can be stated reliable.

Then a normality test that was carried out by the researcher based on Kolmogorov-Smirnov test table show that mark Asymp. Sig. (2-tailed) is 0.200. It means the mark is significant with bigger value from 0.05, so it can be concluded that this residual data are normally distributed and can be used for further test.

Then in the multicollinearity test that has been done show that variables of Education Level (X1), Graduate Attributes (X2), Employability Skills (X3), and Job Mismatch (X4) respectively together mark from every variable > 0.10 and VIF value < 10.00. So it can be concluded that there is no intercorrelation connection between independent variables and there is not any problem in multicollinearity in all four independent variables. It can be concluded that the regression model is good and it can be used for the next test.

Next is the Heteroscedasticity test that was carried out by the researcher using test. The test shows that if the mark significance or Sig. (2-tailed) > 0.05 then it can be said that there is no problem in heteroscedasticity. In this study all mark significance from every variable is > 0.05, then it can be concluded that in this study there is no heteroscedasticity.

1. Effect of Education Level on Unemployment among Fresh

Graduates in Yogyakarta

The test results show that The Education Level variable has a significant influence on Unemployment. This is based on the results of the partial t-test which shows that the education level variable has sig value 0.026 < 0.05, so it can be concluded that Education Level has an influence on Unemployment.

This research is supported by research conducted by Rahman (2023) regarding the analysis of open unemployment in Indonesia. Where the results reveal that the higher a person's education level, the more selective he or she will be in choosing a job according to his or her highest level of education. Apart from that, they will also consider the wages they receive. This is reinforced by data on Gross Enrollment Rates for High School and Higher Education presented by BPS Indonesia, where the education participation rate continues to increase to reach 85.49% at the high school level and 109.71 at the tertiary level. According to research conducted by Prawira (2018), the average length of schooling has a significant positive impact on the published unemployment rate. These findings show that the higher the educational attainment, the higher the unemployment rate. This phenomenon is explained by the tendency of workers to be increasingly selective in choosing jobs, considering wages appropriate to their level of education.

2. Influence of Graduates Attributes on Unemployment among Fresh Graduates in Yogyakarta

Test results show that the Graduates Attributes variable does not have significant influence on Unemployment. This is based on the results of the partial t test for the Graduates Attributes variable that has sig value 0.170 < 0.05. It can be concluded that Graduates Attributes does not influence Unemployment.

A study related to the influence of graduates' attributes on unemployment is written by Euro (2017) that found economic and

social factors are more influential. The growth of economic and social level will give more effects on unemployment compared to graduate attributes. This may be because Graduate Attributes refer to the skills, knowledge and attitudes expected owned by someone after completing higher education. Although Graduate Attributes is considered important in preparing individuals to plunge into the world of work, it does not always mean that attributes directly reduce risk of unemployment. This factor can be influenced by some elements, such as labor market conditions, growth economy, and the dynamic of industrial needs. It is not always in line with Graduate Attributes that someone has.

3. **Influence of Employability Skills on Unemployment among Fresh Graduates in Yogyakarta**

The test result show that Unemployability Skills do not have significant influence on Unemployment. This is based on the results of the partial t test which shows that Employability Skills variable has sig value 0.104 < 0.05. Therefore, it can be concluded that Unemployment does not influence Unemployment.

This study is in line with research conducted by Klove (2016) that showed employability skills were not influential on unemployment due to complex labor market dynamics. Although Skills like leadership and critical thinking are considered important, external factors like economy condition and technology advances can be more dominant in influencing work opportunity. Nonconformity between skills acquired by individual with the job market needs and the roles of social networking can also play the key roles.

4. **Effect of Job Mismatch on Unemployment among Fresh Graduates in Yogyakarta**

The test result shows that Job Mismatch variable gives significant influence on Unemployment. This is based on the results

of the partial t test which shows that Job Mismatch variable own sig value of 0.000 < 0.05, so it can be concluded that Job Mismatch is influential on Unemployment.

This research is in line with research conducted by Autor (2014) who proved that Job Mismatch has a significant effect on Unemployment. This can occur when individuals cannot find work that matches their qualifications or skills, or when they work in positions that do not take full advantage of their qualifications. Job mismatches like this can hinder an individual's ability to get or keep a job, contributing to higher unemployment rate.

CHAPTER V
CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Based on results data analysis and discussions, it can be concluded that:

1. The results of the multiple linear regression test on the T test can be concluded that Education Level has influence against Unemployment due to sig value < 0.05.
2. The results of the multiple linear regression test on the T test can be concluded that Graduates Attributes do not influence Unemployment due to sig value >0.05.
3. The results of the multiple linear regression test on the T test can be concluded that Employability Skills do not influence Unemployment due to sig value >0.05.
4. The results of the multiple linear regression test on the T test can be concluded that Job Mismatch has influence on Unemployment due to sig value < 0.05.
5. The results of the multiple linear regression test on the F test can be concluded that Education Level, Graduates Attributes, Employability Skills, and Job Mismatch have simultaneous influence on Unemployment. Then based on coefficient test results determination table calculation, it shows that the R-Square value is 0.736, so it can be concluded that all independent variables: Education Level, Graduate Attributes, Employability Skills, and Job Mismatch influence the dependent variables, which is amounted to 73.6% whereas the remaining 26.4% is influenced by other variables or factors

5.2 Recommendations

This research only analyzes Education Level, Graduate Attributes, Employability Skills, and Job Mismatch on Unemployment among fresh

graduates. It is expected for the next study expands the coverage area of the place research and adding supporting study variables.

Based on this research, in the future it is hoped that the government can support the development of vocational programs and short courses that suit the needs of the job market. Second, there needs to be an adaptation of the education curriculum so that it is more responsive to technological developments and industrial needs. Third, government initiatives to support employment opportunities in developing sectors such as technology and entrepreneurship must be strengthened. Lastly, collaboration between governments, universities and the industrial sectors needs to be improved to create an environment where graduates can easily adapt to the changing dynamics of the job market.

REFERENCES

Ademola, A. S., & Badiru, A. (2016). The Impact of Unemployment and Inflation on Economic Growth in Nigeria (1981-2014). 47-55.

Ana, Zahrotun, Nihayah M. (2019). Semarang: UIN Walisongo Semarang.

Autor, D. (2014). Skills, Education, and The Rise of Earnings Inequality among the "other 99 percent". 843-851.

Boud, D., & Falchikov, N. (2006). Aligning Assessment with Long-Term Learning. 399-413.

Brown, P., & Otero, M. S. (2018). The end of the credential society? An analysis of the relationship between education and the labour market using big data. J1-24.

C Haltiwanger et al. (2002). Job Creation and Firm Dynamics in the United States. 3-20.

Cohen, B. (2003). Urbanization in Developing Countries: Current Trends, Future Projections and Key Challenges for Sustainability. 63- 80.

D. Romer, C., & H. Romer, D. (2010). The Macroeconomic Effecr of Tax Changes: Estimates Based on a New Measure of Fiscal Shock. , 763-801.

Fenta, H. M., Asnakew, Z. S., Debele, P. K., Nigatu, S. T., & Muhaba, A. M. (2019). Analysis of supply side factors influencing employability of new graduates: A tracer Study of Bahir Dar University Graduates. 67-75.

Ghozali, I. (2016).
Semarang: Badan Penerbit Universitas Diponegoro.

Kuijpers, M., Meijers, F., & Gundy, C. (2011). The Relationshio Between Learning Environment and Career Competencies of Students in Vocational Education.

21-30.

Kurt, R. (2019). Industry 4.0 in Terms of Industrial Relationship and Its Impacts on Labour Life. 590-601.

Muin, M. F. (2020). Analysis of Determinants of Unemployment Rate in Indonesia. 145-162.

Oreopoulos, P., von Wachter, T., & Heisz, A. (2012). The Short and Long-Term Career Effects of Graduataing in a Recession. 1- 29.

Oreopoulus, P., Wachter, V., & Heisz, A. (2012). The Short and Long-Term Career Effects of Graduating in a Recession. 1-29.

Prasetyo, P. E., & Cahyani, E. N. (2022). Investigating Keynesian Theory in Reducing Unemployment and Poverty in Indonesia. J0039-0048.

Psacharopoulus, G., & Patrinos, H. (2018). Returns to Investemnt in Education: A decennial review of the global literature. 445-458.

Riduwan, & Akdon. (2007). Bandung: Alfabeta.

Savickas, M. L., & Porfeli, E. (2012). Career Adapt-Abilities Scale: Conctruction, Reliability, and Measurement Equivalence Across 13 countries. of 661-673.

Shimer, R. (2012). Reassessing The Ins and Outs of Unemployment. of 127-148.

Sugiyono. (2016). Bandung: Alfabeta.

Tzannatos, Z. (1999). Job Mismatches: A Challenge for the Transition Econimies of Central and Eastern Europe. 501-523.

Widiyanto. (2013). Jakarta : Salemba Empat.

APPENDICES

ANGKET PENELITIAN

FAKTOR-FAKTOR YANG MEMPENGARUHI PENGANGGURAN DI KALANGAN FRESH GRADUATE DI YOGYAKARTA

A. Pengantar

Assalamu'alaikum Warahmatullahi Wabarakatuh

Puji syukur kehadirat Allah SWT, Tuhan semesta alam yang Maha Pengasih lagi Maha Penyayang. Sholawat serta salam semoga tetap tercurah kepada junjungan kita Nabi Muhammad SAW.

Perkenalkan kami ASEM Abdullah Mohammed Qasem Al Dharasi dari Universitas Islam Indonesia saat ini sedang melakukan penelitian tentang Faktor-Faktor yang mempengaruhi pengangguran di kalangan fresh graduate. Kami mengharapkan bantuan Saudara-saudari untuk berkenan mengisi kuesioner yang disediakan. Atas perkenannya, kami dengan rendah hati mengucapkan banyak terima kasih.

Bila anda seorang yang masih mencari pekerjaan, maka anda berkesempatan menjadi responden dalam riset ini. Kami akan memberi reward kepada responden yang beruntung.

Informasi dari riset ini sangat bernilai dalam pengembangan keilmuan. Identitas yang diberikan kepada kami akan menjadi rahasia dan tidak akan disalahgunakan untuk hal yang tidak semestinya.

Demikian permohonan kami, atas bantuannya kami menghaturkan terima kasih. Wassalamualaikum Warahmatullah Wabarakatuh

Hormat kami,

ASEM Abdullah Mohammed Qasem Al Dharasi

(20313354@students.uii.ac.id)

B. Data Demografis

1. Usia
   a. 18 – 22
   b. 22 – 25

c. >25

2. Tahun Lulus
   a. 2021
   b. 2022
   c. 2023
3. Jurusan / Prodi
   a. Ilmu Ekonomi
   b. Manajemen
   c. Akuntansi
   d. Ekonomi Syariah / Ekonomi Islam
   e. Teknik Industri
   f. Teknik Elektro
   g. Teknik Mesin
   h. Lainnya

C. Petunjuk Pengisian Angket

STS : Sangat Tidak Setuju
TS : Tidak Setuju
N : Netral
S : Setuju
SS : Sangat Setuju

D. Pertanyaan Kuisioner

1. Education Level (X1)

No	Pertanyaan	Jawaban Responden				
		STS	TS	N	S	SS
1.	Apakah menurut anda, anda memiliki pengetahuan yang tinggi di bidang anda					
2.	Silabus tidak berhubungan dengan industri pekerjaan					
3	Saya berkualifikasi tinggi untuk pekerjaan yang tersedia atau pekerjaan yang ditawarkan					
4	Saya tidak cukup memenuhi syarat untuk pekerjaan yang saya cari					
5	Banyak lulusan yang melamar pekerjaan yang tersedia					

2. Graduates Attributes (X2)

No	Pertanyaan	Jawaban Responden				
		STS	TS	N	S	SS
1.	Saya terlalu pilih-pilih tentang posisi yang ditawarkan oleh suatu organisasi					
2.	Saya kurang memilki keterampilan komunikasi, pengalaman, dan motivasi diri					
3	Saya menuntut gaji yang lebih tinggi					

4	Saya tidak dapat menunjukan kemampuan memecahkan masalah					
5	Saya tidak dapat bekerja dalam tim					

3. Employability Skills (X3)

No	Pertanyaan	Jawaban Responden				
		STS	TS	N	S	SS
1.	Saya tidak memilki keterampilan kerja yang relevan					
2.	Saya kurang menguasai bahasa inggris					
3	Saya memilki keterampilan komunikasi yang buruk					
4	Saya kurang memilki keterampilan memecahkan masalah					
5	Saya kekurangan kualitas kepemimpinan					

4. Job Missmatch (X4)

No	Pertanyaan	Jawaban Responden				
		STS	TS	N	S	SS
1.	Tidak ada pekerjaan yang sesuai atau relevan yang ditawarkan					
2.	Pekerjaan yang ditawarkan tidak relevan dengan kualifikasi saya					
3	Terdapat ketidakseimbangan antara permintaan keterampilan dan pasokan keterampilan dalam perekonomian					
4	Terlalu banyak keterampilan yang dibutuhkan dipasar					
5	Keterampilan yang terlalu mumpuni, saya sulit mendapatkan pekerjaan					

5. Unemployment (Y)

No	Pertanyaan	Jawaban Responden				
		STS	TS	N	S	SS
1.	Saya belum melamar pekerjaan dimanapun sejak tahun kelulusan pendidikan					
2.	Saya tidak mendapatkan pelatihan pekerjaan dari pemerintah setempat					
3	Saya lebih nyaman bekerja sendiri daripada bekerja dengan perusahaan					
4	Jenjang pendidikan yang saya miliki mebuat saya sulit mendapatkan pekerjaan					
5	Kesempatan kerja yang diberikan tidak sesuai dengan jumlah para pencari kerja					

6	Pekerjaan yang ditawarkan tidak sesuai dengan kemauan					

X1.1	X1.2	X1.3	X1.4	X1.5	X1.TOTAL	X2.1	X2.2	X2.3	X2.4	X2.5	X2.TOTAL	X3.1	X3.2	X3.3	X3.4	X3.5	X3.TOTAL	X4.1	X4.2	X4.3
5	5	4	5	5	24	4	4	5	4	4	21	4	5	5	5	4	23	5	4	4
4	3	4	4	3	18	4	4	4	3	5	20	4	4	4	4	4	20	4	3	4
5	5	5	5	5	25	5	5	5	5	5	25	5	5	5	5	5	25	5	5	5
4	4	5	4	4	21	5	4	3	3	4	19	5	3	4	5	4	21	4	4	4
2	2	3	2	2	11	3	4	5	3	4	19	3	3	3	3	3	15	2	2	3
4	3	4	4	3	18	4	3	3	2	4	16	3	3	4	3	3	16	3	2	4
5	5	5	5	5	25	5	5	5	5	5	25	5	5	5	5	5	25	5	5	5
4	4	4	4	4	20	4	5	4	3	4	20	3	4	4	4	4	19	4	3	4
5	5	5	5	5	25	5	3	3	3	5	19	5	5	5	5	5	25	5	5	5
4	5	3	4	5	21	3	5	4	4	5	21	4	5	4	4	5	22	4	4	5
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4	4	5	4	4	21	5	4	3	3	4	19	4	4	5	5	4	22	5	5	5
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3	4	4	3	4	18	4	3	3	3	4	17	3	4	3	3	3	16	3	3	3
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3	3	4	3	3	16	4	3	3	3	4	17	4	3	3	3	3	16	4	3	3
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4	3	4	4	3	18	4	4	3	3	5	19	4	5	4	5	5	23	3	3	5
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4	5	4	4	5	22	4	5	4	5	5	23	5	5	5	4	5	24	5	5	5
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3	3	4	3	3	16	4	4	4	3	4	19	3	3	1	1	1	9	3	3	3
4	3	5	4	3	19	5	4	3	4	4	20	4	5	5	4	4	22	4	5	4
4	5	5	4	5	23	5	4	4	4	5	22	5	5	4	5	5	24	5	5	4

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5	4	4	5	4	22	4	3	4	3	4	18	5	4	4	5	4	22	4	4	3
4	4	4	4	4	20	4	4	4	4	4	20	4	4	4	4	4	20	4	3	4
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3	4	4	3	4	18	4	3	3	3	3	16	4	4	4	4	4	20	3	4	4
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3	4	4	3	4	18	4	4	3	3	4	18	4	4	4	3	4	19	3	4	3
3	3	3	3	3	15	3	3	3	3	3	15	4	4	3	4	4	19	4	3	3
5	4	3	5	4	21	3	5	3	3	4	18	3	4	2	2	2	13	2	1	2

X4.4	**X4.5**	**X4.TOTAL**	**Y1.1**	**Y1.2**	**Y1.3**	**Y1.4**	**Y1.5**	**Y1.6**	**Y.TOTAL**
4	4	21	4	4	5	5	5	5	28
3	3	17	3	3	3	3	3	3	18
5	5	25	5	5	5	5	5	5	30
1	4	17	4	4	4	4	4	4	24
3	3	13	3	3	3	2	1	2	14
3	4	16	3	4	3	3	3	5	21

5	5	25	5	5	5	5	5	5	30
4	4	19	4	4	3	3	4	3	21
5	5	25	5	5	3	3	5	5	26
4	5	22	4	5	4	4	5	4	26
4	5	21	5	5	4	3	4	4	25
4	4	21	5	4	4	4	5	5	27
4	4	21	4	4	5	4	5	4	26
4	5	22	5	4	4	5	5	5	28
5	5	24	5	5	4	4	4	4	26
4	3	17	3	3	4	3	3	3	19
4	5	23	4	5	4	5	4	4	26
3	4	20	4	4	3	4	4	4	23
4	4	20	4	4	4	3	3	3	21
4	5	24	4	5	4	5	5	4	27
4	4	20	4	4	4	4	4	4	24
4	4	20	4	3	4	4	4	3	22
3	4	22	4	4	5	4	5	4	26
3	4	20	4	4	3	3	3	3	20
4	4	20	4	4	4	4	4	4	24
4	5	23	5	5	5	4	5	5	29
3	3	16	3	3	4	3	3	4	20
4	5	21	5	5	5	5	5	5	30
5	4	23	4	4	4	4	5	4	25
4	3	18	4	4	4	3	4	3	22
4	4	20	4	4	4	4	4	4	24
5	4	22	3	3	4	4	4	3	21
5	4	23	4	4	4	4	4	5	25
4	4	21	4	4	4	4	4	4	24

2	3	14	3	3	4	4	4	4	22
2	2	10	2	3	2	3	3	3	16
1	3	11	3	2	4	3	3	2	17
2	3	16	3	3	3	2	3	3	17
4	4	20	4	4	4	4	4	4	24
3	3	15	4	3	3	3	3	3	19
3	5	20	4	4	4	4	4	4	24
5	4	22	5	5	4	4	5	5	28
4	3	18	4	4	3	4	2	5	22
3	3	15	3	3	3	3	3	3	18
4	4	21	4	5	5	4	5	5	28
3	3	13	3	3	2	2	2	2	14
4	4	17	4	4	3	3	4	3	21
4	5	23	4	5	5	5	4	4	27
2	3	16	3	3	3	3	2	3	17
4	4	20	5	4	5	5	4	4	27
3	4	20	5	4	5	4	4	4	26
5	5	25	5	5	4	4	5	3	26
3	3	15	3	3	2	2	3	3	16
2	4	15	5	3	3	4	2	3	20
1	4	15	4	3	3	4	4	4	22
3	4	18	4	4	4	3	4	4	23
2	4	15	4	3	4	3	3	3	20
3	3	16	3	4	4	3	4	4	22
2	5	17	5	5	3	3	3	3	22
4	5	23	4	3	3	4	5	5	24
5	5	24	5	5	5	4	5	5	29
4	4	16	4	4	4	4	4	4	24

4	4	20	4	4	4	4	4	4	24
3	3	15	3	3	3	3	3	3	18
4	5	22	5	4	3	4	4	3	23
5	5	25	5	5	5	5	5	4	29

3	4	18	3	4	4	4	4	4	23
3	4	19	5	5	4	5	5	3	27
4	3	20	3	4	5	4	4	3	23
3	3	16	3	3	3	3	3	2	17
4	4	19	4	4	4	4	4	4	24
5	5	21	5	4	5	3	4	4	25
4	4	21	4	3	4	4	4	3	22
3	3	15	3	3	3	3	3	3	18
4	3	17	4	3	4	3	3	3	20
5	5	25	4	5	5	4	5	5	28
5	5	19	4	5	5	5	3	3	25
5	4	23	4	5	5	3	3	4	24
3	3	15	3	3	3	2	2	3	16
4	4	21	4	5	3	5	4	5	26
4	5	23	5	5	5	5	5	4	29
5	5	25	5	5	5	5	5	5	30
3	4	18	4	4	4	4	4	4	24
4	3	18	3	3	5	4	3	3	21
4	5	22	4	4	4	4	4	4	24
4	5	21	5	5	5	5	5	5	30
4	5	23	5	5	5	5	5	4	29
4	4	20	4	5	4	4	4	4	25
4	3	18	4	3	4	4	4	4	23
5	5	25	5	5	5	5	5	5	30
3	3	15	3	3	3	3	3	3	18
4	5	21	4	4	4	5	4	4	25
3	5	22	5	4	4	4	5	5	27

5	5	23	5	4	4	3	4	4	24
5	5	22	4	4	5	5	5	4	27
4	4	21	4	4	4	4	3	5	24
3	5	21	4	4	4	4	5	5	26
4	4	18	3	4	4	3	4	3	21
3	3	16	3	3	4	4	3	3	20
1	5	11	4	4	4	4	3	3	22

OUTPUT SPSS

Validity test

X1

Correlations

		X1.1	X1.2	X1.3	X1.4	X1.5	X1 Total
X1.1	Pearson Correlation	1	.563**	.396**	1.000**	.563**	.871**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	100	100	100	100	100	100
X1.2	Pearson Correlation	.563**	1	.361**	.563**	1.000**	.858**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	100	100	100	100	100	100
X1.3	Pearson Correlation	.396**	.361**	1	.396**	.361**	.608**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	100	100	100	100	100	100
X1.4	Pearson Correlation	1.000**	.563**	.396**	1	.563**	.871**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	100	100	100	100	100	100
X1.5	Pearson Correlation	.563**	1.000**	.361**	.563**	1	.858**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	100	100	100	100	100	100
X1 Total	Pearson Correlation	.871**	.858**	.608**	.871**	.858**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	100	100	100	100	100	100

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

X2

Correlations

		X2.1	X2.2	X2.3	X2.4	X2.5	X2.TOTAL
X2.1	Pearson Correlation	1	.193	.201*	.263**	.559**	.579**
	Sig. (2-tailed)		.054	.045	.008	.000	.000
	N	100	100	100	100	100	100
X2.2	Pearson Correlation	.193	1	.637**	.511**	.404**	.790**
	Sig. (2-tailed)	.054		.000	.000	.000	.000
	N	100	100	100	100	100	100
X2.3	Pearson Correlation	.201*	.637**	1	.405**	.350**	.756**
	Sig. (2-tailed)	.045	.000		.000	.000	.000
	N	100	100	100	100	100	100
X2.4	Pearson Correlation	.263**	.511**	.405**	1	.324**	.731**
	Sig. (2-tailed)	.008	.000	.000		.001	.000
	N	100	100	100	100	100	100
X2.5	Pearson Correlation	.559**	.404**	.350**	.324**	1	.696**
	Sig. (2-tailed)	.000	.000	.000	.001		.000
	N	100	100	100	100	100	100
X2.TOTAL	Pearson Correlation	.579**	.790**	.756**	.731**	.696**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	100	100	100	100	100	100

*. Correlation is significant at the 0.05 level (2-tailed).

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

X3

Correlations

		X3.1	X3.2	X3.3	X3.4	X3.5	X3 TOTAL
X3.1	Pearson Correlation	1	.499**	.370**	.627**	.424**	.727**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	100	100	100	100	100	100
X3.2	Pearson Correlation	.499**	1	.379**	.416**	.405**	.666**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	100	100	100	100	100	100
X3.3	Pearson Correlation	.370**	.379**	1	.634**	.673**	.809**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	100	100	100	100	100	100
X3.4	Pearson Correlation	.627**	.416**	.634**	1	.678**	.866**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	100	100	100	100	100	100
X3.5	Pearson Correlation	.424**	.405**	.673**	.678**	1	.827**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	100	100	100	100	100	100
X3 TOTAL	Pearson Correlation	.727**	.666**	.809**	.866**	.827**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	100	100	100	100	100	100

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

X4

Correlations

		X4.1	X4.2	X4.3	X4.4	X4.5	X4.TOTAL
X4.1	Pearson Correlation	1	.694**	.618**	.552**	.529**	.837**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	100	100	100	100	100	100
X4.2	Pearson Correlation	.694**	1	.614**	.566**	.540**	.850**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	100	100	100	100	100	100
X4.3	Pearson Correlation	.618**	.614**	1	.561**	.561**	.817**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	100	100	100	100	100	100
X4.4	Pearson Correlation	.552**	.566**	.561**	1	.451**	.792**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	100	100	100	100	100	100
X4.5	Pearson Correlation	.529**	.540**	.561**	.451**	1	.748**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	100	100	100	100	100	100
X4.TOTAL	Pearson Correlation	.837**	.850**	.817**	.792**	.748**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	100	100	100	100	100	100

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

Y1

Correlations

		Y1.1	Y1.2	Y1.3	Y1.4	Y1.5	Y1.6	Y Total
Y1.1	Pearson Correlation	1	.680**	.468**	.537**	.596**	.523**	.779**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	100	100	100	100	100	100	100
Y1.2	Pearson Correlation	.680**	1	.529**	.569**	.624**	.586**	.821**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	100	100	100	100	100	100	100
Y1.3	Pearson Correlation	.468**	.529**	1	.635**	.588**	.450**	.757**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	N	100	100	100	100	100	100	100
Y1.4	Pearson Correlation	.537**	.569**	.635**	1	.659**	.560**	.821**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	N	100	100	100	100	100	100	100
Y1.5	Pearson Correlation	.596**	.624**	.588**	.659**	1	.657**	.863**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	100	100	100	100	100	100	100
Y1.6	Pearson Correlation	.523**	.586**	.450**	.560**	.657**	1	.787**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	100	100	100	100	100	100	100
Y Total	Pearson Correlation	.779**	.821**	.757**	.821**	.863**	.787**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	100	100	100	100	100	100	100

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

Reliability

X1

Reliability Statistics

Cronbach's Alpha	N of Items
.874	5

X2

Reliability Statistics

Cronbach's Alpha	N of Items
.754	5

X3

Reliability Statistics

Cronbach's Alpha	N of Items
.840	5

X4

Reliability Statistics

Cronbach's Alpha	N of Items
.865	5

Y1

Reliability Statistics

Cronbach's Alpha	N of Items
.891	6

Descriptive statistics

Descriptive Statistics

	N	Range	Minimum	Maximum	Sum	Mean		Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
X1.TOTAL	100	14	11	25	2048	20.48	.287	2.869	8.232	-.517	.241	.402	.478
X2.TOTAL	100	13	12	25	1988	19.88	.266	2.660	7.076	-.161	.241	-.026	.478
X3.TOTAL	100	16	9	25	2042	20.42	.289	2.889	8.347	-.800	.241	1.511	.478
X4.TOTAL	100	15	10	25	1946	19.46	.351	3.515	12.352	-.429	.241	-.362	.478
Y.TOTAL	100	16	14	30	2348	23.48	.392	3.922	15.383	-.339	.241	-.454	.478
Valid N (listwise)	100												

Coefficient of determination

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.858[a]	.736	.725	2.058	2.011

a. Predictors: (Constant), X4.TOTAL, X1.TOTAL, X2.TOTAL, X3.TOTAL

b. Dependent Variable: Y.TOTAL

F test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1120.489	4	280.122	66.121	.000[b]
	Residual	402.471	95	4.237		
	Total	1522.960	99			

a. Dependent Variable: Y.TOTAL

b. Predictors: (Constant), X4.TOTAL, X1.TOTAL, X2.TOTAL, X3.TOTAL

T test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.075	1.782		-.042	.967
	X1.TOTAL	.231	.102	.169	2.256	.026
	X2.TOTAL	.153	.111	.104	1.383	.170
	X3.TOTAL	.190	.116	.140	1.642	.104
	X4.TOTAL	.612	.098	.548	6.268	.000

a. Dependent Variable: Y.TOTAL

Normality test

If sig > 0.05 then it is normally distributed. Sig < 0.05 is not normally distributed

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		100
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	2.01627454
Most Extreme Differences	Absolute	.070
	Positive	.041
	Negative	-.070
Test Statistic		.070
Asymp. Sig. (2-tailed)		.200[c,d]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

Multicollinearity Test

A good model does not occur multicollinearity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.075	1.782		-.042	.967		
	X1.TOTAL	.231	.102	.169	2.256	.026	.495	2.021
	X2.TOTAL	.153	.111	.104	1.383	.170	.493	2.027
	X3.TOTAL	.190	.116	.140	1.642	.104	.384	2.605
	X4.TOTAL	.612	.098	.548	6.268	.000	.364	2.747

a. Dependent Variable: Y.TOTAL

If the tolerance value is > 0.10 then multicollinearity does not occur. If the VIF value < 10 then multicollinearity does not occur

Heteroskedasticity Test

Base

Sig > 0.05 does not occur heteros. Sig < 0.05 does not occur heteros

The good thing is that heteroscedasticity does not occur

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.911	1.066		1.793	.076
	X1.TOTAL	.047	.061	.109	.759	.449
	X2.TOTAL	.020	.066	.044	.305	.761
	X3.TOTAL	.008	.069	.018	.112	.911
	X4.TOTAL	-.094	.058	-.270	-1.614	.110

a. Dependent Variable: ABS_RES

UBasic

Autocorrelation

Test d< do =

there is

autocorrelation

du < d < 4-du =

there is no

autocorrelation

dl < d < du or 4-

du < d < 4-dl =

there is no good

conclusion

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.858[a]	.736	.725	2.058	2.011

a. Predictors: (Constant), X4.TOTAL, X1.TOTAL, X2.TOTAL, X3.TOTAL

b. Dependent Variable: Y.TOTAL

Du < d < 4-du

1.7364 < 2.011 < 2.2636 = no autocorrelation