

Analysis of Factors Affecting the Employability of FE UNNES Graduates with the Integrated Model of Graduate Employability

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Abstract. The study aims to analyze the factors that affect the employability of graduate faculty of economics with an integrated model of graduate employability. This research is a quantitative study with a population of batch 2019-2020 students from the Faculty of Economics (FE), Universitas Negeri Semarang (UNNES). The populations were 847 in 2019 and 597 in 2020. It was distinguished due to differences in the situation; 2019 is not a pandemic, and 2020 is a pandemic. In 2019, 247 graduates were needed, and in 2020 there are 220 graduates. Data will be collected employing a questionnaire and analyzed by SEM-PLS. Based on the results of the analysis, two models were obtained, i.e., pre-pandemic and in-pandemic. The pre-pandemic model measures eight hypotheses with an R-Square of 0.720 for perceived employability and an R-Square of 0.656 for graduate employability. The in-pandemic model also measures eight hypotheses with an R-square of 0.596 for perceived employability and an R-Square of 0.298 for graduate employability. The labor market moderated negatively significantly between perceived employability and graduate employability. Perceived employability at the pre-pandemic model is better than the in-pandemic model. Then, it is suggested for FE, UNNES that employability needs to be improved by increasing individual attributes. Individual attributes variables include indicators of personality, adaptability, and flexibility. Then, in-pandemic, the most influential variable is human capital with three indicators, i.e., skills, competencies, and work experience. It is expected that FE UNNES, as the producers of graduates, can increase the employability of graduates by increasing human capital.

Keywords: Employability, Integrated Model, Labor Market, FE UNNES's Graduates

1 Introduction

Educational institutions have a vital role in giving birth to quality human resources [1]. According to Panagiotakopoulos [2], educational institutions help prepare graduates from finding a job to getting a decent job. As higher educational institutions, universities prepare superior and qualified human resources who understand the knowledge or science and master the skills in line with the labor market.

Montgomery (as cited in Papalia et al. [3]) states that college is a means of developing students' abilities and personalities, especially communication skills, counting skills, critical thinking skills, and moral reasoning. Based on Regulation of the Minister of Education and Culture Republic Indonesia No. 49 of 2014, graduates are considered to have been able to master theoretical knowledge and have general skills and skills specifically in their respective

fields. Based on this, it can be concluded that universities have an important role in preparing undergraduate graduates to be ready for work [4].

Educational institutions, including universities, are responsible for improving human resources in Indonesia. *FE UNNES* is an educational institution so that the expected output will be able to become professional educators in schools or other educational institutions. However, graduates are still waiting to get a job even though it has been more than six months since graduation (Tracer Study Data on 2020).

Employability skills are a factor that needs to be the main concern to prepare undergraduate graduates to be ready to work and compete to fill existing job opportunities, both local, global and international, or independently create their jobs [5]. Similarly, Setiyaningsih et al. [6] stated that employability is important for students and students before entering the world of work. Educational institutions become the basis of forming employability skills to help undergraduate graduates get a job [7]. Therefore, before entering the world of work must try to improve one skill and quality of self both in school, on campus, and during training.

Employability can be used as a reference for one's readiness before work. Furthermore, employability skills are defined as obtaining a job, maintaining a job, and achieving success in a career life [8]. McQuaid and Lindsay [9] define employability skills as a person's readiness to work and compete to fill available career opportunities.

Employability skills can be improved through improved communication skills, problem-solving skills, willingness to learn, teamwork, critical thinking skills, creativity and innovation [10][11], decision-making skills, adaptability [12], as well as technical skills or skills in using technology [13][14]. So prospective scholars should improve their employability skills by participating in various training and self-development activities before entering the world of work. In addition, the Industrial Revolution 4.0, which is characterized by rapid technological advances, impacts human labor that can be replaced with machines based on advanced technology. On the other hand, intense competition in competing for certain competencies and skills with foreign workers who will come with the open free market causes graduates of schools and universities difficulty getting a job and impacting the higher unemployment rate in Indonesia.

Fresh graduates dominate the increasing number of unemployed, and it occurs due to the lack of quality knowledge, skills, and attitudes of new graduates [15]. According to liputan6.com [16] data, the level of distribution in Indonesia is dominated by thousands of graduates from universities e year. Then, according to data from the Ministry of Research, Technology, and Higher Education reported in pikiranrakyat.com [17], about 8.8% or about 630 thousand of the total 7 million unemployed in Indonesia are undergraduates (fresh graduates). It is also strengthened by data from the Central Bureau of Statistics (BPS) in 2019 [18], which reported that the Open Unemployment Rate (OUR) of Indonesians at the university education level in volatile conditions, i.e., from 5.18% in February 2017 increased in February 2018 by 6.31%, and decreased by 0.07% to 6.24%. The unemployment rate of Indonesian undergraduate graduates is still quite high, and it happens because undergraduate graduates consider themselves to have higher competencies compared to high school or vocational school graduates, when in fact, the competence is still not following the needs of the world of work [19]. It is reinforced by Agustin's statement [20], which states that having a bachelor's degree does not guarantee a job.

Mansour and Dean [11] stated that undergraduate graduates' employability skills are still lowly. At that moment, many graduate users are looking for graduates who are competent in terms of academics, communication skills, adaptability, problem-solving skills, teamwork

skills, creative and innovative thinking skills, have high enthusiasm [21], proactive, and critical thinking skills [15]. However, the reality is that candidates who match the organization's needs are still difficult to find out [22]. Based on these problems, universities as institutions that produce superior human resources are expected to increase human resource capacity by increasing the students' employability. Therefore, it is necessary to analyze the factors that affect students' employability at *FE UNNES* to increase students' employability so that they have work readiness and can compete in the world of student work.

Based on the identification of the problems, it is necessary to focus on this research's theme. Researchers will examine several variables that affect graduate employability, i.e., human capital, social capital, individual behavior, and individual attributes as independent variables or independent variables. While perceived employability as a mediating variable and labor market as a moderating variable.

This study analyzes the factors that influence graduates' employability using an integrated model consisting of human capital, social capital, individual behavior, and individual attributes as independent variables. Furthermore, perceived employability as a mediating variable, the labor market as a moderating variable, and graduate employability as the dependent variable. This study uses two models, i.e., before and during the pandemic, each consisting of 8 hypotheses so that this study will produce an analysis of 16 research hypotheses.

2 Review of Related Literature

2.1 Connectionism Theory

Edward Thorndike developed connectionism theory in the United States (1874-1949). Thorndike in Rifa'i RC and Anni [23] concluded that learning activities are more trial and error. Then the progress made in learning is piecemeal and not in leaps and bounds. Thorndike suggests three kinds of learning laws, but this study only uses one learning law relevant to the research variable, i.e., the law of readiness. The law of readiness states that individuals ready to act or behave and carry it out will experience satisfaction and vice versa. Based on this, it can be concluded that the law of readiness can be associated with job readiness or individual work worthiness, which is reflected in the employability variable.

2.2 Learning Theory of Career Counseling (LTCC)

Slameto [24], cited from Thorndike, states that career development has a relationship with work readiness, where readiness must go to the next stage of development. Armed with the behavioristic theory and Bandura's social cognitive theory, Mitchell et al. [25] proposed the Learning Theory of Career Counseling (LTCC). In the LTCC, Kromboltz believes that one's career development comes from personal and environmental factors. The two major factors are divided into four categories: genetic, environmental, learning, and task-facing skills.

Genetic factors are inherited or hereditary factors that are obtained from birth. One of the genetic factors is intelligence. In multiple intelligence, there are various types of intelligence, one of which is emotional intelligence. This intelligence is inherited but can also be influenced by the environment and learning experiences. In this study, genetic factors are represented by human capital variables, where human capital itself refers to factors that influence a person's career development such as age, education, work experience, training experience, work performance, years of service in a company, emotional intelligence, and cognitive abilities.

Environmental factors consist of various variables, including the family environment, peers, residence, education, and relationships. Concerning this research, environmental factors are represented by social capital and labor market variables. The social capital variable is related to the individual's networking/social relations that help individuals find job opportunities. Meanwhile, the labor market relates to the labor market related to the supply and demand for the required labor.

The last factor that influences an individual's career is task approach skills. Task-facing skills are skills possessed by individuals to do the tasks given. In this study, the skills to face the task are represented by individual behavior variables, individual attributes, and perceived employability. It can be explained that the individual behavior variable itself refers to factors related to self-management skills and career-building skills. Then, the individual attribute variables refer to factors related to proactive behavior, flexibility, and the ability to adapt to work. Then, the perceived employability variable refers to factors related to the perceived workability to get a job and fulfill the required job qualifications.

2.3 Employability

According to Fugate et al. [26], employability is a psycho-social construct that embodies individual characteristics that encourage them to become more adaptive in cognition, behavior, and affect, thereby improving individual conditions in the world of work. Furthermore, employability is a concept formed to help individuals adapt actively to help individuals identify and understand job opportunities. Employability refers to a new graduate with a set of skills and competencies that enable him to compete and get a job, whether informal employment, self-employment, or any career [27]. Barrick and Buck [28] state that employability consists of attributes other than technical skills (skills required to complete certain tasks) that make employees an employer asset. Hillage and Pollard [29] argue that employability is about getting and keeping a job. In a broader context, employability is an individual's ability to get and continue to maintain a job on an ongoing basis at the place of work so that the individual can be called a professional worker. Employability of graduates or what is called graduate employability can be reconceptualized into several constructs, namely: human capital (human capital), social capital (social capital), individual behaviors (individual behavior), individual attributes (individual attributes), perceived employability (perception of employability), and the labor market (labor market).

2.4 Research Hypotheses

Based on the theoretical basis and framework of thinking, there are 16 hypotheses in this study consisting of eight (8) hypotheses pre-pandemic and eight (8) hypotheses in-pandemic:

- H1. Human capital has a positive and significant effect on perceived employability pre-pandemic.
- H2. Social capital has a positive and significant effect on perceived employability pre-pandemic.
- H3. Individual behavior has a positive and significant effect on perceived employability pre-pandemic.
- H4. Individual attributes have a positive and significant effect on perceived employability pre-pandemic.
- H5. Labor market has a positive and significant effect on perceived employability pre-pandemic.
- H6. Labor market has a positive and significant effect on graduate employability pre-pandemic.

- H7. Perceived employability has a positive and significant effect on graduate employability pre-pandemic.
- H8. Labor market has a positive and significant effect on the relationship between perceived employability and graduate employability pre-pandemic.
- H9. Human capital has a positive and significant effect on perceived employability in-pandemic.
- H10. Social capital has a positive and significant effect on perceived employability in-pandemic.
- H11. Individual behavior has a positive and significant effect on perceived employability in-pandemic.
- H12. Individual attributes have a positive and significant effect on perceived employability in-pandemic.
- H13. Labor market has a positive and significant effect on perceived employability in-pandemic.
- H14. The labor market has a positive and significant effect on graduate employability in-pandemic.
- H15. Perceived employability has a positive and significant effect on graduate employability in-pandemic.
- H16. Labor market has a positive and significant effect on the relationship between perceived employability and graduate employability in-pandemic.

3 Method

The type of research used is quantitative research which aims to analyze, describe, and obtain empirical evidence of patterns of influence between variables (Wahyudin, 2015: 110). The study uses statistical calculations with descriptive and quantitative analysis tools through data analysis techniques Structural Equation Modeling (SEM), a multivariate statistical analysis technique. The analytical tool used in this research is Smart PLS version 3.0.

The population of this study was *FE UNNES* graduates in 2019 and 2020 who get jobs. The number of respondents was 847 in 2019 and 597 in 2020. It is distinguished due to different situations. 2019 is not yet a pandemic, and 2020 is a pandemic. The number of samples was calculated using the *Slovin* formula with an error range of 5%. The result for 2019 is that 247 graduates are needed, and in 2020 are 220 graduates. Data were collected by using a questionnaire method. The following is a table of operational definitions of variables with the indicators used in this study:

Table 1. Operational Definitions of Variables

No	Variables	Operational Definitions	Indicators
1.	Graduate Employability	The concept of the individual can encourage the individual to be more adaptive in the world of work.	1) Individual employment. 2) Career outcome
2.	Perceived Employability	Employee perceptions related to job opportunities both internally and externally.	1) Proactive Behavior 2) Flexibility 3) Adaptability
3.	Human Capital	Skills, experience, and knowledge of workers can increase worker productivity.	1) Skill 2) Competencies 3) Work Experience

No	Variables	Operational Definitions	Indicators
4.	Social Capital	The results resulting from social relations as measured by relationships between individuals	1) Network 2) Social Class 3) University Ranking
5.	Individual Behaviour	Career-related habits that can affect an individual's employability.	1) Career self-management. 2) Career-building skills.
6.	Individual Attributes	Character or traits of an entity or individual that can drive career success.	1) Personality variables 2) Adaptability 3) Flexibility
7.	Labour Market	The demand and supply of labor allow labor transactions to occur in the labor market.	1) Supply Factors 2) Demand Factors

(Clarke [30])

4 Research Result

This study has 16 hypotheses divided into eight hypotheses pre-pandemic and eight hypotheses in-pandemic. Data were collected and tabulated and then analyzed. Here are the results of the research.

4.1 Graduate Employability Model Scheme Pre-pandemic

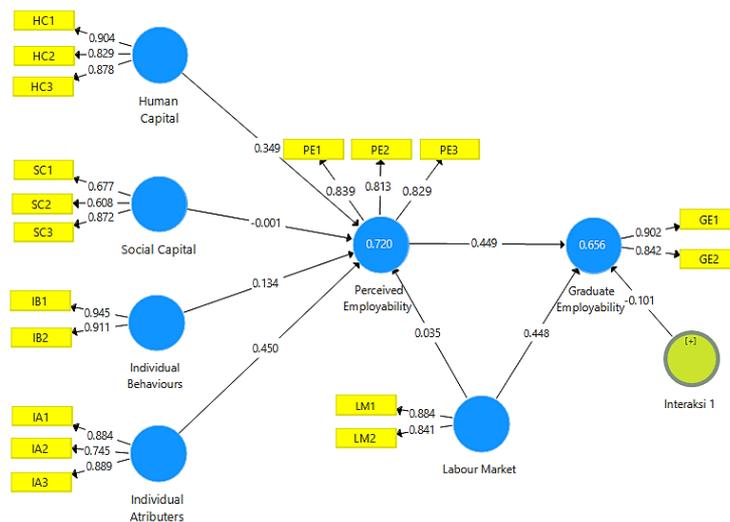


Fig. 1. Outer Model (Measurement Model)

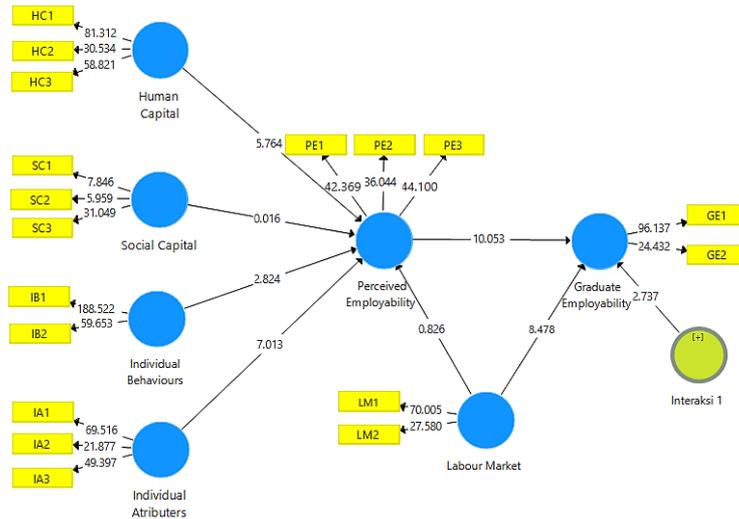


Fig. 2. Inner Model (Structural Model)

4.2 Validity and Reliability

Hypothesis testing in this study uses the Partial Least Square (PLS) analysis technique with the Smart PLS 3.0 program. The outer model scheme states that the outer loading on each research variable indicates that the outer loading value is above 0.5. It means that the indicators in the research construct are valid or meet the assumption of convergent validity. Furthermore, it can also be seen in the Average Variance Extracted (AVE) value for each research variable to assess convergent validity.

Table 2. Results of Average Variance Extracted (AVE)

Variable	AVE Value	AVE Level	Information
Graduate Employability (Y)	0.762	0.5	Valid
Perceived Employability	0.684	0.5	Valid
Human Capital	0.759	0.5	Valid
Social Capital	0.530	0.5	Valid
Individual Behaviours	0.862	0.5	Valid
Individual Attributes	0.709	0.5	Valid
Labour Market	0.745	0.5	Valid

(Research data processed, 2021)

Based on table 2. shows that the AVE value of each research variable is > 0.5 . It means that the research variable meets the rule of thumb $AVE > 0.5$ so that it is stated that the research variable can become a good research construct.

Structural Equation Modeling (SEM) with Smart PLS also requires reliability assumptions to measure the internal consistency of the measuring instrument. The reliability test in Smart PLS uses two methods, i.e., Cronbach's alpha and composite reliability.

The rule of thumb of Cronbach's alpha and composite reliability values > 0.7 [31].

However, Hair et al. [32] stated that the value of 0.6 is still acceptable, so this study using a minimum limit of 0.6. Table 3. presents the results of Cronbach's alpha of each research variable.

Table 3. Cronbach's Alpha Research Variables

Variables	Cronbach's Alpha	Cronbach's Alpha Level	Notes
Graduate Employability (Y)	0.691	0.6	Reliable
Perceived Employability	0.770	0.6	Reliable
Human Capital	0.840	0.6	Reliable
Social Capital	0.653	0.6	Reliable
Individual Behaviours	0.841	0.6	Reliable
Individual Attributes	0.794	0.6	Reliable
Labour Market	0.659	0.6	Reliable

(Research data processed, 2021)

Table 3 shows that the value of Cronbach's alpha for each variable is > 0.6 so that the research variable is declared feasible as a consistent measuring tool in the study.

4.3 Inner Model Test (Structural Model)

The inner model or structural model test is used to determine the effect of the construct. The inner model test was analyzed using the R Square value and the t-test for the significance value. R-Square describes the relationship between latent variables based on the theory evaluated by the dependent construct. The value of R2 indicates the goodness of fit. The higher the R2 value, the better the construct [31]. Square with a value > 0.67 is considered good, and R Square with a value > 0.33 is considered moderate or sufficient. Meanwhile, R Square with a value of < 0.19 is considered weak [33]. Table 4. presents the results of the R Square (R2) test as follows:

Table 4. R Square (R2) Test Results

Variable	<i>R Square</i>	<i>Adjusted R Square</i>	Category
Graduate Employability	0.656	0.651	Good
Perceived Employability	0.720	0.713	Good

(Research data processed, 2021)

Based on table 4. the R2 of the graduate employability construct is 0.656. It shows that the value of R2 is considered a good category because it has a value of > 0.33 and < 0.67 . Furthermore, the value of R2 on the perceived employability construct is 0.720 (Good Category).

4.4 T-test (T-static) for Hypothesis Testing

The t-test was conducted to determine the significance of the structural path parameter coefficients between variables by looking at the t-statistical significance. The path coefficient score in the inner model aimed at the t-statistic value must be above 1.96 for the two-tailed hypothesis [31]. Hypothesis testing in this study was carried out based on the p-value of the total effect to determine the effect between research variables.

Table 5. Total Effect

Variable	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistic	P Values	H	Notes
Human Capital -> Perceived Employability	0.349	0.353	0.060	5.795	0.000	H1	Accepted
Social Capital -> Perceived Employability	-0.001	0.003	0.035	0.018	0.985	H2	Rejected
Individual Behaviours -> Perceived Employability	0.134	0.132	0.045	2.988	0.003	H3	Accepted
Individual Attributes -> Perceived Employability	0.450	0.447	0.066	6.843	0.000	H4	Accepted
Labour Market -> Perceived Employability	0.035	0.032	0.039	0.885	0.377	H5	Rejected
Labour Market -> Graduate Employability	0.448	0.445	0.051	8.801	0.000	H6	Accepted
Perceived Employability -> Graduate Employability	0.449	0.453	0.042	10.716	0.000	H7	Accepted
Interaksi 1 -> Graduate Employability	-0.101	-0.098	0.037	2.720	0.007	H8	Rejected

(Research data processed, 2021)

4.5 Graduate Employability Model Schematic In-pandemic

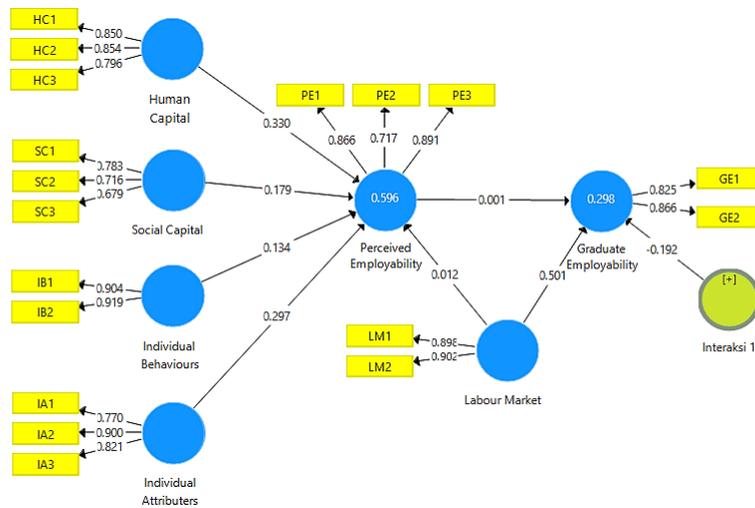


Fig. 3. Outer Model (Measurement Model)

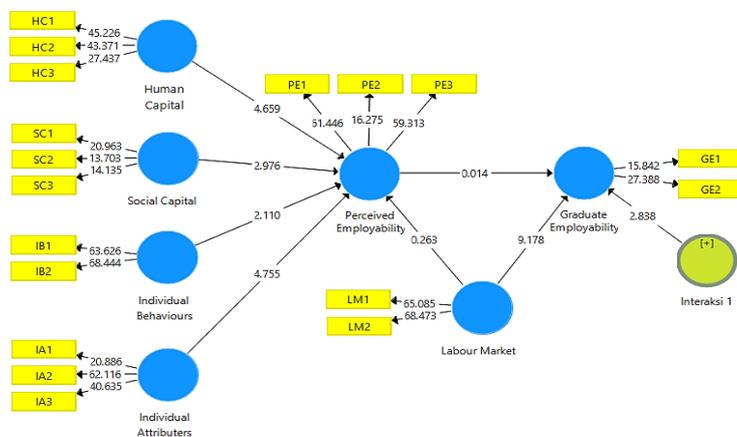


Fig. 4. Inner Model (Structural Model)

4.6 Validity and Reliability

Structural Equation Modeling (SEM) analysis with Smart PLS has three criteria for assessing the outer model: convergent validity, discriminant validity, and reliability testing. The outer loading and Average Variance Extracted (AVE) values are used to test convergent validity. An indicator in the construct is considered to meet convergent validity, categorized as good if > 0.6 . Ghazali [33] states that a loading value of 0.5 to 0.6 is considered sufficient for early-stage research. The study uses a minimum limit of 0.6 for Cronbach's alpha and 0.5 for assessing the Average Variance Extracted (AVE) on each research variable.

Table 6. Hasil Average Variance Extracted (AVE)

Variable	AVE Value	AVE Level	Information
Graduate Employability (Y)	0.716	0.5	Valid
Perceived Employability	0.686	0.5	Valid
Human Capital	0.695	0.5	Valid
Social Capital	0.529	0.5	Valid
Individual Behaviours	0.831	0.5	Valid
Individual Attributes	0.693	0.5	Valid
Labour Market	0.810	0.5	Valid

(Research data processed, 2021)

Based on table 6. shows that the AVE value of each research variable is > 0.5 . It means that the research variable meets the rule of thumb $AVE > 0.5$ so that it is stated that the research variable can become a good research construct.

Structural Equation Modeling (SEM) with Smart PLS also requires reliability assumptions to measure the internal consistency of the measuring instrument. The rule of thumb of Cronbach's alpha and composite reliability values > 0.7 [31]. However, Hair et al. [32] stated that the value of 0.6 is still acceptable, so this study using a minimum limit of 0.6.

Table 7. Cronbach's Alpha Research Variables

Variable	Cronbach's Alpha	Cronbach's Alpha Level	Notes
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Variable	<i>Cronbach's Alpha</i>	<i>Cronbach's Alpha Level</i>	Notes
Graduate Employability (Y)	0.604	0.6	Reliable
Perceived Employability	0.771	0.6	Reliable
Human Capital	0.780	0.6	Reliable
Social Capital	0.600	0.6	Reliable
Individual Behaviours	0.797	0.6	Reliable
Individual Attributes	0.783	0.6	Reliable
Labour Market	0.765	0.6	Reliable

(Research data processed, 2021)

Table 7 shows that the value of Cronbach's alpha for each variable is > 0.6 so that the research variable is declared feasible as a consistent measuring tool in research. In addition to the value of Cronbach's alpha, reliability testing was also carried out by looking at the composite reliability value.

4.7 Inner Model Test (Structural Model)

The inner model test or structural model is used to determine the magnitude of the influence of the construct. Table 8. presents the results of the R Square (R2) test as follows:

Table 8. R Square (R2) Test Results

Variable	<i>R Square</i>	<i>Adjusted R Square</i>	Category
Graduate Employability	0.298	0.289	Moderate
Perceived Employability	0.596	0.588	Good

(Research data processed, 2021)

Based on table 8, the R2 of the graduate employability construct is 0.298, which means that the percentage of graduate employability described by other constructs is 70.2, explained by other variables outside the research model. It shows that the value of R2 is considered moderate/enough because it has a value of > 0.19 and < 0.33 .

Furthermore, the value of R2 on the perceived employability construct is 0.596, which means that the percentage of perceived employability explained by other variables outside the study is 40.4. It shows that the value of R2 is considered a good category because it has a value of > 0.33 and < 0.67 .

4.8 t-Test for Hypothesis Testing

The t-test was conducted to determine the significance of the structural path parameter coefficients between variables by looking at the t-statistic significance. Table 9. presents the results of hypothesis testing based on the value of t-statistics, nip value on the total effect to determine the effect between research variables.

Table 9. Total Effect

Variables	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistic	P Values	H	Notes
Human Capital -> Perceived Employability	0.330	0.328	0.071	4.646	0.000	H9	Accepted
Social Capital ->	0.179	0.183	0.062	2.882	0.004	H10	Accepted

Variables	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistic	P Values	H	Notes
Perceived Employability							
Individual Behaviours -> Perceived Employability	0.134	0.130	0.061	2.197	0.028	H11	Accepted
Individual Attributes -> Perceived Employability	0.297	0.299	0.060	4.953	0.000	H12	Accepted
Labour Market -> Perceived Employability	0.012	0.012	0.047	0.255	0.799	H13	Rejected
Labour Market -> Graduate Employability	0.501	0.503	0.052	9.648	0.000	H14	Accepted
Perceived Employability -> Graduate Employability	0.001	-0.003	0.073	0.014	0.989	H15	Rejected
Interaksi 1 -> Graduate Employability	-0.192	-0.192	0.063	3.047	0.002	H16	Rejected

(Research data processed, 2021)

5 Discussion

The employability of *FE UNNES* graduates must be improved considering the Industrial Revolution era, which digitized almost all student activities. It was accelerated by the corona pandemic, which forced all human resources to master IT to communicate and interact in work.

FE UNNES students have received a curriculum of course materials adapted to the times and the job market's needs. It can be seen from the questionnaire results that 80% of the 247 respondents who graduated pre-pandemic stated that they were ready to compete and were confident in finding and getting a job. Then 71% of the 220 respondents who graduated in-pandemic said they were confident in competing with graduates from other universities. This decrease was because some graduates felt that IT mastery needed to be improved due to the huge exposure to IT usage in-pandemic. Furthermore, of course, influenced by other external factors that cannot be controlled.

5.1 Pre-Pandemic

Four predictors affect perceived employability pre-pandemic; it can be seen that the highest influencing variables are:

- Individual attributes of 45%
- The human capital of 34.9%
- Individual behaviors by 13.4%
- Social capital of -0.00%

It means that the individual variable attributes are the characters or characteristics of the entity or individual that can encourage career success. which covers Personality variables, adaptability, flexibility. These results follow Adila [34] research, which states that individual characteristics or entities have a positive and significant influence on student career success, contributing 56.6%. In addition, this study also supports the research results conducted by Putri and Frieda [35], which shows that self has a positive and significant influence on career success for fresh graduates by 34%, while other factors outside the study influence the rest.

The results of this study are in line with the theory used, i.e., the law of readiness from Thorndike, which suggests that individuals who have the readiness to act or behave and can carry it out will experience satisfaction and vice versa. Based on this, it can be concluded that the law of readiness can be associated with job readiness or individual work worthiness, which is reflected in the employability variable.

Furthermore, human capital is the expertise, experience, and knowledge of workers that can increase worker productivity, including Skill, Competencies, Work Experience. This variable is the second most influential factor on perceived employability. As is the case with contemporary phenomena, the concept of career success involves many research activities with various influencing factors. The results of this study support research conducted by Athiasari [36]. He found that human capital consisting of education, experience, and skills has a positive influence and is significant to career success.

Then, Pamungkas [37] also measures career success through human capital, motivation, and supervisor support, which shows results that there is a positive and significant relationship between human capital and career success.

The results of this study show a good correlation with the theory used in this study, i.e., the Learning Theory of Career Counseling (LTCC) theory from John D. Krumboltz and Mitchell [25], who believe that one's career development comes from personal and environmental factors. The two major factors are divided into four categories: genetic, environmental, learning, and task-facing skills. Personal and environmental factors determine one's career success; this shows that the better the student's personal and environment, the greater the possibility to encourage student career success.

Then the fourth is social capital, where the effect is -0.00% which occupies the lowest influence on perceived employability pre-pandemic. This result contradicts the research conducted by Kistyanto [38], which shows a positive and significant relationship between social cliques and career success.

Based on the explanation above, it can be explained that when students feel that work readiness is high, it will increase their confidence and consistency to work in the desired institution or company. The magnitude of the influence of the R-Square four constructs on perceived employability reaches 72% (Good Category). It means that the four factors can properly measure perceived employability. 28% influenced by other factors that were not measured in this study.

The effect of perceived employability on graduate employability is 44.9% (positive and significant), as seen in the outer model scheme. However, with all the factors possessed by FE graduates, working or not is also influenced by the labor market. As shown in Table 5, the labor market's influence pre-pandemic was -10.1% (negative and significant). It indicates that the pre-pandemic labor market was not so good so that there were not so many available job vacancies and reduced the employability level of *FE UNNES* graduates.

Overall, the Integrated Model of Graduate Employability can form an R-square of 65.6% (Good Category). It means that the research model is good in measuring the employability of *FE UNNES* graduates.

5.2 In-Pandemic

What happens in-pandemic will certainly be different from the conditions pre-pandemic. It is known that the in-pandemic conditions are increasingly concerning for many sectors, including the economic sector, which impacts the jobs availability of jobs or *FE UNNES* graduates.

From four constructs that make up perceived employability, the order of the most

influential factors is:

- a) Human capital 33%
- b) Individual attributes 29.7%
- c) Social capital 17.9%
- d) Individual behaviors 13.4%

This condition is different from pre-pandemic because the most influential factor is the human capital of 33%. Human capital is the capital of *FE UNNES* graduates, including indicators of skills, experience, and competencies. The higher the competence and skills as well as work experience, the higher the perceived employability. It follows the Learning Theory of Career Counseling (LTCC) proposed by John D. Krumboltz and Mitchell [25], which states that a person's career development comes from genetic factors. In this study, genetic factors are represented by the human capital variable, where human capital itself refers to factors that influence a person's career development such as age, education, work experience, training experience, work performance, years of service in a company, emotional intelligence, and cognitive abilities.

The second biggest factor is individual attributes, which means traits that a person naturally possesses that make a person unique and determine individual effectiveness in certain job roles. Individual attributes include indicators of personality variables, adaptability, and flexibility. It is following the Learning Theory of Career Counseling (LTCC), which states that a person's career development comes from the skill factor in dealing with tasks which in this study is reflected through individual attribute variables, which refer to factors related to proactive behavior, flexibility, and ability to adapt to work.

Overall, the four constructs succeeded in measuring perceived employability of 59.6% (Good Category), with 40.4% being influenced by other factors not measured in this research model. Furthermore, the effect of perceived employability on graduate employability is 0.01% (positive and insignificant), as shown in Table 8. It means that perceived employability does not have a significant effect on graduate employability. It is made worse by moderating the labor market variable, affecting -19.2% (negative and significant to graduate employability).

It makes sense because the pandemic condition has negatively affected many sectors: the economic sector. According to data from the Indonesian Institute of Sciences (LIPI), reported from metadata.co.id (2020), the corona pandemic impacted the economic sector, business continuity, and people's income. Data from the Ministry of Manpower on April 20, 2020, noted that 2,084,593 workers from 116,370 companies were laid off and affected by layoffs. It happened because many companies experienced a decline in production and even stopped operating. Then, this condition is also supported by data reported from finance.detik.com [39], which states that the number of MSMEs has shrunk from 64.7 million units in 2019 to only 34 million units in 2020. In addition, workers are also forced to experience a reduction of 7 million people. It is certainly something that also affects the fresh graduates of *FE UNNES*.

Overall this model only managed to get the magnitude of the influence of 29.8% (good enough category). It indicates that the integrated model of graduate employability is quite good in measuring employability.

Before or in-pandemic, the labor market factor became a factor that significantly influenced graduate employability. In model 1 pre-pandemic, out of 8 hypotheses, three hypotheses were rejected.

Table 10. The Rejected Hypotheses in Model 1 or Pre-Pandemic

Social Capital	->	-0.001	0.003	0.035	0.018	0.985	H2	Rejected
Perceived Employability								

Labour Market -> Perceived Employability	0.035	0.032	0.039	0.885	0.377	H5	Rejected
Interaksi 1 -> Graduate Employability	-0.101	-0.098	0.037	2.720	0.007	H8	Rejected

Meanwhile, in model 2, in-pandemic, out of a total of 8 hypotheses, three hypotheses were rejected:

Table 11. The Rejected Hypotheses in Model 2 or In-Pandemic

Labour Market -> Perceived Employability	0.012	0.012	0.047	0.255	0.799	H13	Rejected
Perceived Employability -> Graduate Employability	0.001	-0.003	0.073	0.014	0.989	H15	Rejected
Interaksi 1 -> Graduate Employability	-0.192	-0.192	0.063	3.047	0.002	H16	Rejected

The labor market is a variable that consistently has a negative and significant effect, both a direct predictor of graduate employability and a moderating variable between perceived employability and graduate employability. It is something that an educational institution, *FE UNNES*, cannot control. The government and other parties involved are parties that should pay attention to this variable.

Then, the interesting thing is that pre-pandemic social capital had a negative and insignificant effect on perceived employability. However, in-pandemic, social capital became a factor that positively and significantly affected perceived employability. It should be a concern for institutions and students to pay attention to social capital.

Social capital is a good intention contained in social relations. An individual social capital is determined by the size of the network and the strength of the network. The size of the network owned by an individual can determine how much information and influence the individual has in realizing and understanding job opportunities. Social capital includes indicators of the network, social class, and university ranking. It is following the Learning Theory of Career Counseling (LTCC), which states that a person's career development comes from the environment, which in this study is reflected in social capital variables related to the individual's environment in the form of networking/social relationships that help individuals find job opportunities.

The results of this study are supported by research conducted by Setyaningsih et al. [6], which states that internal factors that affect employability are: self-efficacy and self-confidence. The external factors are social support, job satisfaction, and career development training. These results are by this study which states that social capital (social capital), which is the same as the social support variable, has a positive and significant influence and is a factor that affects the perceived employability of *FE UNNES* graduates. Then, the results of this study are relevant to the research conducted by Finch et al. [40], which states that soft skills, problem-solving skills, job-specific functional skills, pre-graduate experience, and academic reputation affect undergraduate employability. The factors that have been described in previous research can be reflected in the human capital variable with one of the indicators being skills, experience, and competencies; individual attributes and individual behavior variables related to problem-solving skills, and job-specific functional skills; as well as on social capital variables related to academic reputation.

6 Conclusion

Based on the results of the analysis, two models were obtained, i.e., pre-pandemic and in-pandemic. The pre-pandemic model measures eight hypotheses with the results that five hypotheses are accepted, and three hypotheses are rejected with an R-Square of 0.720 for perceived employability and an R-Square of 0.656 for graduate employability. The in-pandemic model also measures eight hypotheses with the results that five hypotheses are accepted, and three hypotheses are rejected with an R-square of 0.596 for perceived employability and an R-Square of 0.298 for graduate employability. The variables which have the strongest effect on perceived employability pre-pandemic are Individual attributes at 45% and human capital at 34.9%. Then, in-pandemic, the variables that gave the strongest effect on perceived employability are Human capital 33%, Individual attributes 29.7%, Social capital 17.9%, Individual behaviors 13.4%. The labor market moderated negatively significantly between perceived employability and graduate employability. Perceived employability when the pre-pandemic model is better than the in-pandemic model.

Then, it is suggested for FE, UNNES that employability needs to be improved in this new normal era by increasing individual attributes. Individual attributes variables include indicators of personality, adaptability, and flexibility. Then, in-pandemic, the most influential variable is human capital with three indicators, i.e., skills, competencies, and work experience. It is expected that FE UNNES, as the producers of graduates, can increase the employability of graduates by increasing the human capital.

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