

Construct Validity Of Employability: Confirmatory Factor Analysis Of The Employability Scale

Fatwa Tentama, Bella Rifqi Nabilah

Abstract: The purpose of this study is to test the validity and reliability of the construct employability and to examine the dimensions that make up the construct of the employability scale. Employability is measured in three dimensions, namely career identity, personal adaptability and social and human capital. The subjects in this study were 90 students of class VII at SMK X in Yogyakarta. The data collection method uses an employability scale. Research data were analyzed using Structural Equation Modeling (SEM) SmartPLS 3.2.8 with outer models through CFA 2nd Order. Based on the results of the analysis, the dimensions and indicators that form employability are declared valid and reliable. The dominant dimension that reflects the construction of employability is career identity. The lowest dimension that reflects employability is personal adaptability. All dimensions and indicators are able to reflect and shape employability. Thus the structural model can be accepted because the theory that describes employability is in accordance with empirical data obtained from the subject.

Keywords: Career Identity, Employability, Partial Least Square, Personal Adaptability, Social And Human Capita, Student, Structural Equation Modeling.

1. INTRODUCTION

Concerns about employability make a thought related to the suitability of students in developing the attributes possessed [1]. Employability is an opportunity to get a job in the internal or external labor market [2]. Employability relates to individuals in finding work and individuals who have employability will try to improve themselves in order to get a job [3]. Pool and Sewell [4] suggest that to have a high employability requires several things, namely expertise in accordance with their fields, broad insight, understanding in thinking and good personality that makes a person able to have a job. Employability as important in finding work [4]. Benabou and Tirole [5] suggested that lack of employability in individuals would limit individual work actions and ambitions into the world of work. Low employability can make it difficult for individuals to get jobs [6]. On the other hand, employability helps individuals to understand the things needed to get a job [7]. The function for individuals is to make individuals have confidence with the ability they have to get jobs according to their goals [5]. High employability will have an impact on helping to increase individual opportunities in obtaining employment [8]. Other literature shows that employability can also contribute to the image of higher education institutions [9]. This is confirmed by several studies that approach the relationship between these two constructs (Duarte, Alves & Raposo, 2010; Landrum, Turrissi & Harless, 2010; Soutar & Turner, 2002). Therefore, employability is the key to individual resources in the 21st century and gives rise to important reflections about career, work, and the meaning of life. The literature provides various definitions of employability [10] which involve maintenance of work [11], personal resources [8]; work orientation [12]; job skills, work anticipation, opportunity optimization, balance between personal and professional needs [13]; job sustainability, qualifications, future-oriented perspectives [14]; meta-competence (ability to adapt behavior, self-knowledge, awareness of career orientation, sense of purpose, self-esteem) [15], and internal and external factors [16].

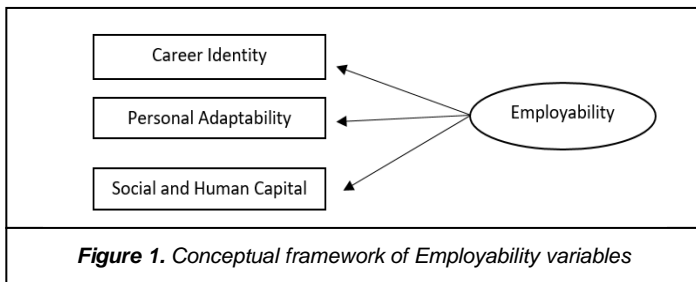
[17], [18], [19], [20], [21], [22], [23], [24], [25], [26], [27]. More specifically in the world of work which is unstable and uncertain today, individuals need to increase their qualifications and resources to improve their work abilities. Individuals need to examine in depth their own personal value system so that they can meet the challenges of the post-modern era and achieve satisfaction and well-being [28]. Employability in the context of graduates aims to measure the extent to which a student from a particular institution or program has and develops the appropriate attributes [29]. For employability graduates are having the understanding, skills, and personal attributes needed to perform adequately according to graduates to get a job [30]. Employability is a skill of special abilities that enables individuals to identify and realize career opportunities [31]. Employability is a form of active adaptation that makes individuals identify and realize career opportunities that can enhance the ability to get a job [8]. Employability is defined as the process of obtaining employment through optimal use of competence [32]. Employability is described as a set of skills, understanding, and personal attributes that make it easier for individuals to get jobs and succeed in their chosen jobs so that they can benefit themselves or others, the wider community and economic growth [33]. The definition of employability refers to the skills, knowledge, understanding and personal attributes that make an individual more likely to choose and secure a job that is satisfying to him and successful [4]. Employability is a skill, knowledge and competency that increases the ability of individuals to get a job so that it is easier to enter the workforce [7].

Previous research tried to measure the employability conducted on 132 respondents who wanted to work in business organizations. [34]. In addition to the research of Vos, Haw, and Heijden [35], who tried to do employability research on individuals outside Indonesia which certainly differed from the cultural side of the subject of this study. The employability scale used to measure the level of employability of a vocational high school student was prepared using the dimensions proposed by Fugate, Kinicki and Ashforth [8], which consisted of career identity, personal adaptability, and social and human capital. Employability owned by students can be known through the indicator of employability based on the dimensions of employability expressed by Fugate, Kinicki, and Ashforth [8], namely career identity which has indicators

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including goals, expectations, personal traits, values and norms. Then, personal adaptability has indicators including beliefs in adapting, a tendency to continue learning, self-disclosure, and self-control in various situations. Next, social and human capital have indicators including being able to utilize the vast strength of the network owned by individuals to realize job opportunities.

A conceptual framework based on these three dimensions can be seen in Figure.1



Based on Figure 1, the following research hypotheses are prepared:

Above the description can be concluded that employability is important, the formulation of the problem in this study are: 1) Is the construct of employability valid and reliable? and 2) Are the dimensions of career identity, personal adaptability and social and human capital able to shape the construct of employability? Confirmatory Factor Analysis is one approach that can be used in testing the construction of a measuring instrument. Confirmatory Factor Analysis (CFA) is one of the main approaches in factor analysis. CFA can be used to test the dimensionality of a construct. This test is used to measure the model (model measurement) so that it can describe the dimensions and indicators of behavior in reflecting latent variables namely employability by looking at the factor loading of each aspect that forms a construct. Confirmatory Factor Analysis (CFA) is also used to test the validity of the extracts and the reliability of the constructs of the indicators (items) forming latent constructs [36]. The CFA used in this study is a second order confirmatory factor analysis (2nd Order CFA), a measurement model that consists of two levels. The first level of analysis is carried out from the latent construct of the dimension to its indicators and the second analysis is carried out from the latent construct to its dimension construct [36]. This study aims to test the construct validity and reliability of construct employability from different country and cultural perspectives from previous studies. Seeing the importance of the employability variable, research on the reliability and validity of the employability scale construct is important to remember given that the understanding of the employability construct is increasingly developing as a multidimensional construct.

2 RESEARCH METHOD

2.1 Participant

The subjects in this study were students of class XII at Muhammadiyah Vocational High School "X" totaling 90 people who were active students and were willing to participate in this study.

2.2 Collecting data method

The instrument used to measure employability in this study is the scale of employability which was constructed by the author based on the employability dimension of Fugate, Kinicki, and Ashforth [8], namely career identity, personal adaptability and social and human capital. The scaling method used in this study is the Likert scale with the summed rating method (Method of Summated Ratings) with four alternative answers. This scale consists of 36 statements with two directions statements namely favorable and unfavorable. The value of the statement can be seen in the table:

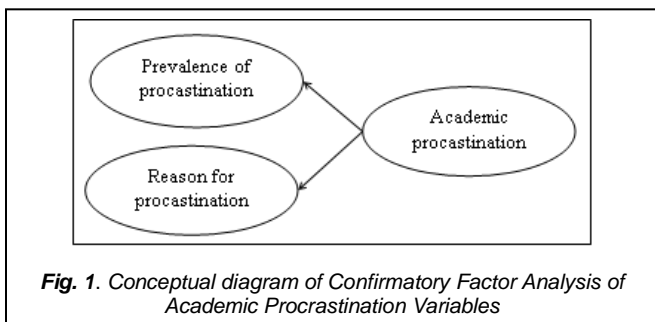
TABLE 1
EMPLOYABILITY SCALE SCORE

Statement	Favorable Score	Unfavorable Score
SS	4	1
S	3	2
TS	2	3
STS	1	4

Examples of items in the career identity dimension are "I hope to get a job that suits my field and" Practical experience at school can help get a job ", then examples of items on the personal adaptability dimension are "I believe I can complete difficult tasks and "I share material lessons and practices with friends "and examples of items in social and human capital are" I can get job information from friends and "I think vocational education can make it easier to get a job".

TABLE 2
BLUEPRINT OF THE EMPLOYABILITY SCALE

Dimension	Indicator	Item	
		Favo	Unfavo
Career Identity	1. Knowing the identity of the job	1, 7	4, 10
	2. Have the hope of a job role	13	16
	3. Having an interaction style that makes it easy to find work	19, 25	22, 28
	4. Have confidence in achieving success in work	31	34
Personal Adaptability	1. Have confidence in adapting	2	5
	2. Tendency to learn	8	11
	3. Openly accept input	14, 20	17, 23
	4. Have confidence in self-control in finding work	26, 32	29, 35
Social and Human Capital	1. Have emotional intelligence in managing social network	3, 9	6, 12
	2. Have training experience that supports career planning	15, 21	18, 24
	3. Have internship experience that supports job search	27	30
	4. Have the knowledge to utilize social networks in finding work	33	36
Frequency		18	18



2.3 Validity and Reliability

2.3.1 Construct Validity

The validity test of this research uses the validity of reflective constructs that are confirmatory in nature to show how well the results obtained from the use of measuring instruments with a theoretical reference are used to define a construct. There are 2 validity tests in construct validity, i.e.:

- a) Convergent validity, measuring the magnitude of the correlation between item scores and construct scores, is assessed based on loading factors. According to Hair, Hult, Ringle, and Sarstedt [37] the higher the loading factor score, the more important the loading role will be in interpreting the factor matrix with a loading value > 0.5 considered significant, then the average variance extracted (AVE) value > 0.5[38].
- b) Discriminant validity is carried out because different constructor gauges should not correlate with height, which is expected to increase the cross loading value between constructs and items more than the other construct values. The trick is to compare the AVE roots of a construct must be higher than the correlation between latent variables [38].

2.3.2 Constructive Reliability

Reliability test is carried out to show the internal consistency of the measuring instrument by looking at the value of composite reliability and Cronbach's alpha with a higher value, it will show the consistency value of each item in measuring latent variables. According to Hair, Hult, Ringle, and Sarstedt, [37] the expected composite reliability and cronbach's alpha value is > 0.7 and the value 0.6 is still acceptable, then according to Cooper the internal consistency test has also been met if the validity of the extract has met the criteria so the average variance extracted value (AVE) has represented internal consistency, because the construct is valid then the construct is reliable but on the contrary a reliable construct is not necessarily a valid construct [38].

2.3.3 Data Analysis

The data in this study were analyzed using the Smart PLS 3.2.8 program with reflective constructs through the 2nd Order CFA. According to Hartono and Abdillah (2015) PLS is a variance-based structural equation analysis (SEM) that can simultaneously test measurement models to test the validity and reliability.

3 RESULT

Based on the results of the outer model test analysis conducted in this study using the Smart PLS 3.2.8 program, a model is shown in the figure as follows:

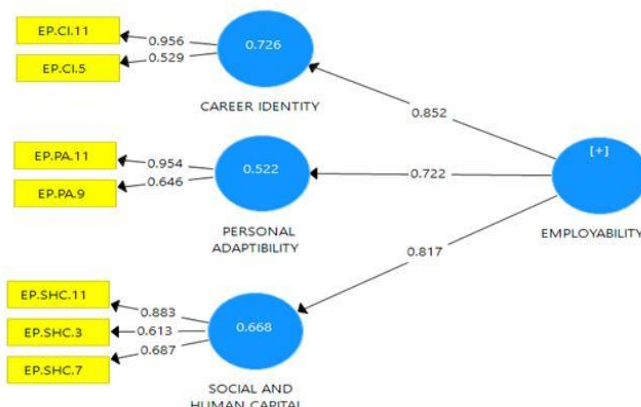


Figure 2. Output of the employability construct model test

3.1 CONVERGENT VALIDITY

Based on the convergent validity test that the value of loading factor has fulfilled > 0.5 and the value of loading factor between variables and aspects has fulfilled > 0.5 can be seen in table.3 below:

TABLE 3
VALUE OF LOADING FACTOR (VARIABLE-ASPECT)

Aspect	Loading Factor	Information
CI	0.852	Valid
PA	0.722	Valid
SHC	0.817	Valid

Based on the convergent validity test that the value of loading factor has fulfilled > 0.5 and the value of loading factor between aspects and indicators has fulfilled > 0.5 can be seen in table.4 below:

TABLE 4
VALUE OF LOADING FACTOR (Aspect-indicator)

Item	Loading Factor	Information
EP.CI.5	0.529	Valid
EP.CI.11	0.956	Valid
EP.PA.9	0.646	Valid
EP.PA.11	0.954	Valid
EP.SHC.3	0.613	Valid
EP.SHC.7	0.687	Valid
EP.SHC.11	0.883	Valid

The convergent validity of the average variance extracted value (AVE) > 0.5 construct has fulfilled > 0.5 that is equal to 0.683 and the average variance extracted value (AVE) of each aspect has also fulfilled > 0.5 can be seen in table.5 below:

TABLE 5
AVERAGE VARIANCE EXTRACTED (AVE) VALUE OF CONSTRUCT

Aspect	AVE Value	Information
Career Identity	0.597	Valid
Personal Adaptability	0.663	Valid
Social and Human Capital	0.542	Valid

3.2 DISCRIMINANT VALIDITY

Discriminant validity test with the AVE root value compared between aspects is the AVE root value among aspects higher than the AVE root value with other aspects and can be seen in Table 6 below:

TABLE 6

<i>ROOT VARIANCE EXTRACT VARIABLE (AVE) VALUE</i>			
Aspect	CI	PA	SHC
CI	0.772	0.436	0.654
PA	0.436	0.815	0.515
SHC	0.654	0.515	0.735

The construct validity in SEM (Confirmatory Factor Analysis / CFA) shows that all four indicators are valid with a loading factor (λ) ≥ 0.5 .

3.3 CONSTRUCTION RELIABILITY TEST

The reliability test results in this study with the composite reliability value and Cronbach's alpha > 0.7 have been fulfilled so it can be stated that the items used in this study are reliable and can be seen in Table 7 below:

TABLE 7

THE COMPOSITE RELIABILITY AND CRONBACH'S ALPHA VALUES ARE EXTRACTED

Variable	Composite Reliability	Cronbach's Alpha	Information
Employability	0.865	0.765	Reliable

The results of construct reliability testing using Confirmatory Factor Analysis 2nd Order in Table 7 above show that constructs have good reliability and give meaning that the dimensions that measure constructs of latent employability variables meet unidimensional criteria (Hair et al., 2010). This is indicated by the value of Composite Reliability 0.865 and Cronbach's Alpha 0.765. Based on the processing and analysis of research data on the dimensions of the construct employability formed using the 2nd Order Confirmatory Factor Analysis, the results show that the model is acceptable, because all dimensions are able to reflect on the construct formed.

4 DISCUSSION

Based on the results of the analysis of the construct validity and construct reliability that all dimensions and items that make up the employability of students are declared valid and reliable so that all dimensions and indicators are able to form and reflect employability. The most dominant dimension that reflects employability is the dimension of career identity where the main indicators include the role and belief in achieving success to get a job. The specific behavior is to get a job that is appropriate to their field and gain practical experience in school to help get a job. The lowest aspect that reflects students' employability is personal adaptability with the main indicator being confidence in self-control in finding work. The specific behavior is sure to complete difficult tasks and share subject matter and practice with friends. Considering that this research proved that the dimension of career identity has the highest loading factor value (0.852) as the constructor of the

employability construct compared to the other two dimensions, namely the social and human capital dimensions with a loading factor of 0.817 and personal adaptability with a loading factor of 0.722. The findings of this study support the theory or concept of employability discussed by Carkle [39] describing three dimensions namely human capital, social capital and individual behavior. Furthermore, the concepts explained by Van der Heidje and Van der Heidje [32] describe five dimensions namely occupational expertise, anticipation and optimization, personal flexibility or adaptability, corporate sense and balance. While in this study the theory or concept of employability using Fugate, Kinicki, and Ashforth [8] describes three dimensions, namely career identity, personal adaptability and social and human capital. The results of this study are expected to provide an overview of the validity and reliability of the construct employability in the educational context so that it can be used as a reference in subsequent studies, for example in determining the weight or percentage of each dimension in the blueprint on the scale of employability.

5 CONCLUSION

Based on the results of the analysis and discussion, it can be concluded that the dimensions and indicators that form employability are declared valid and reliable. The dominant dimension that reflects the construction of employability is career identity. The lowest dimension that reflects employability is personal adaptability. All dimensions and indicators are able to reflect and shape employability. Thus the structural model can be accepted because the theory that describes employability is in accordance with empirical data obtained from the subject.

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