

Relationship among Self-Efficacy, Digital Mindset, and Resilience towards Work Readiness in Industry 4.0.

Defrina Dwifani¹, Achmad Fajar Hendarman¹

¹(School of Business and Management, Institut Teknologi Bandung, Indonesia)

*Corresponding Author: Defrina Dwifani¹

ABSTRACT : *Human capital is crucial for economic success in business and industry. Recruitment of skilled human resources significantly contributes to achieving organizational goals, especially in regions like West Java, Indonesia, where there's a misalignment between the available labor force's skills and market needs. This study examines work readiness in the Industry 4.0 era, focusing on self-efficacy, digital mindset, and resilience. The quantitative research confirms a positive relationship among these variables, suggesting that work readiness is enhanced by a strong self-belief in one's capabilities, adaptability in a digitalized environment, and the ability to bounce back from adversity. The findings advocate for targeted development in these areas, especially for Bank Indonesia scholarship recipients, to align workforce competencies with market expectations, thereby reducing unemployment and promoting economic growth.*

KEYWORDS – *Digital mindset, Industry 4.0, resilience, self-efficacy, work readiness.*

I. INTRODUCTION

The onset of Industry 4.0 marks a transformative era, emphasizing the importance of human capital in driving economic success. This revolution brings forth a paradigm shift in employment landscapes, demanding a workforce that is well-equipped with relevant skills and competencies [1]. As companies strive for balanced economic activities, the role of competent human resources becomes pivotal. West Java, Indonesia, encapsulates a significant challenge in this regard: a crisis of human productivity. Despite a large labor force, the region grapples with the subpar quality of job seekers and a misalignment between their skills and market needs. This has resulted in high unemployment rates, highlighting the need for strategies to enhance workforce readiness[2].

The paper aims to underscore the critical role of Industry 4.0 in shaping the qualifications required for the modern workforce. It examines the interconnectedness of self-efficacy, digital mindset, and resilience as key contributors to work readiness in this new industrial landscape. By focusing on scholarship recipients from Bank Indonesia in West Java, the study evaluates how these individuals are prepared to navigate the challenges and seize the opportunities of the digitalized, interconnected work environment.

The research adopts a quantitative approach to ascertain the relationship among the identified variables, positing that an individual's readiness for work is significantly influenced by their belief in their capabilities (self-efficacy), their adaptability to a digitized work environment (digital mindset), and their resilience in the face of change and adversity. The investigation extends to understanding how scholarship programs can contribute to equipping students with the required skills and knowledge for the professional world.

The study has both theoretical and practical implications. Theoretically, it contributes to the psychology literature by exploring the relationship between self-efficacy, digital mindset, resilience, and work readiness. Practically, it enhances understanding of how these variables shape work readiness among the future workforce. The findings suggest actionable steps for augmenting work readiness, particularly among Bank Indonesia scholarship recipients, thereby bridging the skill gap and fostering economic growth.

II. LITERATURE REVIEW

II.1 Work Readiness Industry 4.0

Organizations are increasingly moving toward a digital framework, commonly known as Industry 4.0, which requires significant changes to how they operate (Sony & Naik, 2018). This shift affects every aspect of an organization, from production to all related internal and external activities [3]. Against this backdrop, it's essential for students to prepare themselves to deal with the changing dynamics of the workforce. The pressing nature of these changes elevates the level of competition among prospective university graduates, influencing the type of skills that future workers need to have. Industry 4.0 goes beyond just adopting new digital

technologies; it also demands a change in thinking and working styles, underscoring the importance of developing skills that allow for adaptability [4].

Hendarman et al. [5] embarked on research to assess individual readiness within the context of Industry 4.0, utilizing elements of Knowledge, Hard Skills, Soft Skills, and Attitudes for evaluation. The study targeted manufacturing, banking, and telecommunication-based companies in Indonesia.

Table 2.1 Dimension of Work Readiness 4.0

No.	Dimension of Work Readiness 4.0	Description
1	Knowledge	Intellectual capital is performance-oriented, acting with a categorization of knowledge, whether it is tacit or explicit, and specialized or general.
2	Hard Skills	Skills encompass intellectual activities like thinking, reasoning, and remembering, which are influenced by an individual's Intelligence Quotient (IQ).
3	Soft Skills	Skills, both internal and interpersonal, are necessary for individual development, social participation, and workplace success.
4	Attitude	Behavior is shaped by both conscious and unconscious mental perspectives, developed cumulatively through experience, leading to tendencies to perceive certain objects or behaviors as likable or unlikable.

Source: Hendarman et al. (2021)

II.2 Self-Efficacy

Gibson Donnelly and colleagues [6] describe self-efficacy as the inherent belief in an individual's ability to perform tasks in given situations. Simamora [7] echoes this by describing self-efficacy as the confidence in one's ability to succeed in their job, leveraging their cognitive abilities to effectively carry out tasks. Individuals with high self-efficacy are known to have strong personalities and are more likely to tackle difficult tasks, while those with low self-efficacy may shy away from such challenges.

When considering the concept of work readiness in the context of Industry 4.0, self-efficacy is seen as crucial to an individual's sense of readiness to participate in the modern workforce. Andrianus highlights that being ready for a job in this new era involves not just confidence but also a thorough readiness across different areas. Self-efficacy contributes to boosting a person's confidence and their drive to succeed, whereas work readiness equips them to perform well in roles that match their skills and knowledge [8].

Bandura [9] breaks down self-efficacy into three core dimensions. Firstly, magnitude or level, referring to an individual's appraisal of their capability to perceive the complexity of a task. Secondly, generality, which pertains to the belief in one's proficiency to accomplish a diverse range of tasks. Lastly, strength, which represents the resolute confidence in the skills an individual possesses, and is linked to the degree of effort exerted by the individual in attaining their desired objectives.

Table 2.2 Dimension of Self-Efficacy

No.	Dimension of Self Efficacy	Description
1	Magnitude of Level	This dimension is related to the individual's perception of the level of difficulty of the task at hand and refers to the choice of behavior to try or avoid
2	Generality	This dimension is related to the strength of an individual's belief in their abilities. A weak belief in an individual will be easily shaken by things that do not support it, while a strong belief will encourage the individual to persist in his efforts.
3	Strength	This dimension relates to an individual's perception of looking at a broad field or task context, whether their abilities are limited to a particular activity and context or to a series of varied activities and contexts.

Source: Bandura (1997)

II.3 Digital Mindset

A digital mindset is a blend of cognitive and behavioral tendencies that equips people and organizations to understand and leverage the possibilities offered by the digital age for both professional growth and personal fulfillment. It encourages the creation of workplaces that are both interconnected and centered on human values and aspirations. Someone with a digital mindset understands the ways in which technology can enhance and widen access to various forms of interaction and community. Having a digital mindset also means having a comprehensive grasp of the effects of the digital age and possessing the necessary competencies and perspectives to manage these effectively [10].

Table 2.3 Dimension of Digital Mindset

No.	Dimension of Digital Mindset	Description
1	Openness and Collaboration with others	This aspect promotes openness, inclusiveness, and interaction. It values diversity, encourages sharing and collaboration through various tools, seeks transparency, removes barriers, and fosters a trustworthy and empowering atmosphere.
2	Progressive Work Methods Adoption	This dimension encompasses attributes of proactivity, engagement, drive, and disruption, along with novel working methods, incorporating elements of agile and design thinking approaches.
3	Technology and Data Emphasis	This involves being open to new digital solutions, readily integrating digital technology into daily work and life routines. It also entails learning and understanding digital technology concepts, such as AI, robots, and the Internet of Things, and exploring the opportunities they offer.

Source: (Lessiak, 2020)

II.4 Resilience

Resilience is defined as the ability to adjust to significant life adversities [11]. It encompasses the capacity of a person to deal with challenges at work in a way that promotes personal growth and inner strength. In the context of employment, resilience is the maintenance of mental and emotional health in the face of work-related stressors. It includes the ability to cope with uncertainty and change in the professional environment. Possessing resilience can result in improved job performance, dedication to one’s work, and the skillful handling of stress.

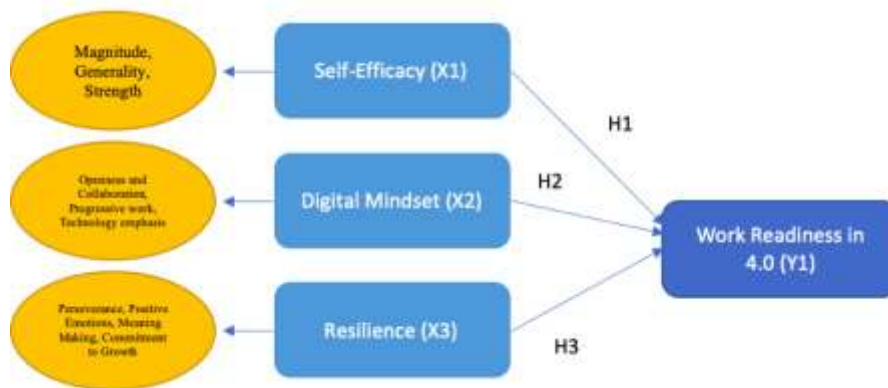
Amir and Standen [11] measure resilience using four dimensions:

Table 2.4 Dimension of Resilience

No.	Dimension of Resilience	Description
1	Perseverance	This involves maintaining effort and self-discipline when confronted with adversity.
2	Positive emotion	This denotes maintaining an optimistic perspective.
3	Meaning-making	This implies actively reflecting and reaffirming personal values in the face of challenges
4	Commitment to growth	This encapsulates the process of drawing strength from and overcoming severe hardship and loss of control.

Source: Amir and Standen (2019)

II.5 Hypothesis



- H1: Self Efficacy has positive and significant relationship with Work Readiness in the era of industry 4.0
- H2: Digital Mindset has positive and significant relationship with Work Readiness in the era of industry 4.0
- H3: Resilience has positive and significant relationship with Work Readiness in the era of industry 4.0

III. METHODOLOGY

The research adopted a quantitative methodology. This method is defined by its use of deductive reasoning to test pre-existing theories. It quantifies variables to identify trends, correlations, or cause-and-effect relationships through statistical analysis. The methodology typically involves structured data collection and analysis procedures. Quantitative research strives for impartiality and aims to gather a broad base of knowledge [12].

In this study, the method of multiple regression was used to analyze the hypotheses. Multiple regression is a statistical tool that explores how a single outcome variable is affected by several predictor variables. It uses the known values of the predictors to estimate the outcome variable's value. The main goal of this research is explanatory, as the author seeks to clearly define the relationships between the variables in question. It's important to note that the intent of this research goes beyond mere exploration or description; it is deeply rooted in the comprehension and interpretation of the dynamics and connections between the different factors being examined

IV. RESULT

IV.1 Descriptive Analysis

In this research, 268 individuals who were recipients of the Bank Indonesia West Java scholarship were surveyed. These participants came from various educational institutions including Telkom University, Singaperbangsa Karawang University, IKOPIN University, State Islamic University (UIN), Bandung Institute of Technology (ITB), Indonesian University of Education (UPI), Padjadjaran University (UNPAD), and Bandung Islamic University (UNISBA). As detailed in a specific table, Telkom University had the largest number of respondents at 102. The State Islamic University (UIN) followed with 38 participants, Padjadjaran University (UNPAD) had 30, Singaperbangsa Karawang University had 29, IKOPIN University had 27, Bandung Institute of Technology (ITB) had 19, Indonesian University of Education (UPI) had 12, and Bandung Islamic University (UNISBA) contributed 11 respondents.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Telkom University	102	38.1	38.1	38.1
	Universitas Singaperbangsa Karawang	29	10.8	10.8	48.9
	IKOPIN University	27	10.1	10.1	59.0
	Universitas Islam Negeri (UIN)	38	14.2	14.2	73.1
	Institut Teknologi Bandung (ITB)	19	7.1	7.1	80.2
	Universitas Pendidikan Indonesia (UPI)	12	4.5	4.5	84.7
	Universitas Padjajaran	30	11.2	11.2	95.9

	(UNPAD)				
	Universitas Islam Bandung (UNISBA)	11	4.1	4.1	100.0
	Total	268	100.0	100.0	

The subsequent table delineates the gender distribution of the survey participants. According to the survey data, females constituted 59.7% of the respondents, corresponding to 160 individuals, whereas males represented 40.3%, equating to 108 participants.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	160	59.7	59.7	59.7
	Male	108	40.3	40.3	100.0
	Total	268	100.0	100.0	

Variabel	MIN	MAX	STDEV	MEAN	N
Self-Efficacy	1	5	0.34859208	3.90625	268
Digital Mindset	1	5	0.38234777	4.34794776	268
Resilience	1	5	0.39853466	3.96875	268
Work Readiness	1	5	0.52866233	4.10837119	268

IV.2 Validity Test

Validity refers to how well a tool measures what it's supposed to measure. A tool is considered valid if it accurately reflects the variables under investigation with little variance from their true values (Creswell, 2009). In this study, validity was checked using SPSS software, version 27, with Pearson correlation as the method of analysis. For the tool to be valid, the calculated Pearson's r value (r_count) must be greater than the critical r value (r_table). With a sample of 268 respondents, it was found that the critical r_table value at a 5% significance level stood at 0.119. The validity scores for all items and for all respondents were above this critical value, confirming the validity of the instruments used in the study.

IV.3 Reability Test

Reliability assessment examines the consistency of an instrument to determine if it can yield dependable data. A threshold of 0.6 is employed in the decision-making process concerning instrument reliability. For the variables X1, X2, X3, and Y1, the reliability test produced a Cronbach's Alpha value exceeding 0.60. Consequently, the instrument is deemed **reliable**.

Table 4.1 Reability Result

Variable	Cronbach's Alpha	Notes
Self-Efficacy (X1)	0.668	Reliable
Digital Mindset (X2)	0.732	Reliable
Resilience (X3)	0.698	Reliable
Work Readiness 4.0 (Y1)	0.756	Reliable

IV.4 Multiple Linear Regression Model I

Regression analysis is employed to evaluate the influence of independent variables on the dependent variable. In a specific form of regression known as "multiple linear regression," various independent variables are incorporated to ascertain both the direction and magnitude of their impact on the dependent variable.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-7.239	7.538		-.960	.338
	SE	.554	.264	.127	2.097	.037
	DM	1.974	.227	.497	8.686	.000
	RE	.497	.218	.130	2.282	.023

a. Dependent Variable: WR

When evaluating statistical significance, if the computed t value (t-count) is higher than the critical t value (t-table), it leads to the rejection of the null hypothesis (H_0) in favor of the alternative hypothesis (H_a). On the other hand, if the computed t value is lower than the critical t value, the null hypothesis is retained and the alternative hypothesis is rejected. With a set significance level (Sig.) of 0.05 and degrees of freedom (df) calculated as the number of observations minus the number of predictors (n-k), which in this case is (268-3) equaling 265, the critical t value (t-table) is 1.968. Therefore, it is concluded that the independent variables — Self-Efficacy (X1), Digital Mindset (X2), and Resilience (X3) — have a statistically significant positive impact on Work Readiness within the scope of Industry 4.0.

- a. The Self-Efficacy variable (X1) has a regression coefficient of 0.554, showing a notable effect on Work Readiness for Industry 4.0. The t-value for Self-Efficacy is 2.097, which is above the critical value of 1.968. With a significance level of 0.001, considerably lower than the established alpha level of 0.05, the evidence supports the first hypothesis.
- b. Digital Mindset (X2) also shows a significant regression coefficient of 1.974, suggesting a strong impact on Work Readiness for Industry 4.0. It has a t-value of 8.686, well above the critical value, and a significance level of 0.001, again below the alpha level of 0.05, thus the second hypothesis stands confirmed.
- c. Resilience (X3) records a regression coefficient of 0.497 and is significantly associated with Work Readiness for Industry 4.0. The t-value for Resilience is 2.282, exceeding the critical t-value, and with a significance level of 0.001, below the alpha threshold of 0.05, the third hypothesis is likewise substantiated

IV.4 Multiple Linear Regression Model II (Gender Added as Control Variable)

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-8.360	7.526		-1.111	.268
	SE	.599	.264	.137	2.270	.024
	DM	1.945	.227	.489	8.578	.000
	RE	.492	.217	.129	2.270	.024
	FEMALE	2.163	1.157	.087	1.870	.063

a. Dependent Variable: WR

If the computed t-value (t-count) is greater than the critical t-value (t-table), the null hypothesis (H_0) is rejected in favor of the alternative hypothesis (H_a), and if it's the reverse—t-count is less than t-table— H_0 is accepted and H_a is rejected. The critical t-value, given a significance level (Sig.) of 0.05 and degrees of freedom (df) calculated as (n-k) or (268-4) which equals 264, is found to be 1.968. Therefore, the variables such as Self-Efficacy, Digital Mindset, and Resilience are determined to have a significant impact on Work Readiness, whereas the variable Female is not found to have an effect on Work Readiness.

IV.5 F Test

Based on the outcomes of the F-test, the computed F-value stands at 65.189, accompanied by a significance value of 0.000. The corresponding critical F-value, or F-table value, can be determined using the prescribed formula:

$$Df = (\alpha ; (k-1, n-k-1))$$

$$Df = (5\% ; (3-1, 268-3-1))$$

$$Df = (5\% ; (2, 264))$$

$$Df = 3,029$$

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16861.461	3	5620.487	65.189	.000^b
	Residual	22761.524	264	86.218		
	Total	39622.985	267			

a. Dependent Variable: WR

b. Predictors: (Constant), RE, DM, SE

Since F-count > F-table (65,189 > 3,029) and significance (0.000 < 0.05) the variables Self-Efficacy, Digital Mindset, and Resilience together have a relationship with Work Readiness.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.652 ^a	.426	.419	9.28536	2.146

a. Predictors: (Constant), RE, DM, SE

b. Dependent Variable: WR

The adjusted R-squared value in the study is 0.419, indicating that the variables Self-Efficacy, Digital Mindset, and Resilience collectively explain 41.9% of the variation in Work Readiness. The remaining 58.1% of the variation is due to other factors not included in the analysis

V. CONCLUSION

The primary objective of this research was to delve into the intricate connections between Self-Efficacy, Digital Mindset, and Resilience and their collective influence on Work Readiness 4.0 among the scholarship awardees of Bank Indonesia in West Java. A succinct summary of the research findings is as follows:

This study affirms a clear positive and notable association between Self-Efficacy and Work Readiness 4.0. Consequently, the first hypothesis stands **validated**.

Furthermore, the relationship between Digital Mindset and Work Readiness 4.0 is not only positive but also significant. This leads to the **validation** of our second hypothesis.

In addition, our investigation highlights a compelling positive and significant bond between Resilience and Work Readiness 4.0, thus **confirming** our third hypothesis.

The findings illuminate the critical role that individual characteristics and mindset play in preparing for future work environments, particularly within the context of the rapidly changing Industry 4.0. These results not only emphasize the relevance of these factors to individual preparedness but also suggest directions for institutions like Bank Indonesia to consider when structuring their scholarship programs.

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**Corresponding Author: Defrina Dwifani¹*

¹(School of Business and Management, Institut Teknologi Bandung, Indonesia)