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Generation Z's Readiness for the Gig Economy: The Role of Digital Literacy, Self-Efficacy, and Career Orientation

Reska Rahmatullah[1], Ghia Subagja[2], Lina Dameria Siregar[3], and Ahmad Khoirun Najib[4]*

[1,2,3,4] *Universitas Sriwijaya,, Indonesia*

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CORRESPONDING AUTHOR
reskarahmatullah@unsri.ac.id

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A B S T R A C T

Gig economy continues to expand rapidly, reshaping employment patterns among young generations, particularly Generation Z raised in digital environments. This study investigates the effects of digital literacy, self-efficacy, and career orientation on university students' readiness for the gig economy. A quantitative approach was employed involving 227 Generation Z students from Universitas Sriwijaya. Data were analyzed using Partial Least Squares–Structural Equation Modeling (PLS-SEM). The measurement model demonstrated strong validity and reliability, with factor loadings above 0.70, AVE values exceeding 0.50, and composite reliability above 0.90. The structural model showed substantial explanatory power (R^2 = 0.639; Q^2 = 0.403). Self-efficacy (β = 0.356) and career orientation (β = 0.358) emerged as the strongest predictors, while digital literacy also had a significant effect (β = 0.195). These findings highlight that gig economy readiness is shaped by the integration of digital competence, psychological capacity, and career clarity, underscoring the importance of strengthening digital literacy, self-efficacy development, and career planning services in higher education.

A B S T R A K

Gig economy berkembang pesat dan mengubah pola kerja generasi muda, khususnya Generasi Z yang tumbuh dalam ekosistem digital. Penelitian ini bertujuan menganalisis pengaruh literasi digital, efikasi diri, dan orientasi karier terhadap kesiapan mahasiswa menghadapi *gig economy*. Penelitian ini menggunakan pendekatan kuantitatif dengan melibatkan 227 mahasiswa Generasi Z Universitas Sriwijaya. Analisis data dilakukan menggunakan *Partial Least Squares–Structural Equation Modeling* (PLS-SEM). Hasil analisis menunjukkan bahwa model pengukuran memiliki validitas dan reliabilitas yang sangat baik, ditunjukkan oleh nilai *loading factor* di atas 0,70, AVE lebih dari 0,50, serta *composite reliability* melebihi 0,90. Model struktural memiliki daya jelaskan yang kuat dengan nilai R^2 sebesar 0,639 dan Q^2 sebesar 0,403. Efikasi diri dan orientasi karier menjadi prediktor paling dominan, sementara literasi digital juga berpengaruh signifikan. Temuan ini menegaskan bahwa kesiapan menghadapi *gig economy* dibentuk oleh integrasi kompetensi digital, kapasitas psikologis, dan kejelasan arah karier, sehingga penguatan literasi digital, pengembangan efikasi diri, dan layanan perencanaan karier di perguruan tinggi menjadi sangat penting.

1. Introduction

The rapid advancement of digital technologies has profoundly reshaped the global labor market, particularly in the post-pandemic era. Artificial intelligence, digital platforms, and algorithm-driven systems are no longer peripheral tools but have become central mechanisms that redefine employment structures, productivity patterns, and workforce sustainability [1]. This transformation has altered how work is organized, accessed, and evaluated, leading to the emergence of more flexible yet uncertain forms of employment.

One of the most prominent manifestations of this transformation is the expansion of the gig economy. The gig economy is characterized by short-term, task-based work arrangements mediated through digital platforms, offering workers increased autonomy while simultaneously reducing employment security [2], [3]. Although this labor model provides flexibility and alternative income opportunities, it also introduces challenges such as algorithmic control, income volatility, and limited access to social protection [2]. Consequently, participation in the gig economy requires not only technical skills but also psychological resilience and adaptive career strategies.

Within this evolving labor landscape, Generation Z has emerged as a critical workforce cohort. As individuals who have grown up in a digitally embedded environment, Generation Z demonstrates a high level of familiarity with digital tools and online work settings [4]. However, prior studies suggest that technological fluency alone does not automatically translate into readiness for complex and uncertain work

environments. The transition from formal education to flexible digital employment demands a combination of cognitive, psychological, and career-related resources [3], [5].

In Indonesia, the growth of digital labor platforms has created new employment pathways, particularly for university students who seek work experience alongside academic responsibilities. Hybrid and remote work models have further expanded these opportunities, enabling students to engage in platform-based work across geographical boundaries [5]. Despite these developments, empirical evidence indicates that young workers often face psychological strain, job insecurity, and difficulties in sustaining motivation within flexible work arrangements [6]. These challenges highlight the importance of examining readiness beyond surface-level digital competence.

Existing research reveals a noticeable gap between students perceived digital abilities and their actual readiness to engage in the gig economy. While many students report adequate digital skills, fewer demonstrate confidence in managing uncertainty, self-regulation, and long-term career planning within non-traditional employment settings [7]. This gap appears to be more pronounced in non-metropolitan regions, where access to structured career guidance and professional development resources remains limited [8].

Self-efficacy has been consistently identified as a crucial psychological factor influencing individuals' ability to adapt to complex and uncertain work environments. According to Bandura's theory, individuals with strong self-efficacy beliefs are more likely to exhibit persistence, adaptability, and effective coping strategies when facing challenging tasks [9]. Recent studies further confirm that self-efficacy plays a significant role in academic performance, digital learning outcomes, and career-related decision-making [10], [11]. In the context of the gig economy, self-efficacy becomes particularly relevant, as workers are required to independently manage tasks, performance expectations, and income stability.

In addition to psychological resources, career orientation is essential for navigating increasingly non-linear career paths. Career Construction Theory emphasizes that individuals actively construct their careers by developing adaptive strategies, clear goals, and coherent career narratives in response to changing labor market conditions [12], [13]. Similarly, Social Cognitive Career Theory highlights the interaction between self-efficacy, outcome expectations, and career interests in shaping career behavior [14]. Despite their relevance, these theoretical perspectives have rarely been integrated with digital literacy when examining gig economy readiness.

Digital literacy has evolved into a multidimensional construct encompassing not only technical skills but also critical information evaluation, digital communication, ethical awareness, and cybersecurity competence [15], [16], [17]. Prior studies demonstrate that digital literacy enhances employability and supports individuals' capacity to adapt to technology-driven work environments [18], [19]. However, improvements in digital literacy do not always correspond with increased psychological readiness or career clarity, particularly among young individuals in developing and non-metropolitan contexts [20].

In Indonesia, disparities in digital workforce readiness remain a pressing issue. National-level studies indicate that gaps persist between digital skill acquisition and broader workforce preparedness, especially among young people transitioning from higher education to the labor market [21]. Although technological tools for career exploration are increasingly available, many students still struggle to translate digital competence into informed and sustainable career decisions [22]. Policy initiatives such as the *Merdeka Belajar–Kampus Merdeka* program emphasize the need for higher education institutions to prepare students for dynamic labor markets through experiential learning and skill development [23]. However, without sufficient attention to psychological readiness and career orientation, such initiatives may fall short in equipping students to navigate the uncertainties of the gig economy. Moreover, existing gig economy research has predominantly focused on urban populations and developed economies, resulting in limited empirical evidence from non-metropolitan contexts [24]. This imbalance constrains the formulation of inclusive education and employment policies that address diverse regional conditions. Recent discussions on digital transformation in Indonesia further emphasize the importance of strengthening human resource capacity amid global uncertainty [25], [26].

Therefore, this study aims to examine the combined effects of digital literacy, self-efficacy, and career orientation on gig economy readiness among Generation Z university students in a non-metropolitan Indonesian context. By integrating the Digital Literacy Framework, Social Cognitive Career Theory, and Career Construction Theory, this research seeks to provide empirical insights that contribute to theoretical development and inform higher education strategies for preparing students to engage sustainably in the gig economy. This study extends the existing literature by integrating digital literacy, self-efficacy, and career orientation into a unified model of gig economy readiness, particularly within a non-metropolitan higher education context, which remains underexplored in prior studies.

2. Research Method

This research adopted a quantitative explanatory approach to analyze the causal links among digital literacy, self-efficacy, career orientation, and gig

economy readiness in Generation Z university students. The study was conducted at Universitas Sriwijaya, Indonesia, representing a non-metropolitan higher education context. Data collection was carried out from July to September 2025 using an online survey technique to ensure response efficiency and accessibility. This approach is consistent with prior digital career readiness and employability studies using structural models [8], [24], [27].

2.1. Research Design and Sample

The population of this study consisted of undergraduate Generation Z students (aged 17–25 years). A purposive sampling method was employed using the following inclusion criteria:

a. Actively enrolled as university students

b. Minimum academic standing of semester 3

c. Experience using digital platforms for academic or non-academic purposes

A total of 227 valid responses were obtained and analyzed. The number of respondents surpassed the minimum requirement for PLS-SEM, which suggests using at least ten observations for each structural path leading to an endogenous variable [23]. With three exogenous variables serving as predictors of a single endogenous variable, the minimum sample size requirement was met, supporting adequate statistical power and model robustness.

2.2. Measurement Instrument and Variable Characterization

Research data were obtained using a structured questionnaire constructed from established theoretical frameworks. All indicators were measured using a five-point Likert scale, where 1 represented strongly disagree and 5 represented strongly agree. The operationalization of the study variables is outlined in Table 1.

Table 1. Operationalization of Study Variables

Variable	Definition	Indicators	Source
Digital Literacy (X_1)	Students' ability to use, evaluate, and communicate through digital technology	Technical skills, Information evaluation, Digital communication, Online ethics	[16], [17]
Self-Efficacy (X_2)	An individual's confidence in their capacity to effectively carry out digital and career-related tasks.	Task confidence, Problem-solving confidence, independent work ability	[9], [14]
Career Orientation (X_3)	Students' clarity regarding career objectives and their adaptability in career planning processes.	Career goal clarity, Career planning, Opportunity awareness, Career adaptability	[12], [13]
Gig Economy Readiness (Y)	Students' readiness to work in project-based, platform-mediated employment	Adaptability, Digital task management, Autonomy, Platform readiness	[2], [27]

Before full distribution, the instrument was subjected to expert validation and a pilot test involving 30 students. All constructs demonstrated Cronbach's Alpha and Composite Reliability coefficients exceeding 0.90, reflecting high internal consistency [23].

2.3. Research Model and Figure Representation

The conceptual research model consists of three exogenous variables (digital literacy, self-efficacy, and career orientation) predicting one endogenous variable (gig economy readiness). The model illustration can be seen on Figure 1.

Figure 1. Structural Research Model

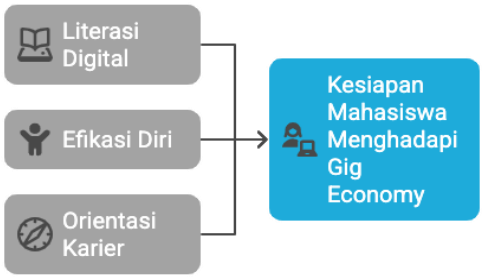

Figure 1. Illustration of Hypothesized Causal Relationships Tested through PLS-SEM.

2.4. Data Analysis Technique

Data were analyzed using Partial Least Squares–Structural Equation Modeling (PLS-SEM) with the assistance of SmartPLS 4 software [23], [27]. This analytical approach was selected because it does not require data normality assumptions, is suitable for predictive research models, and effectively handles complex relationships among latent variables.

The analysis consisted of two main stages. First, the evaluation of the measurement model (outer model) was conducted to assess the validity and reliability of the constructs. Convergent validity was established when indicator outer loading values exceeded 0.70 and Average Variance Extracted (AVE) values were greater than 0.50. Discriminant validity was assessed using the Fornell–Larcker criterion, ensuring that each construct was empirically distinct from other constructs in the model. Internal consistency reliability was confirmed through Composite Reliability and Cronbach's Alpha values above the recommended threshold of 0.70.

Second, the structural model (inner model) evaluation was performed to examine the hypothesized relationships among variables. Path coefficient significance was assessed using a bootstrapping procedure with 5,000 subsamples. The explanatory

power of the model was evaluated using the coefficient of determination (R^2), while predictive relevance was assessed using the Q^2 value obtained through blindfolding procedures. In addition, overall model fit was examined using the Standardized Root Mean Square Residual (SRMR) to ensure an acceptable level of model adequacy.

2.5. Mathematical Representation of the Structural Model

The structural relationship among variables is expressed in Equation (1), with Y is gig economy readiness, X_1 is digital literacy, X_2 is self-efficacy, X_3 is career orientation, β_1, β_2, β_3 represent the path coefficients, and ε represents the error term. This equation demonstrates the predictive power of digital competence, psychological capital, and career adaptability in shaping students' readiness for the gig economy.

$$Y = \beta 1X1 + \beta 2X2 + \beta 3X3 + \varepsilon \quad (1)$$

2.6. Research Procedure and Figure Representation

The research stages followed a standardized workflow as shown in Figure 2.

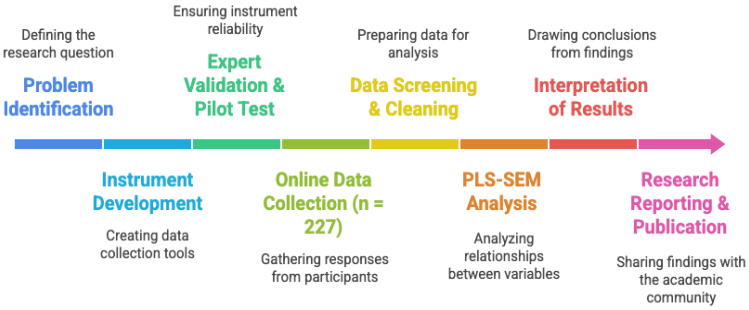

Figure 2. Research Flowchart

2.7. Replication and Workmanship Technique

To ensure scientific rigor and replicability, this study applied standardized research procedures throughout the research process. The measurement instrument was developed based on the Digital Literacy Framework, Social Cognitive Career Theory, and Career Construction Theory to ensure theoretical consistency. Prior to full-scale data collection, a pilot test was conducted to calibrate reliability and clarity of the questionnaire items.

Data collection was carried out through an online survey distributed via official institutional communication channels to ensure respondent authenticity and accessibility. Data screening procedures were applied to identify and remove incomplete, inconsistent, or duplicate responses. Subsequently, data analysis followed a two-stage PLS-SEM evaluation process, consisting of measurement model assessment and structural model testing. Bootstrapping analysis was employed to ensure the robustness and accuracy of statistical inference. These standardized procedures provide a transparent methodological framework and enable replication of the study in different institutional or regional contexts.

3. Results and Discussion

3.1. Respondent Profile

A total of 227 Generation Z students participated in this study and met the predefined sampling criteria. The respondents were drawn from various academic stages and demographic backgrounds, providing a comprehensive overview of the student population under investigation. The characteristics of the respondents are summarized in Table 2.

Table 2. Respondent Characteristics

Characteristics	Category	Frequency	Percentage
Gender	Male	83	36.56
	Female	144	63.44
Age Group	17–19 years	94	41.40
	20–22 years	122	53.74
	23–24 years	8	3.52
	> 25 years	3	1.34
Academic Semester	Semester 3	50	22.02
	Semester 5	82	36.12
	Semester 7	89	39.21
	≥ Semester 9	6	2.65
Work Experience (Part-time/Freelance)	Yes	72	31.71
	No	155	68.29
Digital Platform Usage	Yes	213	93.83
	No	14	6.17

The respondent profile indicates that most participants were aged between 20 and 22 years, representing students in the active phase of career exploration. The majority were enrolled in mid-to-final academic semesters, suggesting increasing exposure to career planning and labor market considerations. Although most respondents had not yet engaged in part-time or freelance work, nearly all reported prior experience using digital platforms. This profile reinforces the relevance of examining gig economy readiness from a preparedness perspective rather than actual work experience alone [5], [19], [25].

3.2. Measurement Model Evaluation (Outer Model)

The measurement model evaluation was conducted to assess convergent validity and internal consistency reliability. Table 3 presents the range of outer loading values for each construct. All indicators demonstrated loading values exceeding the recommended threshold of 0.70, confirming adequate convergent validity for all constructs [23].

Table 3. Outer Loading Values

Construct	Loading Range	Status
Digital Literacy	0.711–0.830	Valid
Self-Efficacy	0.711–0.797	Valid
Career Orientation	0.710–0.824	Valid
Gig Economy Readiness	0.770–0.819	Valid

To further assess construct validity and reliability, Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach's Alpha values were examined and are summarized in Table 4. All AVE values exceeded the minimum criterion of 0.50, indicating strong construct validity. In addition, Composite Reliability and Cronbach's Alpha values were well above the recommended cutoff of 0.70, demonstrating high internal consistency across all measurement constructs [24], [27].

Table 4. Construct Validity and Reliability

Construct	AVE	CR	Cronbach's Alpha
Digital Literacy	0.585	0.918	0.898
Self-Efficacy	0.562	0.920	0.903
Career Orientation	0.618	0.942	0.931
Gig Economy Readiness	0.641	0.941	0.930

3.3. Discriminant Validity (Fornell–Larcker Criterion)

Discriminant validity was assessed using the Fornell–Larcker criterion, as presented in Table 5. The square roots of AVE values (diagonal elements) were greater than the inter-construct correlations, confirming that each construct was empirically distinct and that discriminant validity was satisfactorily established.

Table 5. Discriminant Validity Matrix

Construct	DL	SE	CO	GER
Digital Literacy	0.765	—	—	—
Self-Efficacy	0.739	0.750	—	—
Career Orientation	0.703	0.689	0.786	—
Gig Economy Readiness	0.719	0.776	0.752	0.800

3.4. Structural Model Evaluation

The structural model evaluation focused on assessing explanatory power, predictive relevance, and overall model fit. The results are summarized in Table 6. The R^2 value indicates that digital literacy, self-efficacy, and career orientation jointly explain a substantial proportion of variance in gig economy readiness. The Q^2 value confirms strong predictive relevance, while SRMR and NFI values indicate an acceptable overall model fit.

Table 6. Structural Model Quality

Indicator	Value	Interpretation
R^2 (Gig Economy Readiness)	0.639	Moderate–Strong
Q^2	0.403	Strong Predictive Relevance
SRMR	0.056	Good Fit (< 0.08)
NFI	0.815	Acceptable Fit (> 0.80)

3.5. Hypothesis Testing Results

Hypothesis testing was conducted using a bootstrapping procedure with 5,000 subsamples. The results are presented in Table 7. All hypothesized relationships were supported, indicating that digital literacy, self-efficacy, and career orientation have positive and statistically significant effects on gig economy readiness among Generation Z students.

Table 7. Hypothesis Testing Results

Hypothesis	Path	β	t-value	p-value	Decision
H1	Digital Literacy → Gig Economy Readiness	0.195	3.451	0.001	Supported
H2	Self-Efficacy → Gig Economy Readiness	0.356	5.528	0.000	Supported
H3	Career Orientation → Gig Economy Readiness	0.358	5.651	0.000	Supported

3.6. Discussion

The empirical findings demonstrate that digital literacy, self-efficacy, and career orientation significantly influence gig economy readiness among Generation Z students. Self-efficacy and career orientation emerged as the most dominant predictors, highlighting the central role of psychological resources and career clarity in navigating flexible digital labor markets [9], [12], [14].

The significant effect of digital literacy confirms the importance of digital competence as a foundational requirement for platform-based employment [16], [17]. However, the relatively lower path coefficient indicates that technical skills alone are insufficient without psychological confidence and structured career direction.

The dominance of self-efficacy aligns with Social Cognitive Career Theory, which posits that belief in personal capability directly shapes career behavior and adaptability [10], [11], [14]. Students with high self-efficacy are more resilient in managing uncertainty, independent work pressure, and continuous skill upgrading demanded by the gig economy.

Career orientation also plays a crucial role, supporting Career Construction Theory, which emphasizes proactive career planning and adaptability in non-linear career paths [12], [13]. Students with clear career goals and future orientation are better prepared to strategically utilize gig opportunities as career-building mechanisms rather than short-term income alternatives.

The integration of these three constructs strengthens the argument that gig economy readiness is a multidimensional capability, shaped by the interaction between digital competence, psychological capital, and career construction capacity. This result directly addresses the research gap concerning participation inequality in the gig economy, particularly within non-metropolitan contexts [24].

The results of this study provide important theoretical implications for career development and gig economy research. First, the significant influence of self-efficacy reinforces the central proposition of Social Cognitive Career Theory, which emphasizes individual beliefs as key determinants of career-related behavior in uncertain labor markets. Second, the strong role of career orientation supports Career Construction Theory by demonstrating the importance of career adaptability and goal clarity in navigating non-linear employment pathways such as the gig economy. Finally, the positive effect of digital literacy suggests that digital competence functions not only as a technical skill but also as an enabling resource that strengthens psychological readiness and career agency. Collectively, these findings extend existing theories by contextualizing them within a non-metropolitan and digitally evolving labor environment.

4. Conclusion

This study examined the influence of digital literacy, self-efficacy, and career orientation on Generation Z students' readiness to engage in the gig economy within a non-metropolitan higher education context. The findings reveal that all three variables have positive and significant effects on gig economy readiness, with self-efficacy and career orientation emerging as the most dominant predictors, while digital literacy functions as a fundamental enabling factor. These results indicate that gig economy readiness is a multidimensional construct shaped by the integration of digital competence, psychological capacity, and career clarity. By empirically confirming the combined role of these factors, this study contributes to the literature on digital career readiness and highlights the importance of holistic student preparation for flexible and platform-based employment.

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