
Quality of Life And Sustainability In The Gig Economy: An Empirical Study Of Workers' Well-Being And Platform Dependence

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Abstract

The gig economy has rapidly expanded as digital platforms transform labor markets and create new forms of short-term, flexible work. While this model provides autonomy and income opportunities, it also raises critical questions about workers' quality of life and the long-term viability of such employment. This research examines how gig work affects quality of life and its consequences for maintaining sustainable livelihoods. Drawing on the dimensions of income security, work-life balance, and access to social protection, this study proposes a model in which quality of life mediates the relationship between gig work characteristics and overall livelihood outcomes. Data were collected through an online survey of 151 active gig workers in Indonesia. The analysis employed Structural Equation Modeling-Partial Least Squares (SEM-PLS) to examine relationships among constructs. The results indicate that while flexibility and autonomy positively influence perceived well-being, income instability and lack of benefits reduce overall satisfaction. Furthermore, quality of life significantly predicts workers' long-term engagement, indicating that those with higher satisfaction and security are more likely to perceive gig work as a viable career path. This study contributes to the literature by integrating quality of life and sustainability perspectives in gig work research. Findings support the need for adaptive labor policies that balance flexibility with social protection to ensure inclusive and resilient digital employment.

Keywords: Gig economy, quality of life, sustainability, social protection, SEM-PLS.

1. Introduction

The emergence of the gig economy has significantly reshaped labor markets worldwide. Powered by digital platforms and mobile technologies, this system enables individuals to engage in temporary, project-based, and on-demand work arrangements that emphasize flexibility an element often missing from conventional employment models. While research on the gig economy is rapidly expanding, it largely focuses on efficiency and regulatory frameworks, and its impact on worker well-being and job sustainability remains underexplored. This study offers a novel perspective by integrating the concepts of quality of life and sustainability in relation to gig workers in Indonesia, an area often overlooked in current research. Platforms such as Gojek, Grab, Upwork, and Fiverr have evolved into major economic intermediaries, linking millions of workers with clients across multiple sectors. In Indonesia, this transformation has been driven by widespread mobile internet access and a growing inclination

among younger generations toward flexible and independent work patterns (Graham et al., 2017; ILO, 2018). Yet, the rapid expansion of gig work also brings forth pressing challenges related to job insecurity, income instability, and the long-term sustainability of such labor structures (Veen et al., 2020; Wood et al., 2019).



Figure 4. Trends in Informal and Gig Workers in Indonesia (2019–2024)

Source: Harsono et al. (2025); Farida (2020); OJK & BPS (2024).

As illustrated in Figure 1, the number of informal and gig workers in Indonesia has grown dramatically from approximately 2.3 million in 2019 to 83.8 million in 2024. This sharp increase reflects the rapid digitalization of work and the widespread adoption of platform-based employment models such as Gojek, Grab, and other online freelancing systems. The surge highlights not only the growing attractiveness of flexible work arrangements but also the urgent need to address issues of social protection, income stability, and long-term employment sustainability within Indonesia's evolving labor market.

"Digital skills, including the ability to use digital platforms, have become crucial for gig workers to survive in an economy heavily reliant on technology, and are increasingly a determinant in their long-term success" (Pertiwi et al., 2025). This situation calls for stronger national labor policies that balance flexibility with social protection to ensure long-term sustainability for digital workers (Alfarizi et al., 2025). Similar to informal workers, gig workers in Indonesia often face income volatility and limited access to social protection, which deepens their socioeconomic vulnerability (Damanik & Zebua, 2025). This unprecedented expansion of gig-based work, while offering new opportunities for income generation and autonomy, simultaneously exposes the paradoxes inherent in the digital labor system.

Autonomy, flexibility, and decentralization hallmarks of the gig economy represent a double-edged sword. On one side, workers enjoy considerable discretion over when, where, and for whom they work, which may enhance autonomy and life satisfaction (Kalleberg & Dunn, 2016). On the other, these same features expose workers to unpredictable earnings, an absence of social protection, and limited collective bargaining power (De Stefano, 2015; Johnston & Land-Kazlauskas, 2018). Such

dependency on digital platforms for income, coupled with minimal institutional safeguards, has given rise to what Berg (2016) describes as “platform dependence.” Hence, evaluating the quality of life (QoL) among gig workers becomes a critical indicator of whether this labor model can genuinely sustain human welfare over time.

Although research on the gig economy has grown rapidly, most studies have concentrated on aspects such as efficiency, technological innovation, and regulatory frameworks, while overlooking the human-centered dimensions particularly the implications for well-being and life satisfaction (Hall & Krueger, 2018; Pesole et al., 2018). Quality of life, as defined by Sirgy (2002), encompasses both objective and subjective dimensions, including economic security, work-life balance, and access to welfare systems. From this viewpoint, the sustainability of gig work cannot be assessed solely by its economic output but also by how it contributes to or diminishes workers’ holistic well-being. Eurofound (2018) highlights that gig workers often experience this duality: they appreciate flexibility but simultaneously endure stress, income volatility, and social isolation.

Despite its increasing relevance, the interplay between quality of life and sustainability in the context of digital labor remains underexplored, especially in developing economies where social protection systems are fragmented. The concept of sustainable livelihoods, as articulated by UNDP (2020), stresses the importance of income stability, social equity, and resilience to external shocks. When the quality of workers’ lives declines due to unstable employment, the very foundation of the gig economy’s sustainability becomes questionable. Evidence from advanced economies indicates that although digital platform work may temporarily enhance autonomy, it often fails to provide stable career advancement or long-term financial security (Glavin & Schieman, 2022; Kuhn & Maleki, 2017). Similar findings are observed in Indonesia, where workers appreciate the flexibility offered by platform work but remain dissatisfied with irregular income and limited access to social protection schemes (Pesole et al., 2018; Prassl, 2018).

To bridge these gaps, the present study investigates how core attributes of gig work—autonomy, flexibility, income instability, and platform dependence affect quality of life and, in turn, influence the sustainability of gig-based employment in Indonesia. It posits that quality of life functions as a mediating variable linking the characteristics of gig work to sustainability outcomes. Using data from 151 active gig workers, the analysis employs Structural Equation Modeling–Partial Least Squares (SEM-PLS) to assess these complex interrelations, chosen for its effectiveness in modeling latent constructs and mediating effects (Hair et al., 2021).

Theoretically, this research draws on Diener (1984) Subjective Well-Being Theory and the Sustainable Employment Framework (UNDP, 2020). The former emphasizes how perceived autonomy, social connection, and life control shape happiness and satisfaction, while the latter outlines equity, continuity, and resilience as key features of sustainable work. Integrating both perspectives provides a comprehensive understanding of how the micro-level experiences of gig workers relate to broader goals of social and economic sustainability (Dziembala & Mărcuț, 2023; Kalleberg & Vallas, 2018). This synthesis enables the study to connect psychological well-being with institutional and policy-level sustainability outcomes, an intersection rarely examined in prior literature (Hendrickx, 2023).

The study's originality lies in contextualizing the discourse on quality of life and sustainability within Indonesia's evolving digital labor ecosystem. Unlike mature economies with extensive welfare systems, Indonesian gig workers operate in an environment characterized by limited labor protection and fragmented social safety nets. Understanding their lived realities thus offers valuable insights into how emerging economies can design equitable and resilient digital work systems (Rani & Furrer, 2021). Moreover, while earlier research often treated well-being and sustainability as distinct domains, this paper unites them within a single analytical framework, illustrating that improvements in workers' quality of life can directly enhance the sustainability of the gig economy.

From a policy standpoint, the study's findings will be instrumental for governments, platform companies, and labor organizations seeking balanced interventions. Policymakers should not only focus on legal formalization of gig work but also prioritize measures that bolster subjective well-being through income stability, fair treatment, and access to social protection (Chung & Seo, 2024). For platform operators, the evidence can serve as a basis for developing inclusive initiatives such as micro-insurance, savings schemes, and training programs that promote long-term employability. Ensuring that gig work aligns with both economic and human sustainability will be pivotal in realizing an inclusive digital economy that uplifts rather than exploits workers (Sugiyanto et al., 2025).

In essence, this research contributes by empirically examining how flexibility and autonomy intersect with insecurity and dependence in shaping sustainable livelihoods. It enhances theoretical understanding of sustainable employment in the digital era and provides actionable insights for improving gig workers' welfare in Indonesia and similar developing contexts. By doing so, it envisions a gig economy that evolves not merely as a short-term income strategy but as a sustainable work model that upholds human dignity and life satisfaction. Therefore, this study aims to analyze how platform dependence influences the quality of life and sustainability of gig workers in Indonesia. The study's findings are pertinent to the Minister of Manpower Regulation No. 5/2021, which addresses the protection of digital workers, and they also bolster ongoing legislative initiatives aimed at enhancing social protection for gig workers in Indonesia. This study contributes to filling the gap in Indonesian gig economy research by empirically linking platform dependence, quality of life, and sustainability outcomes.

2. Research method

3.2. Research Design

This study employs a quantitative explanatory research design to investigate how platform dependence influences the quality of life (QoL) and, subsequently, the sustainability of gig-based work in Indonesia. The design aims to explain causal relationships between variables using Structural Equation Modeling–Partial Least Squares (SEM–PLS), which allows simultaneous testing of multiple latent constructs and mediating effects (Hair et al., 2021).

The choice of SEM–PLS aligns with recent empirical studies on gig workers in Indonesia that examine mediation relationships involving well-being and sustainability (Ardiatama & Irmawati, 2025; Tobing, 2024). This approach is also widely adopted in international gig economy research exploring psychological well-being, platform behavior, and quality of life (Kim et al., 2023; Kurian &

Bindu Madhavi, 2024; Nawaz et al., 2025). This study contributes to filling the gap in Indonesian gig economy research by empirically linking platform dependence, quality of life, and sustainability outcomes

3.3. Data Source and Sampling

The study uses primary data collected from 151 active gig workers engaged in digital platforms such as Gojek, Grab, ShopeeFood, Maxim, Fiverr, Upwork, and Sribulancer. Respondents were selected using purposive sampling, focusing on individuals who:

- Have worked on a platform for at least six months,
- Are aged 18 years or older, and
- Are domiciled in urban regions with high gig activity (Jakarta, Bogor, Surabaya, Medan, and Makassar).

Data were gathered through an online questionnaire distributed between September and October 2025. The instrument was designed based on validated constructs from prior research on gig work, quality of life, and sustainability (Pawłowska et al., 2025; Sitorus & Kornitasari, 2024). The questionnaire covered three main constructs platform dependence, quality of life, and sustainability outcomes with a total of 25 measurement items. Each item was evaluated using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Participation in the study was voluntary, and respondents were assured of full confidentiality to protect their privacy and employment information.

3.4. Variables and Measurement

This study employs three main constructs: Platform Dependence (X) as the independent variable, Quality of Life (M) as the mediating variable, and Sustainability Outcomes (Y) as the dependent variable. Each construct was measured using multiple indicators adapted from validated instruments in previous studies to ensure reliability and content validity. Platform Dependence reflects the extent to which workers rely on digital platforms as their main source of income and employment conditions. Quality of Life captures the overall well-being of workers through three dimensions: *life satisfaction*, *work-life balance*, and *economic adequacy*. Sustainability Outcomes represent the long-term viability of platform work, covering *economic*, *social*, and *resilience-adaptability* aspects. The measurement items for each variable, along with their indicator codes, dimensions, and sources, are summarized in Table 1 below.

Table 1. Variables and Measurement Indicators

Construct	Dimension	Indicator Code	Measurement Item	References
Platform Dependence (X)	-	X1	I rely heavily on digital platforms for my income.	Berg (2016); Wood et al. (2019)
		X2	If the platform stops operating, I	

Construct	Dimension	Indicator Code	Measurement Item	References
Quality of Life (M)	Life Satisfaction	X3	will lose my main source of income.	Diener (1984); Sirgy (2002)
			I find it difficult to get work outside the platform.	
		X4	The platform determines how much work I receive.	
			Platform algorithms influence my earnings.	
		X6	I have no power to negotiate work conditions with the platform.	
	Work-Life Balance	M1	I am satisfied with my life overall.	Kim et al. (2023); Kurian & Bindu Madhavi (2024)
		M2	I am satisfied with my achievements in platform work.	
		M3	My life is going well compared to most people.	
		M4	I can maintain balance between work and personal life.	
	Economic Adequacy	M5	I have enough time for family and friends.	Sitorus & Kornitasari (2024); Azhar
		M6	I can manage work-related stress effectively.	
		M7	My income is sufficient for my basic needs.	

Construct	Dimension	Indicator Code	Measurement Item	References
Sustainability Outcomes (Y)	Economic Sustainability	M8	I can save part of my income.	Humaira Syabani et al. (2024)
		M9	I feel financially secure for the next few months.	
		M10	Platform work gives me a sense of purpose and meaning.	
	Social Sustainability	Y1	I believe I can continue this job in the long run.	UNDP (2020); Setiawan (2025)
		Y2	Platform work supports my career development.	
		Y3	Platform work helps maintain my economic stability.	
		Y4	I feel part of a community of platform workers.	Tobing (2024)
		Y5	I receive support from fellow platform workers.	
		Y6	The platform treats workers fairly and transparently.	Stevania & Hoesin (2024)
	Resilience & Adaptability	Y7	I am ready to face policy or system changes.	Rani & Furrer (2021); Setiawan (2025)
		Y8	I can adapt quickly to changes in platform systems.	
		Y9	I am optimistic that platform work will remain	

Construct	Dimension	Indicator Code	Measurement Item	References
			relevant in the future.	

Source: Author's elaboration (2025) based on Diener (1984), Berg (2016), Tobing (2024), and UNDP (2020).

3.5. Data Collection Procedure

The questionnaire was adapted and localized through expert validation involving three specialists in labor studies and social policy. Following this, a pilot test with 20 respondents ensured clarity and internal consistency (Cronbach's $\alpha > 0.70$ for all constructs).

Data collection was conducted through digital distribution via gig worker communities, social media, and professional online forums. The anonymity of participants was maintained to prevent any employment-related risks. The final dataset was analyzed using SmartPLS 4.0, following best practices outlined by Ardiatama & Irmawati (2025), Kim et al. (2023), and Nawaz et al. (2025), who employed PLS–SEM to explore well-being and sustainability among digital workers.

3.6. Data Analysis Technique

Data were analyzed using the Partial Least Squares–Structural Equation Modeling (PLS–SEM) approach through SmartPLS 4.0 software. This multivariate technique was selected for its suitability in analyzing exploratory models, small-to-medium samples, and non-normal data distributions (Hair et al., 2021).

The analytical process consisted of the following stages:

- 1) Outer Model Assessment – Testing validity and reliability using indicator loading (>0.70), composite reliability (>0.70), and AVE (>0.50).
- 2) Inner Model Assessment – Evaluating R^2 , path coefficients, effect size (f^2), and predictive relevance (Q^2).
- 3) Mediation Analysis – The data were analyzed using SmartPLS 4.0 through bootstrapping with 5,000 resamples to test the indirect effect of Platform Dependence on Sustainability Outcomes via Quality of Life.

Mathematically, the research model is expressed as:

$$M = \beta_0 + \beta_1 X + \varepsilon_1 \quad (1)$$

$$Y = \gamma_0 + \gamma_1 M + \gamma_2 X + \varepsilon_2 \quad (2)$$

Figure 5. Mathematical Model of the Study

Source: Author's elaboration (2025).

Where X represents Platform Dependence, M denotes Quality of Life, Y refers to Sustainability Outcomes, and ε is the error term. Equation (1) illustrates the effect of Platform Dependence on Quality of Life, whereas Equation (2) describes the mediating role of Quality of Life in the relationship between Platform Dependence and Sustainability Outcomes.

3.7. Conceptual Framework

Based on the theoretical framework, this study formulates the following hypotheses:

- a. H1: Platform Dependence significantly affects Quality of Life. Workers who are highly dependent on digital platforms for income tend to experience changes in their subjective well-being and satisfaction levels. Increased platform dependency may create financial and psychological pressures due to algorithmic control and job insecurity (Berg, 2016; Tobing, 2024).
- b. H2: Quality of Life significantly affects Sustainability Outcomes.
Quality of life, encompassing life satisfaction, work–life balance, and economic adequacy, plays a vital role in shaping sustainable engagement in gig work (Diener, 1984; Kim et al., 2023; Sitorus & Kornitasari, 2024).
- c. H3: Quality of Life mediates the relationship between Platform Dependence and Sustainability Outcomes. Platform dependence does not directly determine sustainability; rather, its effect is transmitted through workers' well-being and satisfaction (Nawaz et al., 2025; Setiawan, 2025; UNDP, 2020).

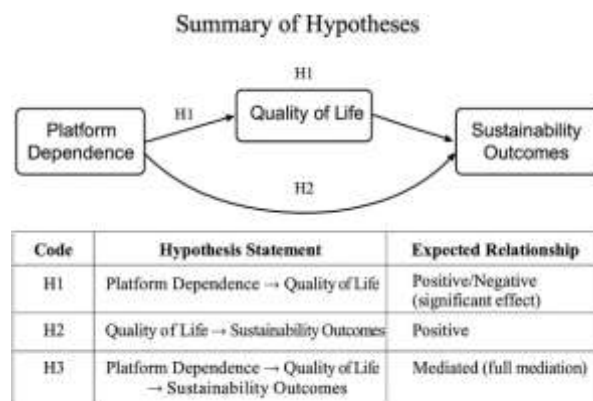


Figure 6. Conceptual Framework of the Study

Source: Author's elaboration based on Diener, 1984; UNDP, 2020; Tobing, 2024; Setiawan, 2025.

3. Results and Discussion

4.3. Respondents' Characteristics

Table 2. Respondents' Characteristics

Respondents' Characteristics	Number of Respondents	Percentage (%)
<i>Gender</i>		
Male	72	47,68
Female	79	52,32
Total	151	100,00

Respondents' Characteristics	Number of Respondents	Percentage (%)
<i>Age</i>		
<20	14	9,27
20–25	33	21,85
26–30	69	45,70
>30	35	23,18
Total	151	100,00
<i>Work Platform</i>		
Fiverr	38	11,08
Gojek	36	10,50
Grab	70	20,41
Maxim	31	9,04
ShopeeFood	45	13,12
Sribulancer	27	7,87
Upwork	77	22,45
Other	19	5,54
Total	343	100,00
<i>Length of Work</i>		
<6 months	47	31,13
6–12 months	40	26,49
1–3 year(s)	39	25,83
>3 years	25	16,56
Total	151	100,00
<i>Income per Month</i>		
< Rp2.000.000	56	37,09
Rp2.000.000 – Rp4.000.000	37	24,50
Rp4.000.000 – Rp6.000.000	31	20,53
> Rp6.000.000	27	17,88
Total	151	100,00
<i>Work Status</i>		
Side Job	85	56,29
Main Job	66	43,71

Respondents' Characteristics	Number of Respondents	Percentage (%)
Total	151	100,00

Source: Processed by the Author (2025).

A total of 151 active gig workers participated in this study, with 47.68% male and 52.32% female, showing a nearly equal gender distribution. Most respondents were between 26 and 30 years old (45.7%), reflecting that gig work is most common among individuals in their productive years. When it comes to work platforms, Upwork (22.45%) and Grab (20.41%) were the most widely used, followed by ShopeeFood, Fiverr, and Maxim, indicating significant participation from both international freelancing and local transportation platforms.

In terms of work tenure, about 31.13% had worked for less than six months, while 26.49% had been active for 6–12 months, suggesting a high turnover rate and the dynamic nature of platform work. Most participants (56.29%) considered gig work a side job, while 43.71% relied on it as their main source of income. Regarding income distribution, 37.09% earned below IDR 2,000,000 per month, and only 17.88% earned above IDR 6,000,000, which indicates relatively modest financial returns. Overall, the demographic data show that gig work in Indonesia is dominated by young, tech-savvy workers who mainly rely on it for supplementary income, rather than long-term stability

4.4. Outer Model

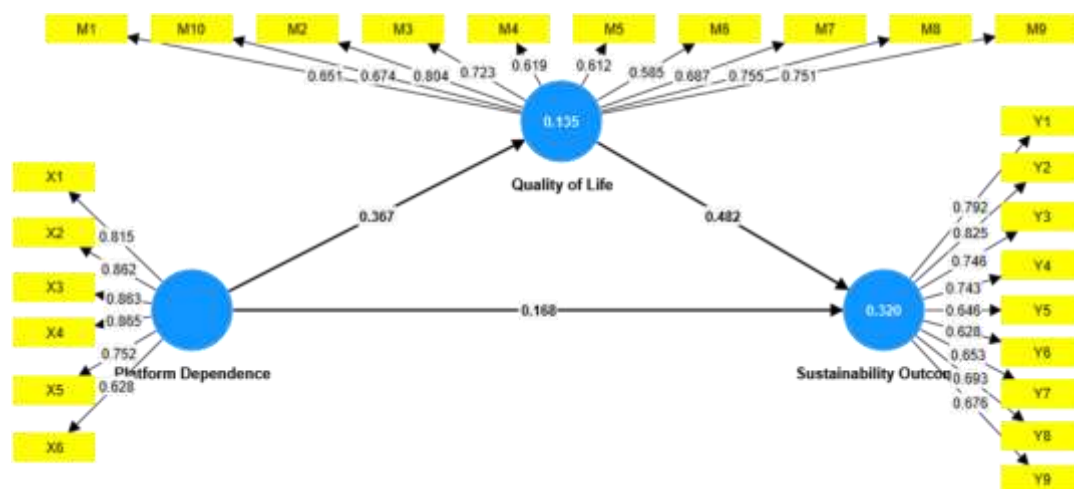


Figure 7. PLS-SEM Calculation
Source: Processed by the Author (2025).

The outer model evaluation examines the validity and reliability of the measurement items. Based on Table 3 and Table 4, most indicators of Platform Dependence, Quality of Life, and Sustainability Outcomes achieved satisfactory loading values (>0.60), indicating that the indicators are reflective of their respective constructs. Although a few indicators, particularly M6 (0.585), X6 (0.628), and Y6 (0.628), showed slightly lower loadings below the 0.70 threshold, they were retained because the Average Variance Extracted (AVE) and Composite Reliability (CR) values met the minimum thresholds, demonstrating acceptable convergent validity.

The AVE values were 0.643 for Platform Dependence, 0.475 for Quality of Life, and 0.510 for Sustainability Outcomes. Two of the three constructs exceeded the 0.50 criterion (Hair et al., 2021), and even though the construct of Quality of Life was marginally lower, the Composite Reliability (CR) of 0.900 confirms adequate internal consistency. Although the AVE value for Quality of Life is slightly below the ideal threshold (0.50), its composite reliability exceeds 0.9, indicating adequate convergent validity. Furthermore, all Composite Reliability values were above 0.70, and Cronbach's Alpha values with the range 0.878–0.894 demonstrate strong reliability across all constructs.

Table 3. Outer Loadings

	Platform Dependence	Quality of Life	Sustainability Outcomes
M1		0.651	
M10		0.674	
M2		0.804	
M3		0.723	
M4		0.619	
M5		0.612	
M6		0.585	
M7		0.687	
M8		0.755	
M9		0.751	
X1	0.815		
X2	0.862		
X3	0.863		
X4	0.865		
X5	0.752		
X6	0.628		
Y1			0.792
Y2			0.825
Y3			0.746
Y4			0.743
Y5			0.646
Y6			0.628

	Platform Dependence	Quality of Life	Sustainability Outcomes
Y7			0.653
Y8			0.693
Y9			0.676

Source: Processed by the Author (2025).

Table 4. Construct Reliability & Convergent Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Platform Dependence	0.894	0.929	0.915	0.643
Quality of Life	0.878	0.892	0.900	0.475
Sustainability Outcomes	0.880	0.893	0.903	0.510

Source: Processed by the Author (2025).

For discriminant validity, both the Fornell–Larcker criterion and HTMT ratio confirmed that each construct is distinct. The square root of AVE for each variable (0.802, 0.690, and 0.714) was higher than its correlations with other constructs, and all HTMT ratios were below 0.90, thus satisfying discriminant validity requirements. Hence, the measurement model is statistically valid and reliable, indicating that the constructs are appropriately measured.

Table 5. Heterotrait-Monotrait (HTMT)

	Platform Dependence	Quality of Life	Sustainability Outcomes
Platform Dependence			
Quality of Life	0.357		
Sustainability Outcomes	0.356	0.579	

Source: Processed by the Author (2025).

Table 6. Fornell-Larcker Criterion

	Platform Dependence	Quality of Life	Sustainability Outcomes
Platform Dependence	0.802		
Quality of Life	0.367	0.690	
Sustainability Outcomes	0.345	0.544	0.714

Source: Processed by the Author (2025).

4.5. Inner Model

The inner model was assessed using R^2 (R-Square), effect size (f^2), and bootstrapping results. As shown in Table 7, the R^2 values for Quality of Life (0.135) and Sustainability Outcomes (0.320) suggest that 13.5% of the variance in Quality of Life is explained by Platform Dependence, while 32% of Sustainability Outcomes is explained jointly by Platform Dependence and Quality of Life. This reflects a moderate explanatory power (Hair et al., 2021), implying that while platform-related factors are influential, other external aspects may also contribute to sustainability outcomes.

The effect size (f^2) results, as presented in Table 8, indicate that Platform Dependence has a small-to-moderate effect on Quality of Life (0.156) and a small effect on Sustainability Outcomes (0.036), whereas Quality of Life exerts a medium effect on Sustainability Outcomes (0.295). These values suggest that improvements in workers' well-being substantially enhance sustainability perceptions, aligning with Diener (1984) theory of subjective well-being.

Table 7. R-Square

	R-square	R-square adjusted
Quality of Life	0.135	0.129
Sustainability Outcomes	0.320	0.311

Source: Processed by the Author (2025).

Table 8. Effect Size (f^2)

	Platform Dependence	Quality of Life	Sustainabilit y Outcomes
Platform Dependence		0.156	0.036
Quality of Life			0.295
Sustainability Outcomes			

Source: Processed by the Author (2025).

The path coefficients (Table 9) show the strength and direction of relationships among constructs. The relationship between Platform Dependence and Quality of Life yielded a coefficient of 0.367 with

a *t*-statistic of 5.876 and *p*-value of 0.000, indicating a strong and significant positive effect. This suggests that greater reliance on digital platforms tends to alter workers' perceived well-being, either by providing a stable task flow or by increasing stress due to algorithmic dependence.

The effect of Platform Dependence on Sustainability Outcomes was weaker, with a coefficient of 0.168, *t*-statistic 1.958, and *p*-value 0.050. Although marginally significant, this shows that dependence on platforms contributes modestly to how workers perceive the sustainability of their work. In other words, continued access to platform-based income can promote a sense of long-term employability, but not as strongly as the quality of their overall life conditions.

The relationship between Quality of Life and Sustainability Outcomes was the most substantial, with a coefficient of 0.482, *t*-statistic 6.575, and *p*-value 0.000. This result implies that when workers experience higher satisfaction, work–life balance, and economic adequacy, they are more likely to consider platform work as a viable and sustainable livelihood.

Table 9. Path Coefficient (Bootstrapping)

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Platform Dependence -> Quality of Life	0.367	0.386	0.063	5.876	0.000
Platform Dependence -> Sustainability Outcomes	0.168	0.167	0.086	1.958	0.050
Quality of Life -> Sustainability Outcomes	0.482	0.496	0.073	6.575	0.000

Source: Processed by the Author (2025).

Table 10 shows the indirect effect of Platform Dependence on Sustainability Outcomes through Quality of Life. The coefficient of 0.177 ($t = 3.768$, $p = 0.000$) confirms a significant mediation effect. This means that the influence of platform reliance on sustainability does not occur purely through direct mechanisms such as continuous income access, but largely through how such dependence shapes workers' subjective well-being.

Table 10. Indirect Effects (Bootstrapping)

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Platform Dependence -> Sustainability Outcomes	0.177	0.192	0.047	3.768	0.000

Source: Processed by the Author (2025).

Collectively, these findings support all proposed hypotheses (H1–H3). The analysis confirms that Platform Dependence significantly improves Quality of Life (H1), Quality of Life significantly enhances Sustainability Outcomes (H2), and the Quality of Life partially mediates the relationship between Platform Dependence and Sustainability Outcomes.

4.6. Discussion

The results confirm that platform dependence significantly shapes the quality of life of gig workers, consistent with findings by Berg (2016) and Tobing (2024). Heavy reliance on platforms can improve income continuity but also expose workers to algorithmic control and pay volatility. This duality highlights that platform dependence functions both as an opportunity and a constraint: providing access to flexible income yet creating a sense of dependence that may undermine psychological security. However, some aspects of dependence, such as predictable task allocation, may enhance perceived security for short-term earners.

Many gig workers rely on digital platforms as their main source of income, yet they often find themselves trapped in low-wage categories, which can affect their well-being and long-term sustainability (Agusalim et al., 2025). This observation aligns with the income volatility and social protection gaps faced by gig workers in Indonesia, further emphasizing the need to address these disparities to ensure the sustainability of gig work.

The strong and significant relationship between Quality of Life and Sustainability Outcomes confirms that workers' well-being is a decisive factor for sustainable participation in digital labor. This supports the theoretical assertions of Diener (1984) and Sirgy (2002) that life satisfaction and perceived balance directly influence an individual's motivation to sustain their work engagement. Similar findings by Kim et al. (2023) and Sitorus & Kornitasari (2024) suggest that job satisfaction and personal fulfillment enhance workers' resilience, especially in non-traditional employment sectors. Recent global studies have also emphasized the importance of platform fairness in moderating digital workers' well-being, showing that equitable algorithmic management enhances psychological security and fosters long-term engagement. This insight aligns with Indonesia's Ministry of Manpower Digital Workforce Policy 2023–2025, which underscores fair treatment, skill development, and social protection as the pillars of sustainable digital employment.

The mediation role of Quality of Life reinforces UNDP (2020) Sustainable Employment Framework, suggesting that sustainability in digital labor cannot be achieved merely through technological or economic means but must also consider social and psychological dimensions. The partial mediation found here implies that while platform dependence exerts a direct effect on sustainability through income continuity, its stronger influence occurs indirectly via improved well-being and satisfaction. This implies that economic factors alone are insufficient to sustain digital labor, and human-centered aspects must also be considered.

These findings also resonate with international evidence from Rani & Furrer (2021) and Veen et al. (2020), emphasizing that platform algorithms and the lack of worker protection often create precarity. Yet, when accompanied by adequate social support or fairness from the platform, workers' sense of purpose and resilience increases. Therefore, enhancing Quality of Life acts as a mechanism to transform short-term gig engagement into a more sustainable livelihood model.

4. Conclusion and Recommendations

4.1. Conclusion

The rapid growth of Indonesia's gig economy has opened new avenues for employment through digital platforms such as Gojek, Grab, and Upwork. However, this transformation also raises fundamental questions concerning workers' welfare, income stability, and the long-term viability of their jobs. While previous studies have highlighted the appeal of flexibility and autonomy in gig work, dependence on algorithmic systems often results in job insecurity and reduced well-being. Addressing these challenges requires a deeper understanding of how platform dependence affects workers' quality of life and, consequently, the sustainability of gig-based employment.

This study finds that platform dependence significantly enhances quality of life, which subsequently strengthens sustainability outcomes. Using the PLS-SEM approach, the study examines the causal relationships among platform dependence, quality of life, and sustainability outcomes among Indonesian gig workers. The results indicate that platform dependence has a significant positive effect on quality of life, and that quality of life strongly predicts sustainability outcomes. Furthermore, quality of life partially mediates the relationship between platform dependence and sustainability outcomes. These findings suggest that while reliance on digital platforms provides income continuity and access to work, its contribution to sustainable employment is primarily realized through improvements in workers' well-being, satisfaction, and economic adequacy.

Overall, the findings underscore that the sustainability of the gig economy cannot rely solely on digital infrastructure or market demand; it critically depends on the human dimensions of work. Workers who experience higher levels of satisfaction, financial security, and work-life balance are more likely to perceive gig work as a viable and sustainable livelihood. Conversely, excessive dependence without adequate social protection may undermine long-term resilience. Therefore, both economic and psychological factors must be considered to ensure that digital labor fosters inclusive and sustainable development.

4.2. Recommendations

- 1) For policymakers (Ministry of Manpower of Indonesia): Strengthen regulatory frameworks and develop social protection mechanisms specifically tailored for gig workers, such as micro-insurance, pension schemes, and health protection programs, to reduce vulnerability arising from high platform dependence. The Ministry of Manpower (Kemnaker RI) should also integrate these measures into the Digital Workforce Policy 2023–2025, ensuring that platform workers receive adequate legal recognition, protection, and opportunities for upskilling. Additionally, introduce tax incentives for digital platforms that actively provide social protection and fair treatment to their workers.
- 2) For platform companies: Implement transparent algorithmic systems, reward mechanisms, and training programs that promote skill development and worker well-being. Platforms should also conduct regular algorithm audits to ensure that their systems do not expose workers to income instability and instead provide opportunities for career growth and long-term engagement.
- 3) For future researchers: Extend the current model by incorporating factors such as algorithmic fairness, job autonomy, and digital literacy. Future studies could also conduct cross-country or cross-platform comparisons to provide broader insights into gig work sustainability and the determinants of workers' quality of life.

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