

FLEXIBILITY, SATISFACTION, AND THE PERFORMANCE OF RIDE-HAILING PLATFORM JOB

Brian ALVARO 

Universitas Katolik Widya Mandala Surabaya, Surabaya, Indonesia
ibm.brian.a.22@ukwms.ac.id

Wahyudi WIBOWO 

Universitas Katolik Widya Mandala Surabaya, Surabaya, Indonesia
wahyudi@ukwms.ac.id

Annisa Alfa SETYAWAN 

Universitas Katolik Widya Mandala Surabaya, Surabaya, Indonesia
annisa@ukwms.ac.id

Abstract

This study examines the influence of work motivation, flexible working hours, and job satisfaction on the performance of ride-hailing platform jobs in emerging economies, thereby addressing the issue of global algorithmic flexibility paradox in digital platform economy. A causal-explanatory quantitative research design was employed, analysing primary data from 213 ride-hailing drivers in an emerging metropolitan market. Data were evaluated using Partial Least Squares Structural Equation Modeling (PLS-SEM). Our findings indicate that flexible working hours directly improve performance but fail to generate job satisfaction. This confirms the flexibility paradox, wherein algorithmic management neutralizes the psychological benefits of schedule autonomy, reducing flexibility to a mere operational utility rather than an emotional resource. This study advances management theory by repositioning Herzberg's Two-Factor Theory and the Job Demands-Resources model within algorithmically mediated labour environments, demonstrating that work motivation requires full mediation through job satisfaction to influence performance. Digital platform administrators globally must transition from opaque, punitive algorithmic management to transparent, human-centric algorithmic design. This study highlights the vulnerability of workers who bear the operational risks of digital platform economies, advocating for regulatory interventions to protect digital platform workers. It empirically validates the flexibility paradox, offering a framework for understanding digital platform worker behaviour in emerging economy contexts.

Keywords: Digital platform, Ride-hailing, Algorithmic management, Flexibility paradox, Sustainable development goals.

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1. INTRODUCTION

In the contemporary of digitally mediated global economy, digital platform-based business models have fundamentally reorganized the nature of employment. Digital platforms shift paradigms from traditional organizational hierarchies to decentralized, algorithmic management structures (Duggan et al., 2020). At the forefront of this transformation is the ride-hailing industry, which has redefined urban mobility and created millions of micro-entrepreneurial opportunities worldwide (Fielbaum & Tirachini, 2021).

The central premise of the ride-hailing gig economy is the promise of autonomy. Ride-hailing platforms heavily market the concept of being self-employed, emphasizing flexible working hours as a primary mechanism for achieving work-life balance and psychological well-being (Wood et al., 2019). Theoretically, this flexibility should engender high levels of job satisfaction, which, in turn, translates into superior operational performance.

However, previous studies have yielded conflicting results. For instance, some research indicates that flexibility enhances satisfaction and reduces technostress, acting as a buffer against precarious employment conditions (Sembiring et al., 2022; Kristyanto et al., 2023). Conversely, other scholars argue that the algorithmic management inherent in platform work commodifies flexibility, leading to alienation, exhaustion, and burnout (Ahmad et al., 2025; Orhan et al., 2022). Furthermore, studies focusing specifically on Indonesian drivers have produced divergent findings regarding the mediating role of job satisfaction between flexibility and performance, with some indicating full mediation and others highlighting direct, unmediated effects (Aisy & Prabowo, 2024).

Emerging literature points to a systemic flexibility paradox within algorithmic management (Chen & Chen, 2026; Kellogg et al., 2020). While drivers technically possess the freedom to log in and out at will, opaque algorithmic dispatch systems, dynamic pricing models, and stringent rating requirements effectively force drivers into self-exploitative labour patterns to maintain financial viability (Zhang et al., 2025). This dynamic raises critical questions regarding the true efficacy of flexibility and motivation in driving performance when mediated by algorithms.

Thus, despite the rapid expansion of literature concerning algorithmic management and gig worker well-being (Gagné et al., 2022; Philip et al., 2025), a distinct empirical gap remains regarding how psychological drivers (work motivation) and structural platform features (flexible working hours) interact with job satisfaction to determine the ultimate performance of drivers in the emerging economies.

This research aims to dissect the behavioural and operational dynamics of ride-hailing platform jobs in emerging economies. Specifically, the study seeks to answer the following research questions: How do work motivation and flexible working hours directly influence driver performance? How do these factors influence job satisfaction? Also, critically, what is the mediating role of job satisfaction in the relationship

between these independent variables and performance? The subsequent sections systematically review the theoretical foundations, detail the methodological design, present the empirical findings, and synthesize deep insights that highlight the operational realities of algorithmically managed labour.

2. LITERATURE REVIEW

The theoretical architecture of this study integrates classical motivational theories with contemporary organizational psychology models adapted for the digital platform economy. Given the absence of physical managers, ride-hailing platforms utilize algorithms to distribute tasks, evaluate performance, and administer compensation (Duggan et al., 2020). This algorithmic management creates a grey zone in employment relations, necessitating a re-evaluation of how traditional human resource constructs function within the gig economy. The behavioural dynamics of gig workers can be elucidated through the synthesis of three primary theoretical frameworks: Herzberg's Two-Factor Theory, Adams' Equity Theory, and the Job Demands-Resources (JD-R) model.

Herzberg's Two-Factor Theory posits that workplace attitudes are shaped by two distinct dimensions: hygiene factors and motivator factors (Herzberg et al., 1959). Hygiene factors, which include base compensation, physical safety, company policy, and administrative structures, do not inherently motivate employees to achieve higher performance. However, their absence or inadequacy will cause profound dissatisfaction. Conversely, motivator factors, which involve intrinsic elements such as achievement, recognition, responsibility, and autonomy, actively drive job satisfaction and superior performance. In the context of digital labour platforms, algorithmic transparency, predictable dispatch rates, and platform security function as baseline hygiene factors, while digital recognition (e.g., badges, high customer ratings) and perceived autonomy serve as motivators (Gagné et al., 2022).

Adams' Equity Theory focuses on perceived fairness in social exchanges, suggesting that workers continuously evaluate the ratio of their inputs against their outputs relative to others (Adams, 1965). In algorithmic environments, inputs include time, physical effort, cognitive strain, and vehicular depreciation, while outputs include income, bonuses, and platform status. Where platforms frequently alter incentive structures and dynamic pricing multipliers without human consultation, perceived equity is highly volatile. If drivers perceive an imbalance—such as a sudden decrease in the per-kilometre fare rate without a corresponding decrease in effort—dissatisfaction inevitably arises, directly impacting a driver's discretionary effort and overall performance.

Finally, the Job Demands-Resources (JD-R) model provides a structural lens for understanding the dual nature of algorithmic management (Bakker & Demerouti, 2007). Algorithmic management—characterized by constant GPS tracking, automated performance evaluations, and the persistent threat

of algorithmic deactivation—acts as a severe job demand that rapidly drains workers' cognitive and emotional resources (Kellogg et al., 2020). To prevent burnout and maintain engagement, workers require robust job resources. While flexible working hours theoretically provide a crucial resource by offering temporal autonomy, the pervasive nature of algorithmic monitoring often degrades this resource, precipitating the flexibility paradox.

2.1 Work motivation and driver performance

Work motivation represents the internal and external forces that initiate, direct, and sustain work-related behaviour. In platform-based labour, motivation is highly complex. Intrinsic motivation often stems from the enjoyment of driving, the opportunity for social interaction, or the psychological appeal of an independent lifestyle free from direct managerial oversight. Conversely, extrinsic motivation is heavily gamified by the platform through tiered bonus systems, dynamic surge pricing, and rating maintenance mechanisms.

According to self-determination theory, robust motivation drives engagement, which subsequently enhances performance outcomes such as service quality, punctuality, and target achievement (Gagné et al., 2022). Empirical evidence from early gig economy studies demonstrates that financial incentives have a significant positive influence on a driver's decision to work and their operational duration (Hall et al., 2018). Drivers motivated by the pursuit of specific income targets or platform-based recognition are logically more likely to exhibit higher productivity, accept more rides, and cultivate better customer interactions.

However, the physical toll of ride-hailing often complicates this direct relationship. Despite these nuances, the foundational organizational behaviour assumption posits that motivation acts as the primary catalyst stimulating performance. Research by Aisy & Prabowo (2024) on ride-hailing drivers in Indonesia found that motivation significantly affects performance, particularly when drivers receive fair incentives and platform recognition. Therefore, it is expected that higher motivation will yield higher performance.

H1: Work motivation has a positive and significant effect on driver performance.

2.2 Flexible working hours and performance

Flexible working hours represent the defining value proposition of the gig economy, allowing workers to bypass rigid, traditional corporate schedules (Wood et al., 2019). From a purely operational standpoint, temporal flexibility empowers drivers to act as micro-entrepreneurs. They can strategically align their working hours with peak demand periods (e.g., morning commutes, adverse weather conditions) to maximize their yield per hour, while avoiding low-demand intervals that result in idle depreciation.

Research by Fielbaum & Tirachini (2021) investigating ride-hailing drivers in Chile highlighted that the flexibility to choose work times is the most highly appreciated attribute among ride-hailing drivers, allowing them to optimize their productivity and manage multiple income streams. Because drivers can ostensibly rest when fatigued and surge when energized, their overall operational efficiency—measured by trips completed on time, customer satisfaction, and daily targets—should theoretically increase. Furthermore, recent studies on Gojek drivers in Indonesia consistently affirm that schedule flexibility directly and positively impacts driver performance by enabling customized optimization of labour (Aisy & Prabowo, 2024).

H2: Flexible working hours have a positive and significant effect on driver performance.

2.3 Work motivation and job satisfaction

The relationship between work motivation and job satisfaction is well-established in organizational behaviour literature. When workers experience high levels of motivation—whether derived from intrinsic enjoyment of their tasks or extrinsic rewards—they typically report greater job satisfaction (Gagné et al., 2022). In the gig economy context, drivers who feel motivated by platform incentives, customer appreciation, and the independence of their work are more likely to develop positive affective responses to their employment.

However, the algorithmic nature of platform work introduces complexities. Motivation may be undermined by perceptions of unfairness in algorithmic reward systems or by the constant pressure of surveillance (Rosenblat, 2016). Despite these challenges, the foundational premise remains that motivated workers experience higher job satisfaction, which subsequently influences their behavioural outcomes. Empirical studies in the Indonesian ride-hailing context support this positive relationship (Aisy & Prabowo, 2024).

H3: Work motivation has a positive and significant effect on job satisfaction.

2.4 Flexibility and job satisfaction

While flexibility is fundamentally linked to gig work, its actual impact on job satisfaction is deeply contested due to the emergence of the flexibility paradox (Chen & Chen, 2026; Wood et al., 2019). The paradox posits that while gig workers technically possess temporal autonomy, the algorithmic architecture of the platform enforces a strict form of controlled autonomy.

Algorithms dictate dynamic pricing, distribute lucrative orders based on hidden metrics such as acceptance rates, and enforce strict withdrawal rules (Rosenblat, 2016). Consequently, drivers whose primary income relies on the platform are structurally coerced into working gruelling, anti-social hours to achieve sustainable earnings. The risk of fluctuating demand is entirely outsourced from the corporation to the

individual driver. Therefore, while drivers maintain the illusion of flexibility, they lack actual economic freedom.

This algorithmic coercion acts as a severe job demand under the JD-R model, leading to resource depletion and exhaustion, which effectively neutralizes the psychological satisfaction that flexibility is supposed to provide (Ahmad et al., 2025). Some literature suggests that flexibility reduces work-life conflict, thereby improving satisfaction. However, an increasing body of empirical work argues that the precariousness of gig work transforms this flexibility into a source of anxiety and uncertainty, diminishing job satisfaction.

H4: Flexible working hours have a positive and significant effect on job satisfaction.

2.5 The mediating role of job satisfaction

Job satisfaction serves as the critical psychological bridge between environmental inputs (such as motivation and flexibility) and behavioural outputs (such as performance). In the context of ride-hailing, the labour is physically demanding, cognitively taxing, and socially isolating. Motivation provides the initial spark for effort, but without the sustaining emotional resource of job satisfaction, motivation can quickly degrade into burnout (Shi et al., 2025). Herzberg's theory suggests that motivated workers only translate their drive into consistent, high-quality performance if they are genuinely satisfied with their working conditions.

Similarly, if flexible working hours generate satisfaction by genuinely facilitating work-life balance and reducing work-family conflict, this positive affective state should theoretically mediate the relationship between flexibility and performance (Chen & Chen, 2026). Therefore, job satisfaction is positioned as an intervening variable capable of transforming platform resources and motivational drives into tangible service outcomes.

H5: Job satisfaction has a positive and significant effect on performance.

H6: Job satisfaction mediates the relationship between work motivation and performance.

H7: Job satisfaction mediates the relationship between flexible working hours and performance.



FIGURE 1. RESEARCH FRAMEWORK
Source: Authors' research

The research framework of this study incorporates two exogenous (independent) variables: Work Motivation and Flexible Working Hours; one mediating variable: Job Satisfaction; and one endogenous (dependent) variable: Performance. Figure 1 presents the research framework.

3. METHODOLOGY

To empirically test the hypothesized relationships within the algorithmic management context, this study adopted a causal-explanatory quantitative research design. This approach is suitable for investigating complex, simultaneous causal relationships among latent variables in behavioural and organizational sciences. It specifically facilitates the exploration of both direct and mediated effects.

The population for this study encompassed all active Grab drivers operating within the Surabaya metropolitan area, Indonesia. In emerging markets such as Indonesia, ride hailing digital platforms like Grab have achieved ubiquitous market penetration and act as vital arteries for both transportation and informal employment (Aisy & Prabowo, 2024; Ansyori & Wibowo, 2025; Wibowo & Ansyori, 2025). Due to the transient nature of gig economy labour, a definitive sampling framework for ride-hailing drivers in the market is unavailable. Consequently, a non-probability purposive sampling technique was utilized to ensure data relevance.

The inclusion criteria require that respondents must be currently active Grab drivers, operate primarily in the Surabaya region and possess a minimum of three months of continuous platform experience to ensure they had sufficient exposure to the platform's algorithmic management systems. The final sample comprised 213 valid respondents. This sample size robustly satisfies the 10-times rule for PLS-SEM, ensuring sufficient statistical power for the complex structural analysis (Kock & Hadaya, 2018).

Data were collected utilizing a structured online questionnaire deployed via Google Forms. All measurement items were assessed using a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The use of a 5-point scale optimizes the balance between measurement reliability and respondent cognitive load, which is highly recommended for SEM-PLS applications to ensure data quality (Hair et al., 2019).

- a) Work Motivation (WM): Adapted from Herzberg et al. (1959) and contemporary gig-economy studies (Aisy & Prabowo, 2024). Indicators measured intrinsic enthusiasm for the driving role, active orientation toward achieving daily trip targets, responsiveness to gamified incentives (bonuses, ratings), the psychological need for recognition, and overall positive attitude toward the job.
- b) Flexible Working Hours (FWH): Adapted from (Fielbaum & Tirachini, 2021). Indicators assessed the perceived freedom to initiate and terminate shifts autonomously, the adaptability of the work

schedule to personal life activities, and the general belief that schedule flexibility constitutes a primary advantage of platform labour.

- c) Job Satisfaction (JS): Grounded in Equity Theory (Adams, 1965) and gig-worker well-being frameworks. The construct measured overall satisfaction with the platform, pride in affiliation with the brand, perceived fairness of algorithmic compensation and incentives, enjoyment of customer interactions, and belief in equal opportunity platform treatment.
- d) Performance (P): Operationalized based on metrics crucial to algorithmic platforms (Aisy & Prabowo, 2024). Indicators included punctuality of pickups and drop-offs, consistency in maintaining high customer ratings, achievement of personal and platform-dictated income targets, provision of courteous service, and overall reliability.

Data were analysed using Partial Least Squares Structural Equation Modeling (PLS-SEM) via the SmartPLS 4 software suite. PLS-SEM is a variance-based approach uniquely advantageous for exploratory research, complex models incorporating mediation, and data distributions that may violate the strict assumptions of multivariate normality required by covariance-based SEM (CB-SEM) (Hair et al., 2019).

The analysis proceeded systematically in two stages. First, the evaluation of the measurement model (outer model) was conducted to confirm indicator reliability, internal consistency, convergent validity, and discriminant validity. Indicators with weak loadings were iteratively removed to improve the psychometric robustness of the constructs (Garson, 2016).

Second, the evaluation of the structural model (inner model) was performed to test the proposed hypotheses. This involved assessing the coefficient of determination (R^2), effect sizes (f^2), and employing a nonparametric bootstrapping procedure to generate standard errors, t-statistics, and p-values for robust hypothesis testing.

4. RESULTS AND DISCUSSION

4.1 Demographic profile of respondents

As detailed in Table 1, the respondents are heavily entrenched in the ride-hailing platform. A significant majority (68.3%) have been driving for over a year, indicating a mature and experienced sample that is deeply familiar with algorithmic management systems. The age distribution reveals that the core workforce consists of individuals in their prime productive years, with 50.5% aged between 31 and 40. While the industry remains male-dominated (58.7%), reflecting the physical demands and historical context of

transportation logistics in Indonesia, the substantial female participation rate (41.3%) highlights the platform economy's role in democratizing access to income-generating opportunities.

TABLE 1. SUMMARY OF RESPONDENTS' PROFILE

Characteristics	Category	Percentage
Work experience	3-6 months	12.4%
	6-9 months	6.9%
	9-12 months	12.4%
	More than 12 months	68.3%
Age	18-20 years old	6.0%
	21-30 years old	24.3%
	31-40 years old	50.5%
	More than 40 years old	19.3%
Gender	Male	58.7%
	Female	41.3%
Daily working hours	Less than 4 hours	5.5%
	4-6 hours	13.3%
	7-9 hours	48.2%
	More than 9 hours	33.0%
Average monthly income	Less than IDR1,000,000	7.3%
	IDR1,000,000–2,000,000	14.2%
	IDR2,000,001–3,000,000	34.0%
	More than IDR3,000,000	43.6%

Source: Authors' research

Critically, 69.7% of respondents identified as full-time gig workers, relying entirely on the platform as their primary occupational pursuit. Consequently, work intensity is exceptionally high: 48.2% of respondents drive between 7 and 9 hours daily, and 33.0% endure shifts exceeding 9 hours per day. This extreme labour intensity contradicts the narrative of casual, flexible work. The financial dependency is equally clear, with 43.6% earning over Rp 3,000,000 monthly, positioning ride-hailing as a vital economic lifeline for these urban workers. This provides critical context regarding the contemporary realities of the gig economy.

4.2 Evaluation of the measurement model

Prior to structural evaluation, the measurement model was rigorously assessed to ensure that the theoretical constructs were accurately captured by the survey indicators. Following the methodological recommendations of Hair et al. (2019) and Garson (2016), an iterative item-trimming process was conducted. Indicators that exhibited outer loadings significantly below the acceptable threshold (specifically FWH1, FWH2, JS4, P2, P3, WM3, and WM4) were systematically removed to enhance psychometric robustness, minimize measurement error, and ensure that Average Variance Extracted (AVE) criteria were met.

As demonstrated in Table 2, all retained indicators exhibited outer loadings that are acceptable within the context of exploratory social science research. While a few items (e.g., WM3, JS5, P1) fall marginally

below the strict 0.708 threshold recommended by Hair et al. (2019), they remain well within the 0.60–0.70 acceptable range for exploratory models and were retained to preserve content validity.

TABLE 2. INDICATOR RELIABILITY

Construct	Indicator	Outer loading
Work motivation (WM)	WM1	0.777
	WM2	0.738
	WM3	0.671
Flexible working hours (FWH)	FWH3	0.797
	FWH4	0.722
	FWH5	0.762
Job satisfaction (JS)	JS1	0.739
	JS2	0.744
	JS3	0.748
	JS5	0.673
Performance (P)	P1	0.675
	P3	0.785
	P5	0.722

Source: Authors' research

TABLE 3. INTERNAL CONSISTENCY AND CONVERGENT VALIDITY

Construct	Cronbach's alpha	Composite reliability (CR)	Average variance extracted (AVE)
Work motivation (WM)	0.565	0.773	0.533
Flexible working hours (FWH)	0.637	0.815	0.579
Job satisfaction (JS)	0.703	0.817	0.528
Performance (P)	0.567	0.772	0.531

Source: Authors' research

Table 3 details the internal consistency and convergent validity of the measurement model. While the Cronbach's Alpha values for Work Motivation (0.565) and Performance (0.567) appear low, the PLS-SEM literature widely acknowledges that Cronbach's Alpha assumes tau-equivalence and frequently underestimates true reliability (Hair et al., 2019). Therefore, Composite Reliability (CR) is preferred. The CR scores for all constructs range from 0.772 to 0.817, comfortably exceeding the 0.70 benchmark and confirming robust internal consistency. Furthermore, the Average Variance Extracted (AVE) for every construct surpasses the critical 0.50 threshold. This confirms convergent validity, signifying that the latent constructs explain more than 50% of the variance in their respective indicators.

TABLE 4. DISCRIMINANT VALIDITY

Variable	WM	FWH	JS	P
Work motivation (WM)	0.730	0.410*	0.845*	0.678*
Flexible working hours (FWH)	0.237	0.761	0.317*	0.769*
Job satisfaction (JS)	0.544	0.214	0.727	0.749*
Performance (P)	0.415	0.461	0.478	0.729

Note: The lower triangle displays Fornell-Larcker correlations (diagonal elements are the square root of AVE). The upper triangle with asterisks (*) displays the Heterotrait-Monotrait (HTMT) ratios.

Source: Authors' research

Discriminant validity was established through both the traditional Fornell-Larcker criterion and the more robust Heterotrait-Monotrait (HTMT) ratio. In Table 4, the square root of the AVE for each construct (the

bolded diagonal elements) is strictly greater than its highest correlation with any other latent construct in the model. Concurrently, all HTMT values (upper triangle) fall well below the stringent 0.90 threshold, verifying that each latent construct is conceptually distinct and measures unique behavioural phenomena without problematic cross-loading.

4.3 Evaluation of the structural model

The predictive power and relevance of the structural model were assessed using the coefficient of determination (R^2) and effect sizes (f^2).

TABLE 5. COEFFICIENT OF DETERMINATION

Construct	R^2 value	Interpretation
Job satisfaction (JS)	0.303	Moderate
Performance (P)	0.381	Moderate

Source: Authors' research

The model explains 30.3% ($R^2 = 0.303$) of the variance in Job Satisfaction and 38.1% ($R^2 = 0.381$) of the variance in driver Performance (Table 5). In behavioural and organizational sciences, particularly within complex gig economy contexts influenced by myriad external variables (weather, traffic, algorithmic fluctuations), these values denote moderate and highly acceptable predictive accuracy.

Analysis of the f^2 effect sizes reveals the relative impact of the predictor variables. Work Motivation exerts a large effect on Job Satisfaction ($f^2 = 0.370$), underscoring the vital link between driver drive and emotional fulfilment. Flexible Working Hours exerts a medium effect on Performance ($f^2 = 0.190$), highlighting its operational utility. Conversely, the effect of Work Motivation on Performance is very small ($f^2 = 0.028$), and the effect of Flexibility on Job Satisfaction is negligible ($f^2 = 0.011$). These specific effect sizes heavily foreshadow the emergence of the flexibility paradox and the critical need for mediation.

4.4 Hypothesis testing

Hypothesis testing was executed via a non-parametric bootstrapping procedure with 5,000 subsamples to generate empirical standard errors and t-statistics. The decision rule accepts a hypothesis if the p-value is less than 0.05 and the t-value exceeds 1.96 at a 95% confidence interval.

TABLE 6. SUMMARY OF HYPOTHESIS TESTING

Hypothesis	Structural path	Path coefficient (β)	T-value	P-value	Decision
H1	WM $\rightarrow$ Performance	0.160	1.713	0.087	Rejected
H2	FWH $\rightarrow$ Performance	0.355	3.671	0.000	Accepted
H3	WM $\rightarrow$ Job satisfaction	0.522	5.131	0.000	Accepted
H4	FWH $\rightarrow$ Job satisfaction	0.091	1.257	0.209	Rejected
H5	JS $\rightarrow$ Performance	0.315	2.978	0.003	Accepted
H6 (Mediation)	WM $\rightarrow$ JS $\rightarrow$ Performance	0.165	2.589	0.010	Accepted
H7 (Mediation)	FWH $\rightarrow$ JS $\rightarrow$ Performance	0.029	1.121	0.262	Rejected

Source: Authors' research

The structural analysis yields profound behavioural insights, as presented in Table 6. Work motivation does not possess a direct, statistically significant pathway to performance (H1 rejected; $p = 0.087$). Instead, motivation relies entirely on job satisfaction to bridge the gap and influence operational outcomes (H6 accepted; $p = 0.010$, indicating full mediation). In stark contrast, flexible working hours massively drive direct performance improvements (H2 accepted; $p = 0.000$) but completely fail to generate job satisfaction (H4 rejected; $p = 0.209$). Because flexibility does not influence satisfaction, no indirect mediation pathway exists (H7 rejected; $p = 0.262$).

The empirical results generated from the PLS-SEM analysis paint a highly nuanced portrait of algorithmic management within the gig economy. The findings challenge rudimentary assumptions about flexibility, motivation, and worker psychology in the emerging economies, revealing a complex landscape where operational imperatives frequently override emotional resources.

4.5 The motivational void: why motivation alone fails

Contrary to foundational organizational behaviour theories which postulate a direct, linear causal link between motivation and performance, this study found no significant direct effect of work motivation on the performance of Grab drivers ($p = 0.087$). This finding diverges significantly from recent ride-hailing studies, such as Aisy & Prabowo (2024), who observed direct motivational impacts among Gojek drivers in similar urban environments.

The underlying reasoning for this rejection lies in the extreme physical and cognitive demands of ride-hailing in a congested, tropical metropolis like Surabaya. Within the framework of the Job Demands-Resources (JD-R) model, algorithmic management functions as an omnipresent and relentless demand. Drivers are subjected to continuous digital surveillance, arbitrary algorithmic dispatching, and the constant psychological stress of maintaining acceptance and cancellation rates to avoid punitive algorithmic deactivation (Kellogg et al., 2020).

In such a high-demand, high-exhaustion environment, raw psychological motivation alone—such as the desire to earn specific bonuses or the intrinsic enjoyment of driving—is simply insufficient to override physical fatigue and produce sustained high-quality performance. A driver may be highly motivated by a temporary algorithmic surge-pricing multiplier, but if they are physically exhausted or alienated by the platform's overall opacity, their actual performance metrics (safety, courtesy, punctuality) will inevitably degrade.

However, the robust acceptance of Hypothesis 6 ($WM \rightarrow JS \rightarrow Performance$; $p = 0.010$) resolves this paradox through the lens of Herzberg's theory. Motivation only translates into tangible performance outcomes when it successfully alters the driver's emotional state, creating genuine job satisfaction. When

platform incentives, transparent communication, and customer recognition make the driver feel genuinely valued—thereby satisfying both equity concerns and intrinsic needs—they experience deep job satisfaction.

This satisfaction acts as a critical emotional buffer. It is a vital resource in the JD-R model that replenishes their cognitive energy, allowing them to overcome physical exhaustion and deliver superior, consistent service (Bakker & Demerouti, 2007). Thus, for gig platforms, deploying raw financial incentives through aggressive gamification is futile unless those incentives are designed fairly enough to generate actual psychological satisfaction. Motivation is merely the spark; job satisfaction is the engine that drives performance.

4.6 Unpacking the flexibility paradox

One of the most profound theoretical insights generated by this study is the definitive rejection of Hypothesis 4 ($p = 0.209$); flexible working hours do not enhance job satisfaction among Grab drivers. This result provides vital empirical validation for the flexibility paradox within algorithmic management, extending its relevance beyond Western contexts to emerging global markets (Chen & Chen, 2026; Hassan, 2022; Tan & Antonio, 2022; Wood et al., 2019).

The demographic data reveals that ride-hailing is a full-time occupation for nearly 70% of respondents, requiring extended, gruelling hours to achieve a living wage (Fielbaum & Tirachini, 2021). In this context, flexibility is largely an illusion globally (Wood et al., 2019). Because the financial risk of fluctuating demand is entirely shifted from the digital platform to the individual driver, the theoretical freedom to log off provides no emotional comfort (Rosenblat, 2016).

The constant cognitive burden of deciding when to work to optimize earnings entirely neutralizes any potential positive impact on job satisfaction. This aligns with Fielbaum & Tirachini (2021) observations in Chile, where drivers appreciated flexibility but suffered from severe anxiety over income transparency and physical risks, dampening overall job satisfaction. Algorithmic monitoring and relentless economic pressure transmute flexibility from an emotional resource into a psychological stressor (Ahmad et al., 2025).

4.7 Flexibility as a purely operational catalyst

If flexibility fails to make drivers psychologically satisfied, why does it dramatically improve their performance (H2 accepted; $p = 0.000$)? The answer lies in the critical separation of psychological well-being from operational utility.

While algorithmic constraints erode the emotional joy of flexibility, the functional ability to manoeuvre one's schedule remains a highly potent operational tool (Shi et al., 2025). Unlike fixed-shift traditional taxi drivers, Grab drivers possess micro-level strategic control over their labour deployment. They can monitor algorithmic heat maps to physically position themselves in high-demand zones, tactically accept or decline specific routes (within the threshold of platform cancellation penalties), and adjust their driving hours dynamically to exploit daily weather anomalies or traffic patterns (Shi et al., 2025).

Hence, flexibility acts purely as a mechanical efficiency lever. It allows drivers to optimize their physical presence in the market, directly inflating their performance metrics completely independent of whether they feel emotionally satisfied with the platform company (Aisy & Prabowo, 2024). This indicates a stark transactional reality of digital gig economy performance. Drivers do not need to be happy to be efficient, they merely need the structural tools to optimize their labour.

4.8 The crucial role of job satisfaction and equity

The strong acceptance of Hypothesis 3 ($p = 0.000$) and Hypothesis 5 ($p = 0.003$) underscores the absolute necessity of affective commitment in the gig economy. Work motivation strongly influences job satisfaction ($f^2 = 0.370$), generating the largest effect size in the model. When drivers perceive that their extreme efforts—navigating dangerous traffic, enduring long hours, and managing passenger demands—are met with equitable, transparent compensation and social recognition from both the app interface and passengers, they experience high satisfaction.

This satisfaction directly drives performance. In a decentralized environment devoid of traditional supervisory oversight or peer pressure, job satisfaction acts as the primary internal regulatory mechanism ensuring quality. Satisfied drivers take pride in their micro-enterprises. They are less likely to engage in gaming the system or exhibiting negative behaviours toward passengers, thereby maintaining the platform's overarching service integrity. The validation of these hypotheses confirms Adams' Equity Theory within the digital realm: perceived fairness and satisfaction are non-negotiable prerequisites for sustained, high-level service execution.

5. CONCLUSIONS

The rapid proliferation of algorithmic management platforms has dismantled traditional organizational structures, necessitating entirely new paradigms for understanding worker motivation and performance in the digital age. This structural analysis of Grab drivers in Surabaya reveals that ride-hailing platform job is

driven by a highly complex interplay of psychological needs and harsh operational realities, governed invisibly by code and algorithms.

This research contributes significantly to the fields of organizational behaviour and human resource management by contextualizing classical theories within the digital labour ecosystem. First, it refines Herzberg's Two-Factor Theory by demonstrating that in the gig economy, motivation is a necessary but insufficient condition for performance. Motivation must be fully mediated by job satisfaction to overcome the immense physical and cognitive demands of platform labour.

Second, and perhaps most importantly, this study provides robust empirical evidence for the flexibility paradox within the Job Demands-Resources framework (Chen & Chen, 2026; Wood et al., 2019). It demonstrates that algorithmic management effectively strips the psychological, resource-providing elements of flexibility, reducing autonomy to a mere operational tactic for survival. This fundamentally bifurcates our theoretical understanding of flexibility in platform work: it is highly effective as an efficiency tool (driving performance) but completely ineffective as an emotional resource (failing to drive satisfaction) in full-time gig paradigms.

For digital platform operators and management practitioners, addressing the flexibility paradox and the mediation void is critical for long-term platform sustainability, driver retention, and overall service quality.

1. Human-in-the-loop algorithmic design is essential. Platforms must transition away from opaque, purely punitive algorithms that generate technostress. Introducing radical transparency in how fares are calculated, how rides are dispatched, and how ratings are aggregated will restore a sense of equity and genuine autonomy. This transparency is necessary to convert raw operational flexibility back into a driver of job satisfaction (Ahmad et al., 2025). Specifically, platforms should provide drivers with clear, real-time explanations for ride allocations and fare calculations, reducing the information asymmetry that fuels dissatisfaction.
2. Redesigning incentive structures is critical. Gamification (e.g., points, tiers, badges) is a powerful motivator. However, if targets are algorithmically adjusted to be perpetually out of reach based on regional saturation, they lead to inevitable burnout (Ahmad et al., 2025). Platforms should implement attainable, stable hygiene factors—such as base fare guarantees or transparent fuel subsidies—to ensure that motivation successfully translates into satisfaction and, subsequently, high-quality performance. Our findings suggest that when drivers perceive incentives as fair and achievable (increasing job satisfaction), their performance improves.
3. Enhancing driver support and voice mechanisms is imperative. Because job satisfaction is the sole conduit for motivation to impact performance, platforms must invest heavily in robust grievance mechanisms and driver-support channels. Treating drivers as essential organizational stakeholders rather than disposable algorithmic nodes will foster the affective commitment

required for consistent, premium service quality. This includes establishing driver advisory councils, implementing responsive customer service for driver concerns, and providing mental health support resources.

The findings spotlight the precarious socio-economic position of digital platform workers in emerging economies. The marketed illusion of autonomy masks a reality where workers bear the totality of economic and physical risk. As digital platforms continue to absorb massive segments of the urban workforce, there is a pressing need for labour regulators to re-evaluate the independent contractor classification. Policymakers must mandate minimum algorithmic transparency standards and baseline social protections—such as mandatory health coverage and accident insurance—to safeguard the mental and financial well-being of the digital workforce.

Specifically, regulatory frameworks should address: (1) minimum earnings guarantees that account for waiting time and vehicle depreciation; (2) limits on maximum working hours to prevent exploitation and ensure driver safety; (3) transparent dispute resolution mechanisms for algorithmic decisions; and (4) portable benefits that follow workers across platforms. These interventions would address the fundamental inequities that the flexibility paradox reveals.

This study is subject to several methodological limitations that should be acknowledged. First, the cross-sectional design captures driver perceptions and behaviours at a single temporal point, precluding the observation of behavioural adaptations over time or across different economic cycles. Driver satisfaction and performance may fluctuate in response to algorithmic updates, seasonal demand patterns, or macroeconomic shocks, which cannot be captured in a one-time survey.

Second, the geographical confinement to Surabaya, a single city, limits the generalizability of the findings to different socio-economic, cultural, or regulatory contexts. While Surabaya represents a significant emerging metropolitan market, ride-hailing dynamics may differ substantially in other Indonesian cities or in other emerging economies with different regulatory environments.

Third, the purposive sampling technique introduces potential selection bias. Drivers who voluntarily participated in the survey may differ systematically from those who declined, potentially affecting the representativeness of the findings. While our sample demographics align with industry reports on driver profiles, the self-selection nature of the sample limits the generalizability of the findings.

Fourth, self-reported data may be subject to social desirability bias and common method variance. Drivers may overstate their job satisfaction or performance to present themselves favourably. While we employed procedural remedies such as ensuring anonymity and using established scales, common method bias cannot be entirely eliminated in cross-sectional, self-report designs.

Fifth, measurement reliability concerns should be noted. The relatively low Cronbach's Alpha values for Work Motivation (0.565) and Performance (0.567), while acceptable in PLS-SEM given the preference for Composite Reliability, suggest that the measurement of these constructs could be improved. Finally, the specific platform context (Grab) and specific job type (ride-hailing) may limit the applicability of findings to other platforms or gig economy sectors.

Future research should embrace longitudinal methodologies to track how driver satisfaction and performance fluctuate dynamically in response to specific algorithmic updates (e.g., actual trip completion rates, customer ratings), changing fare structures, or macroeconomic shocks. Additionally, it is important to refine the research framework to enhance internal consistency, potentially by exploring specific dimensions of technostress or adapting items more specifically to the gig economy context—such as algorithmic anxiety, information asymmetry, or the impact of customer incivility mediated by platform rating systems. This would provide a more granular, nuanced understanding of the barriers to job satisfaction (Gagné et al., 2022).

Comparative empirical studies between different platform architectures (e.g., ride-hailing versus food delivery, logistics digital gig work versus traditional logistics) could isolate how specific algorithmic parameters intensify or mitigate the flexibility paradox, further advancing the study of organizational behaviour in the digital age. Future research should also adopt comparative designs across multiple cities and countries to test the robustness of the flexibility paradox in diverse contexts.

DECLARATION OF COMPETING INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

During the preparation of this work the authors used Google Gemini to assist with language editing and improving the clarity of the manuscript. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the published article.

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