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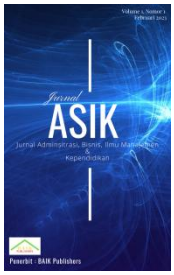

Workload Management and Service Quality Consistency: An Empirical Study of Gig Workers and Consumers in South Tangerang

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ABSTRACT

The rapid growth of on-demand food delivery platforms has institutionalized algorithmic human resource management (HRM), shifting traditional supervisory roles onto automated software tracking. While designed to optimize operational efficiency, these strict algorithmic workloads heavily influence the frontline gig workers who execute the labor, directly impacting the final service delivery. This study explores how the operational tensions within algorithmic workload management shape the lived experiences of couriers, and how these frontline realities subsequently influence consumer-perceived service quality consistency in the high-density suburban zone of South Tangerang. Utilizing a qualitative, exploratory case study design, this research deployed purposive sampling to recruit 8 active ShopeeFood couriers and 10 regular platform consumers in South Tangerang. Primary data was gathered through semi-structured in-depth interviews and field observations at major merchant clusters. The verbatim transcripts were processed using thematic analysis. The thematic analysis revealed three core themes: (1) Algorithmic Despotism, where the illusion of gig flexibility is replaced by systemic anxiety over opaque ratings and point-chasing; (2) The Overflow Effect, where severe time-poverty and multi-batching bottlenecks cause psychophysical burnout, directly degrading frontline interaction courtesy and handling care; and (3) Consumer Meaning-Making, where sophisticated urban consumers interpret visible service fluctuations as a structural symptom of an overloaded human workforce rather than isolated courier errors. This study concludes that prioritizing mathematical platform optimization over human capacity creates a counter-productive paradox, where internal workload pressures destabilize long-term service quality consistency. Platform management must integrate human-centric workload boundaries to sustain both worker well-being and consumer brand loyalty.

Keywords: Algorithmic HRM, Gig Economy, Workload Management, Service Quality Consistency, Qualitative Study.

I. INTRODUCTION

The rapid proliferation of digital platform ecosystems has fundamentally reshaped the global labor landscape, accelerating the rise of the gig economy. In Southeast Asia, particularly in Indonesia, on-demand food delivery services such as ShopeeFood have transitioned from mere lifestyle conveniences into essential urban

infrastructures (Hasin et al., 2023). Distinct from traditional employment, this sector relies on digital applications to manage and deploy algorithmic human resources, commonly known as gig workers or independent contractors (Giotopoulos et al., 2024). Within this operational framework, the management of human resources faces unique challenges. Platform organizations lack direct, physical command over workers' behaviors; instead, they influence worker productivity and outcomes through automated incentive structures, dynamic peak-hour allocations, and algorithmic surveillance (Giotopoulos et al., 2025).

Figure 1. The Workflow Intersecting Gig Labor

As illustrated in the food delivery operational loop above, every phase from dispatching drivers to real-time tracking heavily limits the worker's flexibility, transforming platform mechanics into an intense workload. This intersection creates a direct operational bridge between Strategic Human Resource Management (SHRM) and consumer satisfaction. In frontline service delivery, the consistency of service quality perceived by end consumers is highly dependent on the well-being, motivation, and performance stability of the courier on the ground (Prabhune et al., 2025). When platforms experience an influx of consumer demand in densely populated suburban perimeters like South Tangerang, gig workers face immediate shifts in their work dynamics. The pressure to complete multi-batch orders within strict, algorithmically calculated time windows frequently leads to an escalation in physical and psychological work pressure (Meduri et al., 2024).

Consequently, inadequate workload management within platform algorithms has emerged as a critical vulnerability. When couriers are pushed past their optimal operating capacity, it directly triggers job burnout and emotional exhaustion (Hilmi et al., 2024). Unlike conventional corporate settings where human resource managers can step in with direct employee assistance programs, gig workers must navigate these pressures independently. This strain manifests externally as degraded service delivery, characterized by increased order handling errors, poor communication etiquette, and delayed delivery times all of which are immediately evaluated by the consumer (Nedoshivina et al., 2024). This creates a paradox where algorithmic optimization aimed at maximizing platform efficiency inadvertently disrupts the long-term consistency of service quality.

South Tangerang represents a highly strategic geographical locus for this empirical inquiry. As a satellite urban zone experiencing rapid residential growth and high digital literacy, its consumer base exhibits high service expectations, demanding fast, punctual, and flawless food delivery interactions (Rafique et al., 2024). Previous studies in human resource management have extensively documented how conventional workload controls influence corporate employee retention. However, empirical literature that explicitly bridges the gap between algorithmic workload management, gig workers' operational limitations, and consumer-perceived service consistency remains sparse (Ali & Özkasap, 2024). This study aims to fill this gap by analyzing the empirical links between driver workload pressures and consumer evaluations of ShopeeFood services in South Tangerang. By aligning the "voice of the worker" with the "voice of the consumer," this paper provides critical insights into how modern human resource structures can balance platform productivity with service quality sustainability (Hewage et al., 2025).

II. LITERATURE REVIEW

A. Algorithmic HRM in the Gig Economy Ecosystem

The shift toward the gig economy has institutionalized a novel employment paradigm that disrupts conventional employer-employee boundaries. Within this landscape, Human Resource Management (HRM) is no longer executed through physical interaction or direct supervisory oversight; instead, it is replaced by "algorithmic management" (Xames & Topcu, 2023). This system relies on automated calculations, GPS-based tracking, and digital performance analytics to direct the behavior of independent couriers or freelancers (Hogade et al., 2022). From a qualitative standpoint, algorithmic control creates a complex psychological state of both flexibility and alienation for workers, where their operational discipline and labor motivation are strictly shaped by gamified incentive systems and the structural threat of automated account suspension (Luo et al., 2025).

Extant literature demonstrates that algorithmic HRM radically transforms traditional human resource oversight into an automated, data-driven mechanism. In a qualitative context, this means the platform's control structure directly shapes the courier's psychology, forcing researchers to study worker behavior not as an isolated personal choice, but as a live adaptation to digital, faceless corporate rules.

B. Dynamics and Complexities of Platform Workload Management

Within food delivery platform operations, the workload is not static; rather, it is highly volatile, unpredictable, and tightly regulated by order allocation algorithms (Embodo & Villanueva, 2024). The phenomenon of workload pressure among gig workers encompasses deep physical and psychological dimensions. Couriers frequently encounter high-stress scenarios such as multi-batching (carrying multiple distinct orders simultaneously) and strict point targets under the pressure of unpredictable traffic conditions and severe weather (Al-Shammaa & Al-Hadrawi, 2026). Qualitatively, the platform's systemic workload management often bypasses human biological limitations, generating an intense work environment designed primarily to meet the digital application's speed and efficiency metrics.

The academic consensus shows that workload management in platform ecosystems operates through intense algorithmic constraints rather than supportive scheduling. This emphasizes the need for a qualitative inquiry to explore the lived experiences of couriers as they balance their physical endurance with strict, systemic performance parameters set by the application.

C. Service Quality Consistency and the Human-Frontline Interface

Service quality consistency in the on-demand food sector heavily depends on the frontline performance, specifically the direct interface between the courier and the consumer. Unlike mechanical automated updates, human factors such as courtesy, empathy, and interpersonal communication style serve as the primary lenses through which consumers evaluate quality (Hurwitz et al., 2022). When platforms implement equitable partnership policies and supportive operational guidelines, gig workers exhibit higher emotional engagement, which translates into courteous and reliable delivery behaviors (Galiano et al., 2024). Consequently, maintaining consistent service quality is inextricably linked to the psychological well-being and operational readiness of the frontline human resources executing the labor (Dong et al., 2022).

The literature highlights that service quality consistency is ultimately an outcome of human labor dynamics. This underscores the core assumption of this study: a platform's technical efficiency cannot replace the human element, meaning that consumer perception remains deeply tied to the emotional and physical state of the frontline worker.

D. The Tension Between Worker Strain and Consumer Expectations

A strong dialectical tension exists between the workplace pressures experienced by couriers and the final evaluation made by the consumer. Continuous digital surveillance and rigid performance metrics can induce severe work anxiety and job burnout among gig workers (Kan et al., 2024). This burnout manifests externally through degraded interactions, such as delayed order confirmation, reduced friendliness, and handling errors (Supare & Kanyal, 2024). In highly dynamic suburban zones like South Tangerang, consumers maintain stringent expectations regarding delivery punctuality and service quality (Li et al., 2025). The platform's failure to mitigate algorithmic workload pressures ultimately creates a visible quality gap that consumers experience directly, which subsequently impacts their long-term trust and loyalty toward the digital platform (Thareja et al., 2026).

Research collectively indicates that high algorithmic pressure on workers yields a negative overflow effect that damages consumer evaluations. This study synthesizes this tension by investigating how the operational demands placed on ShopeeFood couriers manifest as a noticeable gap in service quality consistency within the consumer market of South Tangerang.

E. Conceptual Framework

In this qualitative inquiry, the phenomenon is explored not to establish statistical causal relationships, but to uncover how the operational tension between algorithmic workload management shapes the lived experiences of couriers, and how these frontline realities are perceived and interpreted by ShopeeFood consumers in South Tangerang. The qualitative focus is organized around three central thematic pillars:

1. The Worker's Lived Experience: Understanding how ShopeeFood couriers

navigate and make sense of algorithmic control, target-chasing, and continuous workload pressures.

2. The Interface Performance: Exploring how these internal workplace pressures influence the actual behavior, communication, and service delivery of the couriers during customer interactions.
3. Consumer Meaning-Making: Analyzing how consumers interpret the fluctuations in service consistency and to what extent they recognize the human resource challenges embedded in the gig economy platform.

III. RESEARCH METHODOLOGY

A. Research Design

This study employs a qualitative, exploratory case study research design. Qualitative methodology is particularly suited for this inquiry as it allows for a nuanced, deep understanding of complex human experiences, meanings, and systemic tensions within the gig economy that quantitative metrics fail to capture (Ramdhan, 2021). Rather than testing statistical correlations, this design focuses on capturing the lived experiences of ShopeeFood couriers facing algorithmic workload controls and the subjective interpretations of consumers regarding service consistency in the specific urban ecosystem of South Tangerang.

B. Informant Selection and Sampling Strategy

To capture a comprehensive dataset, informants were divided into two distinct groups using a purposive sampling strategy. Informants were recruited until theoretical saturation was reached the point at which no new conceptual themes or insights emerged from subsequent interviews.

The selection criteria for both informant groups were structured as follows:

Table 1. Informant Selection

Informant Group	Sample Criteria	Total Informants (N)
ShopeeFood Couriers (Drivers)	Active partnership for ≥ 6 months; actively operating within the South Tangerang perimeter; routinely working during peak hours (≥ 40 hours per week).	8 Informants
ShopeeFood Consumers	Residents of South Tangerang; regular platform users (ordering ≥ 3 times per week); experienced distinct variations in service delivery.	10 Informants

C. Data Collection Methods

Primary data was accumulated through two main qualitative techniques to ensure robust empirical depth:

1. Semi-Structured In-Depth Interviews: Interviews were guided by a flexible protocol containing open-ended questions. This allowed the researchers to probe unexpected narratives while remaining aligned with the central themes of algorithmic management, physical strain, and interaction quality. Interviews lasted between 45 to 75 minutes, conducted both in-person at local driver gathering points (*basecamp*) and virtually via encrypted video calls.
2. Field Observations: Passive, non-participatory observations were conducted at high-density merchant clusters and transit bottlenecks across South

Tangerang (e.g., Bintaro, BSD City, and Ciputat) to document the physical environment, multi-batching pressures, and real-time courier-consumer touchpoints.

D. Data Analysis and Trustworthiness

The narrative data collected from verbatim transcriptions was processed using Thematic Analysis. The analysis followed a systematic, rigorous multi-stage coding process:

1. Familiarization and Transcription: Stage 1

   Audio recordings of the interviews were transcribed verbatim. Researchers repeatedly read the transcripts alongside field observation notes to completely immerse themselves in the operational context.
2. Initial Coding: Stage 2

   Generating open, line-by-line codes from the raw data. Statements highlighting target-chasing, algorithmic fatigue, communication breakdowns, and consumer frustration were labeled directly.
3. Thematic Categorization: Stage 3.

   Grouping related initial codes into broader, conceptual themes. For instance, codes such as "system penalties," "blind routing," and "incentive drops" were combined under the theme *Algorithmic Surveillance Strain*.
4. Reviewing and Naming Themes:Stage 4.

   Refining the thematic maps against the entire dataset to ensure absolute contextual alignment. Themes were formally named and mapped directly to the three central pillars of the qualitative conceptual framework.

To guarantee the trustworthiness (validity and reliability) of this qualitative work, the research design integrated strict data triangulation by cross-verifying driver narratives against consumer perspectives and field observation logs. Additionally, member-checking was executed by sharing transcription summaries back with selected informants to confirm that the captured records accurately reflected their genuine field realities.

IV. RESEARCH RESULT

Based on the thematic analysis of the verbatim transcripts and field observations in South Tangerang, three core qualitative themes emerged. These findings reveal how algorithmic human resource configurations create systemic pressures that directly leak into the customer-facing interface. To provide an initial structural overview of these findings, the matrix below maps out the themes, underlying sub-themes, and the open codes identified during data analysis.

Table 2. Matrix of Qualitative Themes and Grounded Codes

Core Theme	Sub-Themes Identified	Grounded Codes / Field Indicators
Theme 1: Algorithmic Despotism	• Autonomy Paradox • Systemic Sanction Fear	• Account freezing / anyep • Rating-chasing anxiety • Opaque performance points
Theme 2: The Overflow Effect	• Physical & Cognitive Exhaustion • Emotional Labor Depletion	• Multi-batching mall bottlenecks • Depleted interaction courtesy • Time-poverty adaptations
Theme 3:	• Transactional Frustration	• Unreliable delivery windows

Consumer Meanings	• Empathetic Awareness	• Blunt communication etiquette • Structural platform critique

A. Theme 1: Algorithmic Despotism and the Illusions of Gig Flexibility

The first major finding highlights the profound tension between the promised autonomy of the gig economy and the reality of algorithmic control, often referred to by informants as a form of digital or algorithmic despotism. Drivers reported that the ShopeeFood platform utilizes opaque metrics—such as acceptance rates, completion speeds, and continuous performance points—to force compliance without establishing traditional employment protections. In South Tangerang's highly competitive market, the pressure to meet these automated targets during peak hours forces couriers to accept unsafe workloads.

"They say we are partners and we are free to log off anytime. But the reality is, if I skip two low-paying far-distance orders in a row, the app 'freezes' me for the next two hours. It's like a silent punishment. To get the daily point bonus, I am forced to accept whatever the system throws at me, even if it means driving across Ciputat to BSD in heavy rain." Informant D-03 (Driver, 28 years old, Pondok Aren)

"Kalau rating kita turun di bawah 90%, cari orderan besoknya susahnya setengah mati. Jadi istilah 'bisa kerja kapan saja' itu cuma ilusi di aplikasi. Faktanya, hp ini yang menjajah jadwal hidup kita sehari-hari." (If our rating drops below 90%, finding orders the next day is incredibly difficult. So the phrase 'work anytime' is just an illusion in the app. In fact, this phone is what colonizes our daily life schedule.) Informant D-05 (Driver, 22 years old, Pamulang)

The qualitative data indicates that algorithmic management transforms the concept of flexible labor into highly structured, high-pressure shift work. The algorithmic design constructs an environment where workers feel constantly monitored by an invisible supervisor. This surveillance creates an underlying state of psychological anxiety, as a single algorithmic penalty or drop in acceptance rating directly threatens their daily livelihood.

B. Theme 2: The Overflow Effect: Burnout and the Degradation of Interaction Quality

The second theme captures the operational bridge between internal platform pressures and external service delivery. Field observations in dense transit points, such as Bintaro and Serpong merchant clusters, documented visible signs of physical exhaustion among couriers. The data reveals a direct "overflow effect": when systemic workload controls push drivers past their biological boundaries, their capacity to maintain emotional labor and service consistency breaks down.

"By the 10th or 12th trip of the day, I'm just numb. My back hurts, and the application keeps sending multi-batch orders where I have to pick up from two different malls. When I finally arrive at the customer's housing estate in Pamulang, I don't have the energy to smile or say 'thank you' anymore. I just want to hand over the food and move to the next pin before the app penalizes my timing." Informant D-07 (Driver, 34 years old, Ciputat)

"Konsumen kadang komplain kenapa saya mukanya cemberut atau buru-buru. Mereka nggak tahu kalau di belakang motor saya ini ada dua orderan lain

yang batas waktunya sisa 10 menit lagi karena penumpukan antrean di mall Serpong." (Consumers sometimes complain about why I look grumpy or rushed. They don't know that on the back of my motorcycle, there are two other orders with only 10 minutes left because of the queue bottleneck at the Serpong mall.) Informant D-01 (Driver, 41 years old, Serpong)

This narrative demonstrates that service quality consistency is not merely a reflection of individual work ethic, but a finite resource depleted by systemic overwork. As summarized in the behavioral matrix below, specific algorithmic pressures produce predictable operational adjustments on the frontline.

Table 2: Mapping Algorithmic Strain to Frontline Service Degradation

Algorithmic Workload Input	Driver Coping Mechanism/ Operational Shortcut	Resulting Service Quality Issue (Consumer Facing)
Strict Multi-Batch Deadlines	Speed priority; avoiding traffic compliance; cutting communication short.	Delayed responses on chat; dropped food presentations.
Mall Cluster Bottlenecks	Parking far from merchants; forced rushing in food handling.	Cold food deliveries; incorrect item sorting due to haste.
Continuous Point Chasing	Omitting structural service protocols (e.g., contactless photo validation).	Leaving food at gates without warning; delivery location mismatches.

C. Theme 3: Consumer Interpretations of Service Fluctuations in South Tangerang

The final theme focuses on how consumers in South Tangerang interpret and react to these variations in service quality. While consumers explicitly value the convenience of the application, they frequently encounter a noticeable gap in delivery punctuality and communication etiquette during high-demand hours. Interestingly, the qualitative data reveals a clear divergence in customer attitudes, ranging from transactional frustration to empathetic awareness of gig worker precarity.

"I order ShopeeFood almost every day at my office in BSD. Lately, the consistency is completely gone. During lunchtime, drivers often don't reply to chats, or they text very bluntly. Sometimes my food arrives cold because the map shows they stopped at another location first. I understand they have multiple orders, but as a paying customer, it feels unfair that the service quality drops so drastically when the area gets busy." Informant C-02 (Consumer, 26 years old, BSD City)

"You can immediately tell when a driver is completely exhausted. Their voice sounds drained, and they just want to drop the bag and leave. At first, it irritated me when they didn't follow delivery notes, like leaving the food at the gate. But after chatting with a few of them, I realized the app gives them unrealistic deadlines. Now, I try to be more forgiving when the service fluctuates, because it's clearly a system problem, not just a lazy driver." Informant C-06 (Consumer, 31 years old, Ciputat Timur)

These consumer insights reveal that service quality consistency is no longer perceived as a stable corporate guarantee. Consumers in urban-suburban

zones like South Tangerang are increasingly recognizing the human element behind the application screen. The friction in service delivery—whether it manifests as delayed arrivals, blunt texts, or dropped food items—is directly interpreted by sophisticated consumers as a symptom of a highly strained, algorithmically overloaded human workforce.

D. Discussion and Theoretical Synthesis

The qualitative findings of this study provide critical extensions to modern Strategic Human Resource Management (SHRM) theory within the gig economy context. Traditionally, SHRM emphasizes that high-performance work practices bolster employee satisfaction, which subsequently drives up customer-perceived service quality. However, our empirical evidence shows that in platform organizations, the algorithmic framework acts as a counter-productive force.

By prioritizing mathematical optimization and rapid fulfillment over human worker well-being, the platform creates an operational paradox. The algorithm attempts to maximize customer utility by overloading the frontline workforce; yet, it is precisely this structural overload that triggers worker burnout and ultimately causes the degradation of service quality consistency reported by consumers. Therefore, this study argues that sustainable platform management must shift away from strict algorithmic despotism and integrate human-centric workload boundaries to protect both frontline gig labor and long-term consumer loyalty.

V. CLOSURE

A. Conclution

This qualitative study uncovers the structural frictions embedded within algorithmic human resource management and its direct consequence on external service quality consistency within the ShopeeFood ecosystem in South Tangerang. The empirical findings reveal that the platform's promised paradigm of labor flexibility operates as an illusion. In reality, couriers are subjected to algorithmic despotism, characterized by opaque performance metrics and continuous point-chasing that trigger pervasive work anxiety and systemic time-poverty.

Furthermore, this inquiry highlights a critical "overflow effect," wherein internal algorithmic workload pressures cross the threshold of human capacity, resulting in profound psychofisical burnout. This exhaustion directly degrades the quality of courier-consumer interactions, manifesting as compromised communication etiquette and operational errors during frontline delivery touchpoints. Finally, sophisticated urban consumers in South Tangerang readily detect these service fluctuations, interpreting them not merely as individual driver lapses, but as symptoms of an unsustainable, algorithmically overloaded human workforce. Ultimately, this study demonstrates that technical platform optimization designed to maximize short-term fulfillment efficiency paradoxically destabilizes the long-term consistency of service quality.

B. Suggestion

While this study offers deep exploratory insights into the gig economy landscape of South Tangerang, several avenues remain open for future academic

inquiry:

1. Comparative Geographic Analysis: Future research should replicate this qualitative design in distinct geographical settings, comparing high-density suburban satellite cities like South Tangerang with rural or primary metropolitan centers to observe variations in algorithmic strain and customer tolerance.
2. Longitudinal Case Studies: Utilizing a longitudinal qualitative framework could capture how prolonged exposure to algorithmic surveillance affects gig workers' mental health and career longevity over multiple years.
3. Mixed-Methods Integration: Future scholars could benefit from integrating these qualitative thematic constructs into a large-scale structural equation modeling (SEM) approach to statistically validate the exact correlation coefficients between algorithmic workload intensity, worker burnout, and consumer retention.

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