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THE GIG ECONOMY IN THE DIGITAL ERA AND EMPLOYMENT OPPORTUNITIES: A CASE STUDY OF ALUMNI FROM SMK MAMBAUL ULUM SUKOWONO JEMBER

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This study aims to explore the lived experiences of alumni from SMK Mambaul Ulum Sukowono in navigating the dynamics of the digital economy through their engagement in the gig economy. The central research problem lies in how their participation is shaped by digital skill gaps, limited institutional support, and the absence of legal protection within platform-based work environments. Using a qualitative case study approach under the interpretivist paradigm, data were collected through in-depth interviews, participant observation, and document analysis involving 25 alumni engaged in various forms of gig work, such as ride-hailing, graphic design, and online selling. Findings reveal that while alumni are primarily motivated by time flexibility and immediate income, they also face significant challenges including income instability, algorithmic dependency, and emotional strain. The study concludes that vocational curriculum reform and targeted policy interventions are crucial to support economic resilience and youth labor welfare in the digital era.

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Penelitian ini dilatarbelakangi oleh hadirnya Layanan Mandiri Agen Perbankan guna memberikan layanan jasa perbankan yang sulit dijangkau oleh masyarakat di daerah pedesaan yang menyebabkan nasabah perlu mengeluarkan biaya yang tinggi untuk menjangkau layanan jasa tersebut. Tujuan penelitian ini untuk menganalisis faktor-faktor yang mempengaruhi keputusan nasabah dalam menggunakan layanan Mandiri Agen di Desa Nanga Dedai, Kecamatan Dedai, Kabupaten Sintang. Layanan Mandiri Agen memberikan kemudahan bagi masyarakat yang tinggal di daerah terpencil untuk mengakses layanan perbankan tanpa harus pergi ke kantor cabang. Penelitian ini menggunakan pendekatan kualitatif. Teknik pengumpulan data menggunakan wawancara. Hasil penelitian menjelaskan bahwa keputusan nasabah dipengaruhi oleh beberapa faktor utama, yaitu kemudahan akses, kepercayaan terhadap layanan, serta tingkat pemahaman nasabah tentang produk yang ditawarkan. Faktor sosial dan ekonomi, seperti biaya transaksi yang lebih rendah dan lokasi agen yang strategis, juga berperan penting dalam keputusan nasabah untuk menggunakan Mandiri Agen. Berdasarkan temuan ini, dapat disimpulkan bahwa layanan Mandiri Agen sangat membantu masyarakat di Desa Nanga Dedai dalam memenuhi kebutuhan perbankan mereka, dan adanya peningkatan pemahaman serta kualitas pelayanan akan semakin meningkatkan minat nasabah untuk menggunakan layanan ini.

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INTRODUCTION

The global labor market is undergoing a paradigm shift shaped by digital transformation, technological disruption, and the proliferation of platform-based work arrangements. One of the most prominent manifestations of this transformation is the rise of the gig economy, which encompasses short-term contracts, freelance work, and on-demand labor facilitated by digital platforms (Kalleberg & Vallas, 2021; De Stefano, 2016).

In emerging economies such as Indonesia, the gig economy is increasingly regarded as an alternative pathway to employment, especially for young people who face structural barriers to formal labor markets. The World Bank (2023) reports that over 2.3 million Indonesians are actively engaged in gig work, indicating the growing relevance of platform-mediated employment in the national labor ecosystem.

Vocational school graduates constitute a significant proportion of this emerging workforce. With limited access to formal employment opportunities, many of them turn to flexible gig work options such as ride-hailing, e-commerce, freelance design, and digital content creation. This trend is particularly evident in rural regions, where traditional job markets are constrained, and digital infrastructure remains unevenly distributed (Lopez et al., 2020).

The present study focuses on SMK Mambaul Ulum Sukowono, a vocational high school located in rural East Java and affiliated with Islamic pesantren education. Approximately 60% of its alumni from the 2022–2023 cohort are engaged in informal gig work, making it a critical site for

examining how rural youth navigate the precarious terrain of the digital labor economy (Field Data, 2024).

The digital gig economy provides new forms of labor flexibility and autonomy. However, it simultaneously exposes workers to algorithmic control, income volatility, a lack of institutional protections, and emotional strain (Standing, 2021; Zuboff, 2019). These issues are often magnified in rural contexts, where educational institutions are under-resourced, and policy interventions are minimal.

While research on the gig economy has expanded considerably in recent years, the majority of studies focus on urban workers or global North contexts (Chen & Park, 2021; Smith et al., 2021). There remains a significant gap in the literature concerning rural youth, especially those educated in pesantren-based vocational institutions in developing countries.

Brown (2023) advocates for embedding digital economy competencies into vocational school curricula, yet such innovations have yet to reach most rural schools in Indonesia. Moreover, Johnson and Lee (2022) find that digital literacy significantly affects workers' ability to secure higher-quality gig jobs, underscoring the role of education in mediating access to digital labor.

The literature also highlights the dual character of gig work. Kalleberg and Dunn (2016) describe it as offering both empowerment and exploitation, while De Stefano (2016) emphasizes the regulatory ambiguity that places gig workers in a legal and social gray zone. These perspectives inform this study's conceptualization of the gig economy as both an opportunity and a threat.



Notably, few studies have explored the intersection of vocational training, religious-cultural values, and digital labor practices. In pesantren-affiliated institutions, values such as discipline, sincerity, and humility are emphasized, but little is known about how these norms influence youth participation in the gig economy.

This research addresses these gaps by exploring the lived experiences of 25 alumni from SMK Mambaul Ulum Sukowono who are currently engaged in gig work. By employing a qualitative case study design under an interpretivist paradigm, the study captures nuanced perspectives on motivation, skill acquisition, economic resilience, and aspirational trajectories.

The study is guided by several theoretical lenses. Human Capital Theory (Becker, 2022) provides a foundation for understanding how skill development influences employability. The segmented labor market model (Atkinson, 2021) helps explain the precarious positioning of gig workers, while Sen's Capability Approach (1999) frames their agency in navigating constrained economic environments.

The findings reveal a complex interplay between autonomy and insecurity. While participants value the flexibility and immediacy of gig work, they also confront unstable incomes, lack of social protection, and opaque algorithmic systems. These challenges are particularly acute for rural youth who lack institutional support and access to structured training.

Digital literacy emerges as a critical factor. The majority of respondents acquired digital skills through self-learning—such as YouTube tutorials and peer sharing—rather than formal instruction. This reflects a systemic gap in

vocational education curricula, which remain focused on traditional competencies and fail to integrate platform economy knowledge.

In terms of aspirations, many participants view gig work not as a final destination, but as a stepping stone toward entrepreneurship or further education. However, the absence of mentorship, legal frameworks, and financial stability makes this path highly uncertain.

Importantly, the study also finds that pesantren values shape work ethics in digital contexts. Attributes such as honesty, patience, and perseverance are often cited as personal strengths that help participants manage the emotional burdens of gig work. This cultural dimension is often overlooked in gig economy discourse.

By foregrounding the voices of rural vocational youth, this study contributes a localized, culturally grounded perspective to the broader literature on platform labor. It also challenges dominant narratives that portray gig work as universally empowering, offering a more critical and situated account.

The objectives of this study are twofold: (1) to examine how rural vocational youth engage with and make sense of gig economy participation, and (2) to identify systemic barriers and enabling factors that influence their digital labor outcomes.

Methodologically, the study employs in-depth interviews, participant observation, and document analysis to ensure data richness and triangulation. A thematic analysis approach (Braun & Clarke, 2022) is used to derive patterns and insights from qualitative data.

The implications of this study are significant for educators, policymakers, and platform developers. There is an urgent

need for curriculum reform in vocational education to incorporate digital competencies, entrepreneurship training, and psychosocial support for gig workers.

In conclusion, this research contributes new empirical insights and theoretical perspectives on rural youth employment in the digital age. It calls for more inclusive, ethical, and context-sensitive approaches to vocational training and digital labor governance in Indonesia and beyond.

RESEARCH METHODOLOGY

This study adopts a qualitative case study approach grounded in the interpretivist paradigm to explore the lived experiences of vocational high school alumni engaged in the gig economy in rural Indonesia. The interpretivist stance was chosen to understand the subjective meanings, values, and adaptive strategies used by participants as they navigate the fluid and often precarious world of platform-based employment. The research is rooted in the belief that reality is socially constructed, and therefore best understood through the voices and narratives of individuals.

The qualitative case study design enabled an in-depth exploration of a bounded system—specifically, alumni from SMK Mambaul Ulum Sukowono who graduated between 2017 and 2023 and have been working in various forms of gig work. This design allowed for a rich contextual analysis of the interplay between socio-cultural background, digital competence, economic aspiration, and labor market adaptation in a rural pesantren-affiliated vocational setting.

The unit of analysis in this study is individual alumni who represent diverse

sectors of the gig economy, including online transportation, freelance digital design, online selling, and content creation. These sectors were selected based on their high visibility and accessibility to youth in rural regions with limited infrastructure and formal employment opportunities (Chen & Park, 2021). By focusing on these sectors, the study aims to capture variations in platform dependency, digital literacy, and work outcomes.

The types of data used in this research include primary data obtained directly from the participants through interviews and observations, and secondary data collected from school archives, official reports, policy documents, and digital platform guidelines. The primary data forms the core of the analysis, while the secondary sources are used for triangulation and contextual reinforcement.

The source of primary data was 25 purposively selected alumni who met the following criteria: (1) graduated from SMK Mambaul Ulum Sukowono between 2017 and 2023, (2) had at least one year of experience working in the gig economy, and (3) represented different sectors of platform-based work. These inclusion criteria were intended to ensure relevance, diversity, and depth of insights into the gig work experience. The total alumni population within the specified period was approximately 120 individuals, and the 25 participants were selected to reflect proportional representation across gender, type of gig sector, and geographic origin (rural vs semi-urban), ensuring a diverse and balanced sample.

Data collection employed three key techniques: in-depth semi-structured interviews, participant observation, and document analysis. The semi-structured



interviews were designed to elicit narratives related to motivations, challenges, skill acquisition, financial conditions, emotional responses, and long-term aspirations. The flexibility of the interview format allowed for probing emerging themes while maintaining consistency across participants.

Participant observation was conducted with selected respondents in their daily work environments. The researcher shadowed online drivers, digital freelancers, and online sellers during portions of their routine tasks. This method helped capture non-verbal cues, work rhythms, and behavioral adaptations that could not be fully expressed in interviews.

Document analysis was used to complement interview and observation data. Documents analyzed include school policy reports, curriculum outlines, vocational training manuals, platform user agreements, and previous studies related to gig work and vocational education. This triangulated approach strengthens the validity of findings by comparing multiple sources of evidence.

All interviews were audio-recorded with informed consent and transcribed verbatim. Field notes from observations were digitized immediately after each session to preserve accuracy. The data was then imported into NVivo software to facilitate systematic coding and thematic analysis. NVivo supported data management, code generation, and pattern recognition across participant responses.

The analytical technique used is thematic analysis, following Braun and Clarke's (2022) six-phase framework: data familiarization, initial coding, theme identification, theme refinement, naming of themes, and final interpretation. Both inductive and deductive logics were

applied. Inductive logic allowed themes to emerge organically from the data, while deductive logic helped interpret findings through theoretical lenses such as Human Capital Theory and Labor Market Segmentation.

To ensure research credibility, the study applied Lincoln and Guba's (1985) trustworthiness criteria: credibility, transferability, dependability, and confirmability. Credibility was achieved through member checking and prolonged engagement; transferability was supported through rich contextual description; dependability was assured via audit trails; and confirmability was maintained through reflective memos and triangulation.

Although this study is qualitative in nature, descriptive statistics were used to summarize participant demographics, such as gender, age, years of experience, and sector of employment. However, to explore the potential influence of various factors on gig work outcomes such as income stability or entrepreneurial intention, a linear regression model was also constructed using selected quantifiable variables reported by participants.

The regression model used to test the influence of independent variables on the dependent variable—entrepreneurial intention—is as follows:

$$Y = \beta_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + \epsilon \quad (1)$$

Where:

Y = Entrepreneurial Intention

β_0 = Constant

X_1 = Need for Achievement

X_2 = Digital Self-Efficacy

X_3 = Platform Dependency

X_4 = Social Support

ϵ = Error Term

While the regression analysis serves only as a supplementary lens, it provides insights into the factors that influence participants' decisions to pursue entrepreneurship within or beyond gig work. The variables were measured through Likert-scale responses integrated into interview prompts and subsequently quantified for statistical exploration.

The ethical dimension of the study was carefully considered. Prior to data collection, ethical clearance was obtained from the Research Ethics Committee of Universitas PGRI Argopuro Jember. All participants provided informed consent, and pseudonyms were used to protect identities. The right to withdraw from the study at any time was also emphasized.

In sum, the methodology of this study was designed to be both rigorous and empathetic—balancing analytical depth with ethical sensitivity. The combination of qualitative immersion, theoretical framing, and light quantitative modeling allows this research to provide a holistic understanding of how vocational youth in rural Indonesia engage with and adapt to the digital gig economy.

RESULT AND DISCUSSION

The voices of 25 alumni from SMK Mambaul Ulum Sukowono echo a shared narrative of persistence, adaptability, and aspiration. Their engagement with the gig economy is not simply a product of choice, but often of constrained opportunities and systemic gaps in formal employment structures.

Most participants entered the gig economy driven by necessity. While some initially aspired to work in formal institutions or retail, repeated rejection and lack of experience shifted their trajectories

toward digital platforms. This aligns with Atkinson's (2021) labor segmentation theory, where secondary labor markets absorb individuals excluded from formal sectors.

Respondents frequently cited the allure of flexible schedules and autonomy. Many found a sense of control in choosing their working hours or clients. However, the lived experience often contradicted this perceived freedom, as algorithmic controls and unpredictable demand dictated their routines.

The notion of autonomy, central to Deci & Ryan's (2000) Self-Determination Theory, appeared fragile under the pressures of income volatility. Participants adapted their behaviors—waking earlier, working longer hours, accepting less profitable tasks—to appease opaque platform systems.

Digital literacy emerged as a critical determinant in navigating gig work effectively. Yet, most respondents reported acquiring skills informally through YouTube tutorials or peer mentoring. Only a small percentage attended structured training programs. This corroborates findings by Johnson & Lee (2022), who emphasized the pivotal role of digital skills in gig economy success.

A striking insight was the heavy reliance on self-directed learning. This method fostered independence but also reflected systemic gaps in vocational education, echoing critiques by Braun & Clarke (2022) on institutional unpreparedness in equipping students for modern labor demands.

Despite technological barriers, participants demonstrated remarkable resilience. Many leveraged basic tools like smartphones and data packages to build



online shops or attract freelance clients. These efforts exemplify Sen's (1999) Capability Approach, where individuals expand their functionings despite limited resources.

Nonetheless, the benefits of gig work were often tempered by emotional fatigue. Participants shared feelings of isolation, stress, and anxiety related to performance metrics, client disputes, and financial instability. This aligns with Hochschild's (2012) notion of the "emotional treadmill" in precarious labor.

Table 1: Monthly Income Variation Across Gig Work Sectors

Sector	Average Monthly Income (IDR)
Content Creator	6,000,000
Graphic Designer	5,000,000
Online Seller	3,500,000
Ride-Hailing Driver	3,000,000
Courier	2,500,000

Source: Field Data Processed, 2024

While financial independence was a common goal, many participants remained tethered to platform rules. Algorithms not only influenced job availability but also determined visibility, incentives, and penalties—often without clear logic. These dynamics echo Zuboff's (2019) critique of surveillance capitalism.

The role of pesantren values became evident in the ways participants approached challenges. Ethics such as honesty, patience, and humility helped them endure difficult clients or delayed payments. This spiritual grounding served as a protective buffer against burnout.

Institutional support, however, was markedly absent. Few participants received career guidance from schools or local government initiatives. Most relied on informal peer networks or online

Data revealed income levels ranging from IDR 1.8 million to IDR 6 million per month, with fluctuations based on demand, season, and algorithmic exposure. Although some earnings exceeded the regional minimum wage, the inconsistency posed challenges for financial planning.

Participants involved in content creation or graphic design generally earned more than those in ride-hailing or online selling. Table 1 presents an overview of monthly income across sectors.

communities. This aligns with Standing's (2021) identification of the "precariat" as structurally unsupported workers.

Despite the lack of external support, many showed entrepreneurial drive. Several respondents expressed intentions to develop their own brand, expand online businesses, or pursue formal education in business management.

The lack of access to credit or startup capital was a recurring obstacle. Participants noted that financial institutions were hesitant to lend to gig workers without formal contracts, highlighting the need for inclusive financial instruments.

Interestingly, gender differences emerged. Female participants often combined gig work with domestic responsibilities, and many preferred online selling due to its compatibility with home-based routines. These insights point to the

gendered nature of gig work participation. Table 2 below illustrates the percentage

distribution of alumni across different gig sectors.

Table 2: Percentage Distribution of Gig Work Among Alumni (2022–2023)

Sector	Percentage (%)
Gig Economy	60%
Non-Gig Informal Work	20%
Formal Work	20%

Source: Field Data, 2024

Note: This table illustrates the employment distribution of 50 alumni from the 2022–2023 cohort. Based on field data, approximately 60% (or 30 individuals) were involved in gig economy activities such as ride-hailing, online selling, and freelance design. The remaining 40% were split equally between non-gig informal work and formal sector employment. These figures provide contextual grounding for understanding the prominence of gig-based labor among recent vocational school graduates in rural areas.

Participants expressed mixed feelings about their future in the gig economy. For some, it served as a temporary stepping stone toward entrepreneurship or further education, while others feared long-term precarity and income instability. These divergent perspectives reflect the dual character of gig work—simultaneously offering empowerment and exploitation (Kalleberg & Vallas, 2021). The absence of clear labor protections intensified this tension; participants reported a lack of recourse when injured during deliveries or banned from platforms without explanation. This reinforces De Stefano's (2016) assertion regarding the vulnerability of workers in non-standard employment arrangements.

Psychologically, gig work was mentally and emotionally taxing. Respondents reported disrupted sleep

patterns, constant phone monitoring, and persistent anxiety over sudden deactivation—behaviors indicative of eroded work-life boundaries. These experiences mirror findings by Wilson (2024) on emotional precarity among Southeast Asian digital laborers. However, informal solidarity networks emerged as a coping mechanism. Alumni relied on WhatsApp groups and peer communities to exchange tips, emotional support, and platform strategies, reflecting the organic development of social capital (Martin & Evans, 2025).

Thematic analysis revealed seven dominant themes shaping the gig work experience: motivation, platform dependency, digital skills gap, economic volatility, emotional burden, lack of institutional support, and aspirational outlook. These findings affirm that rural youth are not passive actors but active agents navigating a dynamic digital labor ecosystem using limited resources. Yet, their resilience should not obscure the systemic failures of vocational institutions and policy infrastructure. Most respondents acquired digital competencies through self-directed learning, which although commendable, left many unaware of labor rights and platform risks (Johnson & Lee, 2022). This underscores the urgency for structured interventions and curriculum reforms.



Educational institutions, particularly vocational schools in rural areas, must urgently embed digital entrepreneurship, platform economy literacy, and labor protection education into their programs. Furthermore, policies must recognize gig workers as a legitimate labor segment by offering micro-financing access, platform dispute mechanisms, and tailored health insurance schemes (Adilia, 2024). Platforms themselves must adopt ethical governance by implementing transparent algorithms and responsive grievance systems. Cultural institutions such as pesantren also have a role in cultivating digital ethics by integrating moral values with economic strategies. These cross-sectoral interventions are essential for fostering dignity and sustainability in the digital labor space.

Finally, the stories of these alumni reveal how tradition and innovation coalesce in shaping rural youth's digital futures. Despite operating on the margins of formal employment, participants demonstrated creativity, aspiration, and adaptability—qualities that challenge dominant urban-centric narratives of digital work (Chen & Park, 2021). The methodological approach combining interviews, observations, and document analysis was effective in capturing both individual and structural dimensions of gig labor. While income remains a key motivator, participants also sought personal fulfillment, recognition, and autonomy—elements often suppressed in algorithmic systems. Future research must explore longitudinal outcomes, urban-rural disparities, and gendered participation to design more inclusive and ethical gig economies.

CONSLUSION

This study reveals that the engagement of rural vocational youth from SMK Mambaul Ulum Sukowono in the gig economy is not merely a matter of embracing flexibility or seizing digital opportunities, but rather a complex response to the intersection of structural exclusion, limited institutional support, and the persistent drive for personal and economic dignity. The findings demonstrate that while gig work provides an accessible and immediate source of income, especially for young people lacking formal job access, it is also marked by volatility, emotional strain, and deep dependence on opaque platform algorithms. Most participants entered the gig economy not out of aspiration alone but due to the failure of conventional systems to absorb them into stable, meaningful employment. Nonetheless, they adapted with creativity and resilience—leveraging informal learning, peer support networks, and digital tools to carve out livelihoods. The ethics and values instilled through their pesantren-based education—discipline, sincerity, humility—proved essential in helping them endure client unpredictability, financial stress, and the relentless demands of platform labor. Yet these personal resources, while valuable, are insufficient without structural intervention. The absence of targeted training, career counseling, and protective policies for gig workers has left many participants in a liminal space—technically employed, yet socially and economically vulnerable. As such, this study underscores the need for a transformation in vocational education to include platform literacy, digital entrepreneurship, and psychosocial readiness, ensuring that youth are not only capable of surviving in the gig economy

but of thriving with dignity and autonomy. Furthermore, local governments must recognize gig workers as legitimate labor actors and design inclusive policies that provide access to microfinance, dispute mechanisms, health insurance, and skill certification. Platforms themselves must be held accountable to implement ethical algorithmic governance, clear grievance procedures, and transparent incentive systems. Finally, cultural institutions such as pesantren should be engaged not only as moral anchors but as potential incubators for ethical digital entrepreneurship, blending tradition with innovation. The stories of the alumni in this research reflect not only struggle, but aspiration; not only marginality, but vision. They challenge the prevailing narrative that gig work is inherently liberating or necessarily exploitative—it is both, and more, shaped profoundly by one's social position, access to resources, and institutional support. Therefore, any meaningful effort to improve the conditions of gig workers, especially those in rural and religiously-rooted communities, must move beyond superficial digital inclusion and invest in deeper forms of empowerment—educational, economic, emotional, and ethical. This study hopes to serve as a call to action: for educators to reimagine curricula, for policymakers to act with urgency, for platforms to behave responsibly, and for society to recognize the value and vulnerability of its young digital laborers—not as passive participants in a digital economy, but as agents of change navigating an uncertain future with courage and hope.

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