Economic and Business Horizon

ISSN: 2963-2765

Economic and Business Horizon
Volume: 04
Issue: 02
Year: 2025
Page: 191-204

Citation:
Destiartono, M. E., Renata, A., & Yoestini. (2025). Fluid Workers in Indonesia: Benefits, Challenges, and Needs in Digitalization Era. *Economic and Business Horizon 4*(2), 191-204

Fluid Workers in Indonesia: Benefits, Challenges, and Needs in Digitalization Era

Mohamad Egi Destiartono[1], Almeira Renata[1*], Yoestini[1]

[1] Universitas Diponegoro, Semarang, Indonesia

[*] *Corresponding author: Almeira Renata (almeirarenata00@students.undip.ac.id)*

Abstract

The dynamic modern workplace and digitalization change the workforce from rigid to liquid workforces. Therefore, this study aims to unravel the characteristics, benefits, and challenges of fluid workers in Indonesia using a qualitative method. For these motivations, structured questionnaires with dichotomous questions were distributed to collect primary data. To avoid biased results, study participants are chosen rigorously. The number of participants was 15 workers from various institutions. The findings show that most fluid workers in Indonesia are adaptive, easy to collaborate with, tech-savvy, lifelong learners, and resilient. The current benefits of fluid workers include skill and knowledge exposure, networking possibilities, the prospect of higher income, and flexibility. In terms of challenges, a lack of benefits and limited social support are two factors that impede fluid workers. Surprisingly, job insecurity and income instability are not the primary concerns for fluid workers, indicating that fluid workers differ significantly from informal workers. The priority needs of fluid workers are the right to rest and leisure, equal treatment, fair compensation, and career development opportunities.

Keywords

Fluid Workers, Digitalization, Workplace Flexibility, Employment Challenges, Indonesia Labor Market.

1. Introduction

Before the age of digitalization, workplace environments in emerging countries such as Indonesia were more rigid and informal than today. While manual labour still have a critical position in Indonesia's economy since they are contributing significantly to labor markets, especially in the agriculture, mining, construction, and manufacturing sectors (Asian Development Bank & BPS-Statistic, 2011), there is a significant growth in high technology adoption, especially in the service sectors (van de Weerd et al., 2016). As of 2023, more than 60% of the workforce is employed in the informal sector and they are firmly associated with low-wage and education (Sibagariang et al., 2023; Ahmad, 2021). Nonetheless, in the age of digitalization, the role of informal workers and firms may be improved in the dynamic work environment (Noerhartati et al., 2023; Ramadhani, 2024; Jurnalita, 2024).

In the rigid workforce environment, production activities are associated with long working hours (Lee et al., 2007). Employees with rigid work styles generally work around six to seven days long in the office with very few breaks (Golden, 2012). Also, limited worker rights and strict hierarchy are involved in the rigid workplace environment with authoritarian leadership (Yi, 2022; Syed et al., 2016). Workers have no bargaining power for their rights and small social hierarchies since managers are supposed to have absolute authority (Luoh et al., 2014). Last, of all, there is limited advanced technology usage that engages in production activities in the rigid workforce, except for Information Technology and Communication (ITC) companies (Srinivasan, 2012).

Since the twentieth century, varieties of work styles and agreements have become more complex, ranging from rigid and fluid workforces. Digitalization and high technology use are critical factors that change work styles such as office-based, field-based, remote, virtual, and hybrid work style (Krajčík et al., 2023). In addition, there is significant demand for a project-based workstyle (Chafi et al., 2022). These phenomena mark a substantial shift in the workplace environment. There is a transition away from lengthy hours of activity and rigid structures in businesses, as well as different sorts of agreements (Rotatori et al., 2021). A combination of digitalization and structural changes in the economy are argued as reasons for the fast innovation in the workplace and types of contracts to higher high-skill labor (Agrawal et al., 2015; Balsmeier & Woerter, 2019).

As discussed in earlier investigations, the coronavirus disease (COVID-19) pandemic is viewed as a catalyst for considerable digitization in developing countries which in turn introduces the use of high technology and dynamic work styles (Widyastuti et al., 2023; Takeda et al., 2022; Bai et al., 2021). During the COVID-19 outbreak, employees have pushed remote and hybrid works to the forefront using technology such as online meetings and video conference applications (Erjavec et al., 2021). Therefore, the use of robotics, advanced materials, artificial intelligence (AI), genetic modifications, the Internet of Things (IoT), neuro-technologies, autonomous vehicles, and drones became more integrated into social and economic activities, 'altering behaviors, relationships, and meaning, including in workforce environments' (Turner, 2021).

Aside from the COVID-19 outbreak, organizations that seek to hire flexible, adaptable, and expert individuals in a dynamic environment are significantly growing (Harsch & Festing, 2020). As a consequence, it is not surprising that the nature of work is changing and becoming more fluid (Ashford et al., 2018). Numerous types of organizations, including private and public enterprises, have employed the role of fluid workers such as freelancers, gig or crowdsourcing workers (Baines & Robson, 2001). Therefore, these phenomena also cause a change in the types of firms and labor agreements.

Rodríguez (2021) highlighted characteristics associated with fluid workforces, including lack of permanence, adaptability, mobility, horizontality, and high-frequency modification. In addition, the liquid workforce is firmly associated with the use of IT and dynamic organizations (Marjanovic & Murthy, 2022). As businesses recognize the potential of these fluid and dynamic experts, the term fluid workforce is supposed to expand, and the role of independent professionals as highly respected contributors who can support and accelerate core parts of the business (Do, 2022).

Nonetheless, there are significant challenges that must be addressed by employees in a dynamic, modern, and fluid workforce environment. Financial instability is one of the critical aspects that should be navigated by fluid workers (May et al., 2022). As part of informal workers, they also confront considerable hurdles in getting social insurance, particularly because they are unable or unwilling to contribute a large percentage of their salaries to finance formal sector social insurance benefits (Harsch & Festing, 2020). Furthermore, Lund (2012) emphasized the lack of work-related social protection for informal workers since they are excluded from formal social security systems.

Against this background, this study thus sought to explore the characteristics, benefits, challenges, and priority needs of fluid workers in the context of Indonesia using a qualitative approach. This research focuses on workers' perspectives rather than organizations. To the best of the author's knowledge, this is priory research since there is no earlier investigation about either a fluid worker or workforce phenomenon using the worker's insights. Previous studies have generally unraveled the benefits and challenges of informal workers (see Santoso et al., 2022; Rothenberg et al., 2016; Dartanto et al., 2016; Pitoyo et al., 2021). Therefore, this study provides an up-to-date analysis of the fluid workforce by addressing the following research questions:

RQ 1: What are the characteristics of fluid workers in Indonesia?
RQ 2: What are the advantages of fluid workers?
RQ 3: What are the challenges of fluid workers?
RQ 4: What are the priority needs of fluid workers?

A qualitative research method is employed to answer the above questions. To acquire a thorough picture of fluid workers in Indonesia, this study utilized on structured questionnaires, distributed by Google Drive in March 2024 using an online platform. Study participants are fluid workers from diverse backgrounds, including private firms, semi-government and government institutions, universities, and freelancers.

2. Literature Review

This The application of digital technology in social and economic activities (incl. during the Covid-19 outbreak) alters many aspects of human living things, including the work environment (Donthu & Gustafsson, 2020; Williamson et al., 2020). Today's workplace styles and firm-labor agreements differ significantly from those in past decades. The transition from a rigid to a fluid workforce is occurring for several reasons (Rotatori et al., 2021). Rigid worker agreements may not be relevant to be used in several industries; instead, dynamic, sustainable, and fluid workforces are supposed to have a significant impact on organization development (Bari et al., 2022). In addition, career preference for the labor force with advanced education is growing given that new technologies are constantly creating new career paths and changing skills (Ernst et al., 2019; Akour & Alenezi, 2022). There are innovations in work styles in terms of location, i.e., hybrid work, remote work, and project-based work, and approaches to tasks and collaboration with others (World Economic Forum, 2020; Klaser et al., 2023).

According to the CRI (2020), the term fluid workforce is defined as freelancers, independent, gig, or paid-crowdsourced workers. To explain further, fluid workforces are individuals who work on a temporary basis with organizations (either full-time or part-time) and are not on any employer's payroll. The idea of a liquid workforce has emerged as a response to the shifting dynamics of the contemporary workplace (Rossingol, 2024). The fluid workforce is supposed to drive labor market flexibility and efficiency (Nugroho, 2018). Additionally, the growth of a fluid workforce suggests that technology adoption and innovation are improving for both enterprises and employees.

The fluid workforce is considered fluid based on three criteria namely digitalization, mobility, and flexibility (Rossingol, 2024). Technology is the primary driver of the fluid workforce, and it is supposed to be a positive correlation between advanced technology adoption and dynamic work styles (Singh, 2021) (Shepheard, 2020). Taking full advantage of the internet, computer programs, and electronic devices is crucial, as virtual meetings replace in-person ones (Roos et al., 2020); files that were once kept at the office are now digitized and available to everyone (Leggett, 2020); and instant messaging apps replace face-to-face conversations (Rajendran et al., 2019). In addition, globalization, gig economy, skill specialization, cost efficiency, and agile business practices are other factors that drive the use of fluid workers (Rossingol, 2024).

In practice, technology enables workers to access the tools they require to complete their duties from anywhere. Employees can avoid travel and work from outside the office by employing hybrid and remote circumstances (Wontorczyk & Rożnowski, 2022). The advanced technology use can also assist businesses enter new markets and obtain customers in places where they do not currently operate (Akpan et al., 2022). Additionally, younger employees such as millennials and gen-z see work as a means to an end, which is why the liquid workforce model emphasizes people and work-life balance (Sánchez-Hernández et al., 2019).

The use of fluid workers is supposed to continually grow since it is associated with several benefits for firms and workers themselves. It is widely known that a liquid workforce environment offers companies the opportunity to have access to a larger talent pool while simultaneously increasing cost-effectiveness (Do, 2022). Organizations can only pay for the skills they require and can adopt project-based work rather than attendance. Meanwhile, for fluid workers, benefits in the dynamic and fluid workforce environment include flexibility, marketability, and potentially higher earnings (Burke & Cowling, 2020). Fluid workers have more autonomy over their workload, income, and the types of projects they prefer to choose (Nawaz et al., 2020). Furthermore, fluid workers have opportunities to develop new skills and gain experience in different areas.

Nonetheless, fluid workforces are also associated with critical issues. Management complexity, culture and teamwork, and compliance difficulties are challenges that should be addressed by organizations for their successful operations (Porath, 2023). Businesses should be aware of the legal and compliance issues involved with hiring flexible staff (Wahab et al., 2024). Meanwhile, employment security, a lack of insurance, loneliness, financial volatility, and career advancement are all concerns for fluid workers (Chen et al., 2020). Fluid workers such as contract or freelancers may not be entitled to the same benefits as regular employees, namely health insurance and paid time off, and they have no opportunities for career growth (Chen et al., 2020; Mai, 2021).

3. Methodology

The study applied a qualitative approach utilizing explorative and descriptive strategies with the aim of exploring fluid workers in Indonesia. A qualitative technique was applied since it allowed for descriptions and provided a thorough

grasp of the participants' own experiences (Bradshaw et al., 2017). Structured questionnaires were employed in this study as material for descriptive analysis. Study participants are fluid workers, that is, dynamic employees, who use technology to complete their tasks. Therefore, the types of data used are secondary, consisting of quantitative and qualitative data. The advantage of the qualitative method is that it allows for a deep exploration and investigation of complex phenomena (Wenzel et al., 2016). In addition, qualitative research has the power to identify nuances, paradoxes, and multiple perspectives (Tomaszewski et al., 2020). Despite being traditionally less important in economics, qualitative approaches are gaining traction, with well-done work providing rigorous insights, and adding to economic knowledge (Starr, 2014).

This study relies on small sample size; however, as proposed by Crouch and McKenzie (2006), a small participant is still preferable when researchers intend to be "fully engaged in the issues, to constructive connection with respondents, and to thoroughly address research problems in depth through theoretical contemplation". Moreover, qualitative analysis is focused on the depth of data rather than the frequencies (O'Reilly & Parker, 2012). The data used is collected by interviews. An interview is one of the most common approaches applied in qualitative research (Thompson et al., 2019; Osborne & Grant-Smith, 2021). Despite face-to-face interviews, we organize structured questionnaires to collect data in terms of fluid workers. Interviews are still one of the most widely employed by scholars to document multiple perspectives, extend understanding, and display real-life events, making them a widely applied technique (Johnstone, 2017).

As highlighted before, this study employs structured questionnaires to collect data in terms of fluid workers. The structured questionnaire was prepared and designed to collect precise information (Patten, 2020). The questionnaires have 4 questions in Section 1, 12 in Section 2, 7 in Section 3, 7 in Section 4, and 5 in Section 5. Thus, there are a total of 32 questions. Section 2 describes the fluid worker characteristics (CR). Section 3 contains fluid worker benefits (BN), while Section 4 contains fluid worker challenges (CL). Section 5 consists of fluid worker needs. The questionnaire was developed with dichotomous (Yes or No) questions. The dichotomous questionnaire approach is appropriate to use in case of the need for necessary validation (Boyle, 1990).

This study adopts previous studies by CRI (2020), Rashmi et al. (2023), Ahmad (2021) and Bryant (2020) to construct questions. Therefore, 12 parameters are used to identify the characteristics of fluid workers, including adaptability, autonomy, resilience, lifelong learning, networking, result-oriented, emotional intelligence, resourcefulness, entrepreneurial spirit, communication skills, and tech-savvy. Next, 7 indicators to determine the benefits of fluid workers are explored, including flexibility, autonomy, marketability, potential higher pay, exposure to varied skills and knowledge, work-life balance options, and networking. Finally, to acknowledge the challenges of being fluid workers, 7 major challenges experienced by freelancers or gig workers are used: job insecurity, income volatility, project uncertainty, a lack of benefits, the risk of isolation, limited social support, and a lack of career development. The final questionnaire is supplied in the appendix.

Purposeful maximum-variation sample selection was employed in this research. Therefore, the study participants were fluid workers from various backgrounds, including universities, private firms, government institutions, and semi-government institutions. The definition of fluid workers in this research are workers who applied non-indefinite employment agreements, including finite contract, project-based, or part-time agreements. While recruiting participants, we regard several criteria, including experience and the use of high technology. We consider a fluid worker with at least one year of experience and use high technology in their task. In addition, we regard workers who have at least implemented hybrid, remote, or flexible work

styles. Additionally, participants in this study are focused on Gen-Z and Millennials since they are argued to be more dynamic and tech-savvy compared to previous generations (Szymkowiak et al., 2021; Zhang & Abd Rahman, 2022).

Table 1. Participant in in-depth interviews

Initial	Affiliation	Status
NMFG	Semi-government institution	Project-based worker
MA	None	Freelancer
AM	Private company	Other
MY	Semi-government institution	Project-based worker
FSL	Government institution	Contract
DL	Semi-government institution	Project-based worker
MRR	None	Freelancer
DBA	Private company	Contract
MKF	University – (Bloomberg laboratory)	Contract
HA	University	Project-based worker
FM	Private company	Project-based worker
RAA	Government institution	Contract
ARS	Semi-government institution	Project-based worker
TKA	Private company	Contract
IA	University	Project-based worker

4. Results

To begin with the results and discussions, this study identifies the demographic characteristics of participants. A total of 15 fluid workers from various backgrounds took part in this research. Their demographic data is summarized in Table 2.

Table 2. Demographics of Study Participants

Personal Characteristic		Total	Percentage
Age	Millennials	5	33.33
	Gen-Z	10	66.67
	Total	15	100.00
Gender	Male	10	66.67
	Female	5	33.33
	Total	15	100.00
Affiliation	Government institution	2	13.33
	Semi-government institution	5	33.33
	Private companies	4	26.67
	University/Education	2	13.33
	Freelancer	2	13.33
	Total	15	100.00
Contract	Finite contract	5	33.33
	Project-based worker	7	46.67
	Freelancer	2	13.33
	Part-time	0	0.00
	Other	1	6.67
	Total	15	100.00
Income per month	< minimum threshold	12	86.67
	> minimum threshold	3	13.33
	Total	15	100.00

In terms of age, we found that the vast majority of respondents are Gen-Z (67.33%). Millennials contribute 33.33% of the total participants. 66.67% of respondents are male. In terms of affiliation, the most of participants are associated with semi-government institutions (33.33%), followed by private firms (26.67%).

Last of all, finite contract work and project-based agreements are the vast majority used among fluid workers.

Table 3 shows the results of questionnaires issued according to fluid worker characteristics. The vast majority of participants believed that fluid workers are adaptive, resilient, technologically aware, resourceful, and result-oriented. They also have excellent communication skills, emotional intelligence, and networking abilities. 100% of the participants agreed to become lifelong learners. Surprisingly, participants generally reject autonomy as a hallmark of flexible workers. Finally, just 60% of people identified as entrepreneurial spirits. Based on these findings, it can be concluded that the most important traits of fluid workers in Indonesia are tech savvy, lifelong learners, easy to collaborate with, and adaptable. Because they also have strong communication skills, networking abilities, and emotional intelligence; therefore, fluid workers are well-suited to contribute to the dynamic workplace. As suggested by previous studies, fluid workers are critical to meeting demand fluctuation, specialized skills, cost efficiency, knowledge transfer, and labor market flexibility.

Table 3. Fluid Worker Characteristics in Indonesia

Fluid Worker Characteristics	**Percentage**		**Total**	
	Yes	No	Yes	No
Adaptable	93.33	6.67	14	1
Control (Autonomy)	40.00	60.00	6	9
Resilience (self-motivation and discipline)	93.33	6.67	14	1
Resourcefulness	86.67	13.33	13	2
Lifelong learner	100.00	0.00	15	0
Good communication skills	73.33	26.67	11	4
Good emotional manage	86.67	13.33	13	2
Good networking	80.00	20.00	12	3
Entrepreneurial Spirit	60.00	40.00	9	6
Result-oriented	73.33	26.67	11	4
Collaboration	93.33	6.67	14	1
Tech-savvy	93.33	6.67	14	1

Table 4 displays the results of questionnaires distributed in terms of fluid worker benefits from the workers' perspective. The vast majority of participants agreed that the potential benefits of fluid workers include exposure to a wide range of skills and information, networking opportunities, the possibility of higher pay, and flexibility. 66.67 percent of interviewees stated that fluid workers provided opportunities for work-life balance. Surprisingly, only 40% of participants agreed on the benefits of work or project autonomy.

Table 4. Fluid Worker Benefit

Fluid Worker Benefit	**Percentage**		**Total**	
	Yes	No	Yes	No
Flexibility	86.67	13.33	13	2
Control (autonomy)	40.00	60.00	6	9
Marketability (employability)	80.00	20.00	12	3
Potential higher income	86.67	13.33	13	2
Exposure to various skills and know ledge	93.33	6.67	14	1
Work-life balance opportunities	66.67	33.33	10	5
Networking opportunities	93.33	6.67	14	1

Since the number of fluid workers is increasing, the presence of benefits linked with fluid workers should be maintained. These benefits are vital to the skill, health,

and well-being of fluid workers. Furthermore, fluid workforces provide flexibility for both employers and employees, allowing them to adjust quickly to changes in demand and market conditions. Maintaining their benefits can promote flexibility, which is critical for innovation and competitiveness in today's changing and dynamic labor markets. Furthermore, preserving their benefits, such as potential higher income, flexibility, exposure to a variety of skills and information, and networking opportunities, ensures their continuous contribution to economic growth, productivity, and efficiency.

Soon after addressing benefits, Table 5 shows the results of questionnaires distributed regarding fluid worker challenges from the workers' perspective. The majority of participants agreed that the vast challenges of fluid workers include a lack of benefits and limited social support. Next, 53.33 percent of participants agreed that job security is associated with fluid workers. Income instability, uncertainty projects, and lack of career development opportunities are other challenges that were argued by nearly half of the participants. There are only 26.67 participants who stated that the risk of isolation is a critical issue for fluid workers.

Those challenges that arise in fluid workforces should be addressed considerably. Neglecting the present challenges can lower the role of fluid workers as drivers of numerous economic activities. Instead of contributing to the economy as fluid workers, they may be identified as informal workers with low productivity. The terms fluid and informal worker are different given that fluid workers are considered employees with high levels of productivity. Thus, navigating challenges such as "limited benefit, income instability, and career development" may influence social equity and labor well-being. Furthermore, understanding and addressing critical issues faced by fluid workers are vital for adapting labor regulations to the changing dynamics of the workforce.

Table 5. Fluid Worker Challenges

Fluid Worker Challenges	Percentage		Total	
	Yes	No	Yes	No
Job insecurity	53.33	46.67	8	7
Income instability	46.67	53.33	7	8
Uncertainty project	40.00	60.00	6	9
Lack of benefits (incl. insurance)	80.00	20.00	12	3
Risk of isolation	26.67	73.33	14	1
Lack of career development opportunities	40.00	60.00	6	9
Limited social support	86.67	13.33	13	2

Following discussing the characteristics, benefits, and challenges of fluid workers, this study also explores rigorously the priority needs of fluid workers. For this motivation, this paper employed six possible needs (rights) of fluid workers that may not yet be fulfilled from workers' perspectives. Table 6 demonstrates the results of fluid workers' needs based on questionnaires distributed. The results denote that 100 percent of respondents need their right to rest and leisure. Equal treatment and job security are also priority needs of fluid workers. In addition, 80 percent of participants need their right to fair compensation and career development opportunities. Last of all, only 66.67 of the participants who need their right to insurance.

Table 6. Fluid Worker Challenges

Fluid Worker Challenges	Percentage		Total	
	Yes	No	Yes	No
Right to insurance	66.67	33.33	10	5
Right to fair compensation	80.00	20.00	12	3
Job security	86.67	13.13	13	2
Right to equal treatment	93.33	6.67	14	1
Right to rest and leisure	100.00	0.00	15	0
Career development opportunities	80.00	20.00	12	3

The results in Table 6 point out that the vast majority of fluid workers' needs (rights) are not yet satisfied. This gives additional challenges for policymakers or relevant stakeholders. As there is significant growth in the role of fluid workers in various types of organizations, it is important to draft a scheme and policy to fulfill fluid workers' rights. Fair wages and equal treatment are two aspects that should be navigated currently since they impact workers' well-being in the short run. In addition, it is critical to identify types of insurance that should be integrated, strategies to lower job insecurity, and rights to rest and leisure. Finally, a collaboration between the government and private companies is necessary to discuss possible schemes and policies that can create long-term career opportunities for fluid workers.

5. Discussion

This study reveals that fluid workers in Indonesia exhibit distinctive characteristics such as adaptability, collaboration, technological proficiency, and resilience, alongside a strong orientation toward lifelong learning. These traits highlight their suitability in dynamic and rapidly changing digital work environments. Unlike traditional informal workers, fluid workers possess advanced skillsets, including high emotional intelligence, effective communication, and strong networking capabilities, facilitating their effective integration into various organizational contexts.

In terms of benefits, the study identifies significant positive aspects for fluid workers, notably exposure to diverse skills and knowledge, extensive networking opportunities, potential for higher income, and increased flexibility in their professional lives. These advantages reflect the contemporary digital economy's emphasis on knowledge transfer, skill diversification, and adaptive work arrangements, aligning with the findings of Burke and Cowling (2020) and Nawaz et al. (2020), who also underline the importance of flexibility and autonomy in enhancing worker satisfaction and productivity.

However, fluid workers face substantial challenges, primarily limited access to benefits such as insurance and constrained social support. Interestingly, job insecurity and income instability, frequently discussed in the literature (May et al., 2022; Chen et al., 2020), are not considered predominant concerns among Indonesian fluid workers. This suggests a critical divergence from traditional informal labor perspectives, indicating a unique positioning of fluid workers within Indonesia's evolving labor landscape.

The priority needs highlighted by participants include rights to rest and leisure, equal treatment, fair compensation, and enhanced career development opportunities. Addressing these needs is crucial to ensure fluid workers' sustained productivity and well-being, and underscores the necessity for targeted policy interventions. Ensuring these rights could improve the overall labor market flexibility and responsiveness, thus fostering a more inclusive and efficient economic environment.

Ultimately, this study emphasizes the need for strategic collaboration between policymakers, private sector entities, and labor representatives to establish

comprehensive policies that recognize and address the specific benefits, challenges, and essential needs of fluid workers. Such initiatives could significantly contribute to the growth and sustainability of Indonesia's digital workforce in the long term.

6. Conclusion

The role of fluid workers in the age of digitalization is significant since it offers several benefits for both organizations and employees such as cost efficiency and flexible labor market. Therefore, this study aims to investigate the characteristics of fluid workers in Indonesia as well as its benefits and challenges by adopting qualitative approaches. This study also rigorously identifies the current priority needs of fluid workers. For these motivations, structured questionnaires were distributed to collect primary data. To avoid biased results, study participants are chosen conscientiously following the vast majority of characteristics of the fluid worker. Thus, the number of participants was 15 workers from various institutions, including government and semi-government institutions, universities, private companies, and freelancers. Descriptive qualitative analysis is applied with the aim of unraveling fluid worker characteristics, benefits, challenges, and needs rigorously from fluid workers' perspective.

The results denote that the vast majority characteristic of fluid workers in Indonesia are adaptable, easy to collaborate with, lifelong learner orientation, and resilient. Next, the current benefits of fluid workers are skill and knowledge exposure, networking opportunities, the possibility of higher income, and flexibility. Regarding challenges, a lack of benefits and limited social support are two aspects that hamper fluid workers. Surprisingly, job insecurity and income instability are not the main issues dealt with by fluid workers. These findings indicate that fluid workers strongly differ from informal workers. The priority needs of fluid workers are the right to rest and leisure, equal treatment, fair compensation, job security, and career development opportunities.

This study started as priory research for investigating the characteristics of fluid workers, their benefit and challenges, as well as their needs from workers' perspectives; therefore, it is important to conduct empirical studies as follows: (i) exploring the role of fluid workers from organization' perspectives in Indonesia; (ii) unraveling the priority need of fluid workers that should be enforced in the near future; and (iii) investigating the challenges and benefit faced by organizations in the dynamic work styles in the context of Indonesia.

References

Agrawal, A., Horton, J., Lacetera, N., & Lyons, E. (2015). Digitization and the contract labor market: A research agenda. Economic analysis of the digital economy. *Economic Analysis of the Digital Economy 5* (2), 35.

Ahmad, N. (2021). Gig Workers: The New Employment Form in the New Economy. *Ulum Islamiyyah*, *33*(S4), 131–145.

Akour, M., & Alenezi, M. (2022). Higher Education Future in the Era of Digital Transformation. *Education Sciences*, *12*(11).

Akpan, I. J., Udoh, E. A. P., & Adebisi, B. (2022). Small business awareness and adoption of state-of-the-art technologies in emerging and developing markets, and lessons from the COVID-19 pandemic. *Journal of Small Business & Entrepreneurship*, *34*(2), 123–140.

Ashford, S. J., Caza, B. B., & Reid, E. M. (2018). From surviving to thriving in the gig economy: A research agenda for individuals in the new world of work. *Research in Organizational Behavior*, *38*, 23–41.

Asian Development Bank, & BPS-Statistic. (2011). *The Informal Sector and Informal Employment in Indonesia*. Available at: www.adb.org.

Bai, C., Quayson, M., & Sarkis, J. (2021). COVID-19 pandemic digitization lessons for sustainable development of micro-and small- enterprises. *Sustainable Production and Consumption*, *27*, 1989–2001.

Baines, S., & Robson, L. (2001). Being self-employed or being enterprising? the case of creative work for the media industries. *Journal of Small Business and Enterprise Development*, *8*(4), 349–362.

Balsmeier, B., & Woerter, M. (2019). Is this time different? How digitalization influences job creation and destruction. *Research Policy*, *48*(8), 103765.

Bari, N., Chimhundu, R., & Chan, K. C. (2022). Dynamic Capabilities to Achieve Corporate Sustainability: A Roadmap to Sustained Competitive Advantage. *Sustainability (Switzerland)*, *14*(3).

Boyle, K. J. (1990). Dichotomous-choice, contingent-valuation questions: Functional form is important. *Northeastern Journal of Agricultural and Resource Economics*, *19*(2), 125–131.

Bradshaw, C., Atkinson, S., & Doody, O. (2017). Employing a Qualitative Description Approach in Health Care Research. *Global Qualitative Nursing Research*, *4*, 2333393617742282.

Bryant, A. (2020). Liquid uncertainty, chaos and complexity: The gig economy and the open source movement. *Thesis Eleven*, *156*(1), 45–66.

Burke, A., & Cowling, M. (2020). The relationship between freelance workforce intensity, business performance and job creation. *Small Business Economics*, *55*(2), 399–413.

Capgemini Research Institute. (2020). *The Fluid WOrkforce Revolution.* Available at: https://www.capgemini.com/insights/research-library/fluid-workforce/

Chafi, M. B., Hultberg, A., & Yams, N. B. (2022). Post-pandemic office work: Perceived challenges and opportunities for a sustainable work environment. *Sustainability (Switzerland)*, *14*(1), 1–20.

Chen, B., Liu, T., & Wang, Y. (2020). Volatile fragility: new employment forms and disrupted employment protection in the new economy. *International Journal of Environmental Research and Public Health*, *17*(5), 1531.

Crouch, M., & McKenzie, H. (2006). The logic of small samples in interview-based qualitative research. *Social Science Information*, *45*(4), 483–499.

Dartanto, T., Rezki, J. F., Pramono, W., Siregar, C. H., Usman, & Bintara, H. (2016). Participation of Informal Sector Workers in Indonesia's National Health Insurance System. *Southeast Asian Economies*, *33*(3), 317–342.

Donthu, N., & Gustafsson, A. (2020). Effects of COVID-19 on business and research. *Journal of Business Research*, *117*, 284–289.

Erjavec, K., Janžekovič, M., Kovač, M., Simčič, M., Mergeduš, A., Terčič, D., & Klopčič, M. (2021). Changes in use of communication channels by livestock farmers during the covid-19 pandemic. *Sustainability (Switzerland)*, *13*(18).

Ernst, E., Merola, R., & Samaan, D. (2019). Economics of Artificial Intelligence: Implications for the Future of Work. *IZA Journal of Labor Policy*, *9*(1).

Golden, L. (2012). The effects of working time on productivity and firm performance, research synthesis paper. *International Labor Organization (ILO) Conditions of Work and Employment Series*, (33).

Harsch, K., & Festing, M. (2020). Dynamic talent management capabilities and organizational agility—A qualitative exploration. *Human Resource Management*, *59*(1), 43–61.

Johnstone, M.-L. (2017). *Depth Interviews and Focus Groups BT - Formative Research in Social Marketing: Innovative Methods to Gain Consumer Insights* (K. Kubacki & S. Rundle-Thiele (eds.); pp. 67–87). Springer Singapore.

Jurnalita, A. C. (2024). The Impact of Digital Transformation on MSME Competitiveness and Economic Growth. *Arthatama: Journal of Business Management and Accounting*, *8*(2), 95-106.

Klaser, K., Cuel, R., & Casari, P. (2023). The future of hybrid work in Italy: A survey-based Socio-Technical-System analysis. *Journal of Innovation & Knowledge*, *8*(4), 100426.

Krajčík, M., Schmidt, D. A., & Baráth, M. (2023). Hybrid Work Model: An Approach to Work–Life Flexibility in a Changing Environment. *Administrative Sciences*, *13*(6).

Lee, S., McCann, D., & Messenger, J. C. (2007). Working Time Around the World: Trends in working hours, laws and policies in a global comparative perspective. *Working Time*

Around the World: Trends in Working Hours, Laws and Policies in a Global Comparative Perspective, 1–220.
Leggett, E. R. (2020). *Digitization and digital archiving: a practical guide for librarians*. Rowman & Littlefield Publishers.
Lund, F. (2012). Work-related social protection for informal workers. *International Social Security Review*, *65*(4), 9–30.
Luoh, H. F., Tsaur, S. H., & Tang, Y. Y. (2014). Empowering employees: Job standardization and innovative behavior. *International Journal of Contemporary Hospitality Management*, *26*(7), 1100–1117.
Mai, Q. D. (2021). Unclear signals, uncertain prospects: The labor market consequences of freelancing in the new economy. *Social Forces*, *99*(3), 895–920.
Marjanovic, O., & Murthy, V. (2022). The Emerging Liquid IT Workforce: Theorizing Their Personal Competitive Advantage. *Information Systems Frontiers*, *24*(6), 1775–1793.
May, T., Warran, K., Burton, A., & Fancourt, D. (2022). Socioeconomic and Psychosocial Adversities Experienced by Freelancers Working in the UK Cultural Sector During the COVID-19 Pandemic: A Qualitative Study. *Frontiers in Psychology*, *12*(January), 1–11.
Nawaz, Z., Zhang, J., Mansoor, R., Hafeez, S., & Ilmudeen, A. (2020). Freelancers as Part-time Employees: Dimensions of FVP and FJS in E-Lancing Platforms. *South Asian Journal of Human Resources Management*, *7*(1), 34–60.
Noerhartati, E., Saurina, N., & Idris, A. (2023). Evaluating User Satisfaction and Educational Impact of the Sorghum Entrepreneur Marketplace: An Application of the Pieces Framework. *Research Horizon*, *3*(6), 668-679.
Nugroho, A. A. (2018). Labor Market Flexibility: Advantages for Workforce or Threat? *Policy & Governance Review*, *2*(2), 132.
O'Reilly, M., & Parker, N. (2012). 'Unsatisfactory Saturation': a critical exploration of the notion of saturated sample sizes in qualitative research. *Qualitative Research*, *13*(2), 190–197.
Osborne, N., & Grant-Smith, D. (2021). *In-Depth Interviewing BT - Methods in Urban Analysis* (S. Baum (ed.); pp. 105–125). Springer Singapore. h
Patten, M. (2020). Planning Questionnaire Research. *Questionnaire Research*, 7–14.
Pitoyo, A. J., Aditya, B., Amri, I., & Rokhim, A. A. (2021). Impacts and Strategies Behind COVID-19-Induced Economic Crisis: Evidence from Informal Economy. *The Indian Journal of Labour Economics*, *64*(3), 641–661.
Porath, U. (2023). Advancing Managerial Evolution and Resource Management in Contemporary Business Landscapes. *Modern Economy*, *14*(10), 1404–1420.
Rajendran, J. A., Baharin, H., & Mohmad Kamal, F. (2019). Understanding Instant Messaging in the Workplace BT - Advances in Visual Informatics. In H. Badioze Zaman, A. F. Smeaton, T. K. Shih, S. Velastin, T. Terutoshi, N. Mohamad Ali, & M. N. Ahmad (Eds.), *Advances in Visual Informatics* (pp. 640–652). Springer International Publishing.
Ramadhani, R. (2024). Big Data in Digital Transformation of Corporate Marketing Strategy. *Economic and Business Horizon*, *3*(1), 24-28.
Rashmi, L. N. E., Raina, A., Shukla, R., & Meharunisa, S. (2023). The Future of Work: Adapting Management Practices to the Gig Economy and Freelancer Culture. *European Economic Letters (EEL)*, *13*(3 SE-Articles), 1131–1139.
Rodríguez, R. S. R. (2021). C*haracteristics of a liquid workforce*. Ifeel.
Roos, G., Oláh, J., Ingle, R., Kobayashi, R., & Feldt, M. (2020). Online conferences – Towards a new (virtual) reality. *Computational and Theoretical Chemistry*, *1189*, 112975.
Rossingol, N. (2024, January 18). From Rigid to Fluid: The Rise of the Liquid Workforce. Available at: https://www.runn.io/blog/liquid-workforce
Rotatori, D., Lee, E. J., & Sleeva, S. (2021). The evolution of the workforce during the fourth industrial revolution. *Human Resource Development International*, *24*(1), 92–103.
Rothenberg, A. D., Gaduh, A., Burger, N. E., Chazali, C., Tjandraningsih, I., Radikun, R., Sutera, C., & Weilant, S. (2016). Rethinking Indonesia's Informal Sector. *World Development*, *80*, 96–113. h
Sánchez-Hernández, M. I., González-López, Ó. R., Buenadicha-Mateos, M., & Tato-Jiménez, J. L. (2019). Work-life balance in great companies and pending issues for engaging new generations at work. *International Journal of Environmental Research and Public Health*, *16*(24), 5122.

Santoso, R. P., Sahadewo, G. A., Sugiyanto, C., & Setiastuti, S. U. (2022). Informal and Formal Wage Differences Based on Cohorts in Indonesia. *Economies*, *10*(12), 1–13.

Shepheard, M. (2020). *Technology and the future of the government workforce - How new and emerging technology will change the nature of work in government*. Available at: www.instituteforgovernment.org.uk

Sibagariang, F. A., Mauboy, L. M., Erviana, R., & Kartiasih, F. (2023). Gambaran Pekerja Informal dan Faktor-Faktor yang Memengaruhinya di Indonesia Tahun 2022. *Seminar Nasional Official Statistics*, *2023*(1), 151–160.

Singh, D. V. (2021). Technology, Future of Work and Ageing Workforce Readiness. *International Journal of Systematic Innovation*, *6*(4), 55–63.

Srinivasan, V. (2012). Multi generations in the workforce: Building collaboration. *IIMB Management Review*, *24*(1), 48–66.

Starr, M. A. (2014). Qualitative and mixed-methods research in economics: surprising growth, promising future. *Journal of Economic Surveys*, *28*(2), 238–264.

Syed, I., Daly, T., Armstrong, P., Lowndes, R., Chadoin, M., & Naidoo, V. (2016). How do work hierarchies and strict divisions of labour impact care workers' experiences of health and safety? Case studiesof long term care in toronto. *The Journal of Nursing Home Research Sciences*, *2*(1), 41–49.

Szymkowiak, A., Melović, B., Dabić, M., Jeganathan, K., & Kundi, G. S. (2021). Information technology and Gen Z: The role of teachers, the internet, and technology in the education of young people. *Technology in Society*, *65*, 101565.

Takeda, A., Truong, H. T., & Sonobe, T. (2022). The impacts of the COVID-19 pandemic on micro, small, and medium enterprises in Asia and their digitalization responses. *Journal of Asian Economics*, *82*, 101533.

Thompson, L. J., Glewen, K. L., Elmore, R. W., Rees, J., Pokal, S., & Hitt, B. D. (2019). Farmers as Researchers: In-depth Interviews to Discern Participant Motivation and Impact. *Agronomy Journal*, *111*(6), 2670–2680.

Tomaszewski, L. E., Zarestky, J., & Gonzalez, E. (2020). Planning Qualitative Research: Design and Decision Making for New Researchers. *International Journal of Qualitative Methods*, *19*, 1609406920967174.

van de Weerd, I., Mangula, I. S., & Brinkkemper, S. (2016). Adoption of software as a service in Indonesia: Examining the influence of organizational factors. *Information & Management*, *53*(7), 915–928.

Wahab, H. A., Wahed, H., & Razak, S. S. A. (2024). *Flexible Work Arrangements and the Legal Considerations in Malaysia* (Vol. 2023, Issue Uumilc 2023). Atlantis Press International BV.

Wenzel, M., Senf, N. N., & Koch, J. (2016). Exploring complex phenomena with qualitative research methods: an examination of strategic innovation trajectories in haute cuisine. *Complexity in Entrepreneurship, Innovation and Technology Research: Applications of Emergent and Neglected Methods*, 163–182.

Widyastuti, D. A. R., Wahyuni, H. I., & Wastutiningsih, S. P. (2023). Creating a digital ecosystem for sustainable development: Insights from Indonesian micro, small and medium enterprises. *Kasetsart Journal of Social Sciences*, *44*(1), 27–38.

Williamson, B., Eynon, R., & Potter, J. (2020). Pandemic politics, pedagogies and practices: digital technologies and distance education during the coronavirus emergency. *Learning, Media and Technology*, *45*(2), 107–114.

Wontorczyk, A., & Rożnowski, B. (2022). Remote, hybrid, and on-site work during the SARS-CoV-2 pandemic and the consequences for stress and work engagement. *International Journal of Environmental Research and Public Health*, *19*(4), 2400.

World Economic Forum. (2020). The Future of Jobs Report 2020. *The Future of Jobs Report*, *October*, 1163.

Yi, K. (2022). *How Does Authoritarian Leadership Influence Employees and Organisation?* Atlantis Press SARL.

Zhang, R. (Renata), & Abd Rahman, A. (2022). Dive in the flow experience: millennials' tech-savvy, satisfaction and loyalty in the smart museum. *Current Issues in Tourism*, *25*(22), 3694–3708.