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Factors influencing University Students' Adoption of Digital Labour Platforms

Siti Suraya Abd Razak[1]*, Nurulaina Najwa Razali[1], Lo Ying Tuan[2]
**Corresponding Author*

[1] Management of Technology Department, Faculty of Management, Universiti Teknologi Malaysia, Malaysia
[2] Entrepreneurship and Enterprise Hub, Xi'an Jiaotong–Liverpool University, Jiangsu,China

sitisuraya@utm.my, najwa2001@graduate.utm.my, Joe.Lo@xjtlu.edu.cn.
Tel: +60167311730

Abstract
The digital labor platform is an important component of the platform economy and has attracted youths to use it to generate income. This research examines university students' intention to participate in digital labor platforms. Using the Technology Acceptance Model, factors on social influence, perceived risk, and perceived usefulness are examined. Surveys distributed to 375 undergraduates revealed that social influence, perceived risk, and perceived usefulness positively influence university students to use digital labor platforms to work and generate income. The study suggests raising awareness, reducing risks, and promoting gig opportunities to enhance students' participation in the evolving gig economy.

Keywords: Gig Economy; Youth; Technology Acceptance Model; Digital Labour Platform

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1.0 Introduction

The growth of the digital economy is partially a consequence of rising unemployment and the limitations of employment opportunities. Before the pandemic, workers were actively looking for new job prospects. However, the outbreak has led to a new employment environment with the emergence of a digital platform workforce (Gavrila & Ancillo, 2021). In Malaysia, the gig economy began with digital platforms like Grab, Food Panda, Lazada, Uber, and Shopee. All these platforms paved the way for the gig economy to become a significant driver of economic growth. By recognizing its potential, the gig economy was officially acknowledged as a new source of economic growth and included as part of the 12th Malaysia Plan, as announced by Tun Dr. Mahathir Mohamad (Ahmad, 2021). The gig economy gained prominence during the Movement Control Order (MCO) implementation in 2020 because of the COVID–19 outbreaks, which caused many individuals to lose jobs. In 2020, the data highlighted that approximately 26% of Malaysia's workforce, or four million freelancers out of a total of 15.1 million workers, participate in the gig economy in Malaysia (Mohamed & Mat, 2023). A sharp increase in Malaysia's Gross Domestic Product (GDP) contributed to gig activities (Supramani, S., 2021). In addition, a study also found that 38% of full–time workers in Malaysia were interested in joining the gig economy in the following year indicating the expansion of Malaysia's gig economy (Daud et al., 2024). Due to the gig economy's flexibility and adaptability, it has successfully made it particularly attractive to students, who can easily engage in freelance jobs without being tied to fixed working locations or hours. Popular roles such as driver services, delivery services, freelancers, and reviewers are in high demand, especially among higher education students (Muhyi et al., 2023). For graduates, the gig economy offers a valuable opportunity to gain practical experience, develop entrepreneurial skills, and boost their income during their transition into the workforce. This flexibility often involves short–term or task-based engagements that are further supported by advancements in digitalization and the rising unemployment rate in the traditional job market (Uchiyama et al.,

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2022). This research aims to examine factors that influence university students' adoption of digital labor platforms and the most preferred digital labor platforms among university students.

2.0 Literature Review

2.1 Digital Labor Platform

According to a study, there was significant growth in the number of digital labor platforms, providing gig workers with a consistent source of income (Nawawi et al., 2023). The digital labor platform led to the formation of improvement in the gig economy. Instead of physical work from office arrangement, digital labor platforms shifted toward online remote work that accelerated during the COVID–19 pandemic, as governments implemented mandatory work–from–home (WFH) policies, that fundamentally changed the way people work (Radic, V., 2022). The gig economy is particularly more popular among younger generations as it can be globally accessible through apps and websites, unhindered by geographical boundaries. Graduates are increasingly lured to the gig economy because of its flexibility, which allows them to work on their schedules and availability. Due to that, the number of Malaysians working in the gig economy reached an all-time high of three million (Saieed, 2024).

2.2 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) can be used to examine behavior, particularly in contexts involving the adoption and use of technology. TAM is widely applied to understand and predict how users adopt, accept, and continue to use technologies. TAM emphasizes the role of individual perceptions and attitudes in shaping technology adoption and usage (Davis, 1989). Social Influence refers to the impact of social variables such as social media, classmates, family, instructors, and societal norms. It refers to how people may affect one another through another person, a role, a norm, a group, or a member of a group (Shen et al., 2024). Perceived risk refers to people's beliefs, attitudes, judgments, and emotions about risk, shaped by broader social and cultural values, as well as the perspectives they take toward potential dangers (Shen et al., 2024). Students' tendencies to take up gig employment are significantly influenced by financial and professional risks, such as irregular income, a lack of benefits, and job instability (Mpofu et al. 2020). They may be deterred from exploring gig possibilities by worries about personal safety, platform deactivation, financial instability, and insufficient worker safeguards. This perceived risk serves as an obstacle to students engaging in the gig economy if they place a higher priority on long-term stability and security. Perceived usefulness is the extent to which an individual thinks that utilizing a specific system would improve their effectiveness at work (Mahmud et al., 2023). Understanding how students see the gig economy to advance their careers, improve their skills, and sustain themselves financially relates to the link between perceived usefulness and student readiness for the gig economy. Students are more likely to join when they believe gig work would help them achieve their objectives. Additionally, they tend to see gig work favorably and be more interested if they think it will help them pay for living expenses, tuition, or student debt. According to the previous study, it has been proven that perceived usefulness indeed has a big impact on students' interest in the gig economy (Mahmud et al.,2023).

Understanding students' intention to adopt digital labor platforms serves as a critical basis for measuring their preparedness and readiness to engage in this changing labor market situation. Recognizing the foundational role of abilities, latent aptitude, and skills plays a crucial role in the gig economy. Students' increasing participation in the freelance economy can be attributed to a mix of factors including social influence, perceived risk, and perceived usefulness (Mahmud et al., 2023). Therefore, this study aims to fill the gap in the area. Based on the discussion, the following are the hypotheses:

H1: Social influence has a positive and significant impact on university students' adoption of digital labor platforms.

H2: Perceived risk negatively impacts university students' adoption of digital labor platforms.

H3: Perceived usefulness has a positive and significant impact on university students' adoption of digital labor platforms.

3.0 Methodology

The population in this study was undergraduate students who studied in a university, involving students from 9 different faculties. This population is relevant because the study aims to understand perspectives representative of all faculties and levels of study. Including all faculties ensures comprehensive insights. According to the university data, the population of undergraduate students across the different faculties is 16,425 students (Universiti Teknologi Malaysia, 2024). Thus, a total of 16,425 undergraduate students were considered as the eligible population that met the criteria for this study. The sampling table from the Krejcie and Morgan sampling technique will be used to determine the sample size (Krejsice & Morgan, 1970). Krejcie and Morgan's table is a well-established and widely accepted method to calculate an appropriate sample size for a given population. For a population close to 15,000, it recommends 375 respondents, ensuring a balance between accuracy and practicality. This selection enhances the reliability and generalizability of the study's results. Additionally, since this study is a quantitative study where a questionnaire data-collection approach is used, this study will use a probability sampling technique. Particularly, the stratified random sampling strategy was chosen as the sampling technique for this study. Using stratified sampling ensures that all faculties and years of study are represented, which is critical for understanding the different perspectives at the university. Most importantly, this method reduces sampling bias and ensures that smaller sections of the population are accurately represented. Google Form is used to conduct the questionnaire, which is intended to collect pertinent data for accomplishing the study's goals. Questionnaires are efficient tools for collecting data from large populations in a short time. They are cost-effective, and scalable, and allow for the structured collection of both quantitative and qualitative data. Google Forms is an

accessible and user-friendly online platform for data collection. It minimizes logistical constraints, facilitates easy distribution, and ensures anonymity, encouraging honest responses.

There was a total of 27 questions in the four sections (A, B, C, and D) of the questionnaire. Likert scale was used in Sections B and C to rate the agreeableness or disagreeability with the statements. The Likert scale was used because it is a validated method to assess attitudes, perceptions, and levels of agreement. The five-point scale provides a balanced range of responses, enabling a nuanced understanding of participants' perspectives. In contrast, attribute data with a nominal scale were used in Sections A and D where the respondents were required to choose one from several options. In this study, the respondent's level of agreement was assessed using a five-point Likert scale which is 1 = Strongly Disagree; 2 = Disagree; 3 = Moderately Agree; 4 = Agree; 5 = Strongly Agree. Data analysis is the process of interpreting all the information gathered from questionnaires to produce actionable insights (Forster et al., 2024). Statistical Package for the Social Sciences (SPSS) is the instrument used in this study to examine the connection between independent and dependent variables. SPSS is a trusted software for quantitative data analysis. Its robust statistical tools allow for accurate and efficient analysis of data, which is critical for identifying patterns and relationships between variables. Therefore, the SPSS program was used to evaluate the data. Descriptive analysis and the reliability test were the methods employed in this study. Descriptive statistics are fundamental for summarizing and understanding the data. It helps in presenting the demographic distribution and overall trends in an understandable format. While reliability testing ensures the consistency and dependability of the questionnaire. By employing this, the study validates the accuracy of the data collection instrument.

4.0 Findings

4.1 Reliability Test

Based on the dependent and independent variable data from Section B and Section C, the data obtained was analyzed using the normality and reliability test using Cronbach's Alpha.

Table 1. Reliability statistic test

Item	N	Cronbach's alpha
Social influence	5	0.847
Perceived risk	5	0.831
Perceived usefulness	5	0.837

According to Cronbach's Alpha Rule of Thumb, strong consistency is indicated by a consistency level of 0.9 > 0.8. Consistency is considered acceptable if the alpha falls between 0.8 and 0.7. A low question rating indicates that the consistency is questioned if the alpha falls between 0.7 and 0.6. Table 2 shows that the dependent variable has an alpha value of 0.878, which is considered acceptable. The independent variables are all good and acceptable, with Social Influence at 0.847, Perceived Risk at 0.831, and Perceived Usefulness at 0.837. All the alpha values for the dependent and independent variables are more than 0.8, indicating that this study's results are acceptable.

4.2 Demographic Findings

Table 2. Demographic of respondent

Demographic	Classification	Frequency	Percentage
Age	19 – 20	91	24.3%
	21 – 22	146	38.9%
	23 – 24	103	27.5%
	25 and above	35	9.3%
Gender	Male	166	44.3%
	Female	209	55.7%
Faculty	Faculty of civil engineering	31	8.3%
	Faculty of mechanical engineering	35	9.3%
	Faculty of electrical engineering	38	10.1%
	Faculty of chemical and energy engineering	40	10.7%
	Faculty of computing	46	12.3%
	Faculty of science	38	10.1%
	Faculty of built environment and surveying	32	8.5%
	Faculty of social science and humanities	36	9.6%
	Faculty of management	79	21.1%
Year of Study	First year	34	9.1%
	Second year	125	33.3%
	Third year	135	36%
	Final year	81	21.6%

The age result shows that, with a total of 146 students (38.9%), most participants are between the ages of 21 and 22. The next age group is 23 to 24 years old, which corresponds to 103 students (27.5%). On to the 19 and 20 age group, which has 91 students (24.3%). Lastly, the lowest age group, which is 25 and above, with a total of 35 students (9.3%). In terms of gender, both male and female students are involved in this study. Female students form the majority with a total of 209 students (55.7%), while male students with a

total of 166 students (44.3%). This slight female dominance indicates higher engagement among female students in this study. Next, this study includes participants from all nine faculties, with the Faculty of Management having the highest representation at 79 students (21.1%). Followed by the Faculty of Computing with 46 students (12.3%). Other faculties show balanced participation: Faculty of Chemical and Energy Engineering with 40 students (10.7%), Faculty of Electrical Engineering and Faculty of Science with 38 students each (10.1%), Faculty of Social Science and Humanities with 36 students (9.6%), Faculty of Mechanical Engineering with 35 students (9.3%), Faculty of Built Environment and Surveying with 37 students (8.5%), and lastly Faculty of Civil Engineering with the lowest at 31 students (8.3%). Regarding the year of study, third-year students are the most represented, comprising 135 students (36%), reflecting their growing interest in after-graduation opportunities such as the gig economy. Second-year students make up 125 students (33.3%), while final-year students account for 81 students (21.6%), demonstrating a focus on career planning. First-year students are the least represented at 34 students (9.1%), as they may still be adapting to university life.

Table 3. Mean score

Factor	Mean	Rank
Social influence	4.196	2
Perceived risk	4.188	3
Perceived usefulness	4.252	1

All the components in these findings have high levels and lie between 4.188 and 4.252. Most respondents agreed that perceived usefulness, which has the highest mean score value of 4.252, influences university students to adopt digital labor platforms. With a mean score of 4.196, social influence comes next, showing that most students believe that social influence affects their desire to adopt digital labor platforms. Finally, with a mean score of 4.188, perceived risk ranks lowest among the factors affecting students' intentions to adopt digital labor platforms in the gig economy, indicating concerns about the potential risks involved. In conclusion, perceived usefulness is the highest factor that influences undergraduate students to adopt digital labor platforms.

Table 4: Frequency

Description	Classification	Frequency	Percentage (%)	Rank
Most preferred platform	Indriver	43	11.5	6
	Misi	54	14.4	4
	Lalamove	64	17.1	3
	Troopers	49	13.1	5
	Grab	92	24.5	1
	FoodPanda	73	19.5	2

The descriptive analysis approach is employed to analyze research objective 2 which is to determine which digital labor platform would be most desirable for university students to join. 375 university students answered the survey questionnaire through multiple-choice questions. Respondents are allowed to choose more than one platform listed in the survey. Results show that Grab is the preferred platform by students with 11.5%, followed by FoodPanda with 19.5% and Lalamove with 17.1%. The least preferred digital labor platform is Misi with 14.4%, Troopers with 13.1% and the least preferred digital labor platform to be adopted among students is InDriver with 11.5%.

5.0 Discussion

Findings show that the most significant factor is perceived usefulness with a mean score of 4.252, indicating students recognize benefits such as income generation and skill development, aligning with the Technology Acceptance Model. The results of this study provide significant insights into how the Technology Acceptance Model (TAM) can be expanded to address the adoption of digital labor platforms within the gig economy. TAM, originally designed to explain and predict technology adoption in organizational and personal contexts, emphasizes two primary constructs—perceived usefulness and perceived ease of use—as determinants of user intention and behavior. The findings here align closely with the TAM framework while providing additional context for its applicability to the gig economy.

The digital labor platform is useful for students seeking jobs as it can be easily accessed through apps. This is also because less human interaction is needed when they use digital labor platforms which help them to generate income in a short time, suitable for their status as university students who juggle between working and studying. Social Influence ranks second with a mean score of 4.196, showing the strong impact of peer and societal encouragement to the students in adopting digital labor platforms. Previous studies stated that views from family and successful peers play a key role in shaping students' decisions (Boye, 2024). University students are influenced to work part-time and gain income through watching their friends work using digital labor platforms. Support from family also plays an important role as in some cases university students follow the steps of their family members who adopt digital labor platforms to perform work. Additionally, perceived risk ranks lowest with a mean score of 4.188, reflecting concerns about financial instability and job security. Issues such as payment deduction and low payment by digital labor platforms have withdrawn them from using digital labor platforms. Digital labor platforms unnecessarily cut their allowance or payment, and, in some cases, the user's account has been blocked by the digital labor platform due to complaints lodged by the customers. The unfair treatment of the workers on digital labor platforms posed risks for university students to adopt digital labor platforms. These risks can further dampen enthusiasm among the youths working using digital labor platforms despite their appeal in the gig economy (Razak et al., 2024). In conclusion, university students are primarily motivated by the practicality of digital labor platforms. However, the risks posed by digital labor platforms have harmed trends.

Addressing concerns about job security and financial risks is essential to foster greater participation in the gig economy. Since perceived usefulness is the most significant factor influencing adoption, government policies should prioritize initiatives that demonstrate the tangible benefits of digital labor platforms for users, such as flexibility, income generation, and skill-building opportunities. Workshops, webinars, and outreach programs at universities should be conducted to educate students about the value of gig work and how to maximize its benefits.

6.0 Conclusion & Recommendations

The findings of this study showed that several attributes influence the students' intention to adopt digital labor platforms, these are social influence, perceived risk, and perceived usefulness. From the data collected and analysis of research results, it can be observed that social influence and perceived usefulness are positively significant in students' intention to adopt digital labor platforms. However, perceived risks in digital labor platforms such as payment issues on the digital labor platform and absence of insurance protection have prevented students from adopting digital labor platforms. Platform providers should improve their systems and upgrade their security and payment features to attract more users, especially the youth. The limitation of this study is that the study relies solely on quantitative data collection and analysis, which may overlook qualitative insights, such as detailed opinions or unique perspectives from the participants. Future research should investigate the impact of specific interventions, such as specialized training or mentorship programs, on enhancing youth adoption of digital labor platforms. With continuous support and strategic preparation, youth can transition seamlessly into this dynamic workforce, contributing meaningfully to Malaysia's digital and economic growth.

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Paper Contribution to Related Field of Study

The study contributes to the discussion on the theory of the Technology Acceptance Model to digital labor platforms as a form of evolving technology in the gig economy. This study also has contributed practically to platform providers as this study provides awareness to the platform providers to improve their digital labor platform system so that it will attract more users.

References

Ahmad, N. (2021). Gig Workers: The New Employment Form in the New Economy. *Ulum Islamiyyah*, 33(S4), 131–145. https://doi.org/10.33102/uij.vol33nos4.419

Boye, J. O. (2024). Peer Influence, Family Influence, Academic Difficulties and Gender Differences as Agents of Career Indecisiveness of Senior High School Students in Ghana. *International Journal of Research and Innovation in Social Science*, 8(3), 690-702.

Daud, S. N. M., Osman, Z., Samsudin, S., & Phang, I. G. (2024). Adapting to the Gig Economy: Determinants of Financial Resilience Among "Giggers." *Economic Analysis and Policy*, 81, 756–771. https://doi.org/10.1016/j.eap.2024.01.002

Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 319. https://doi.org/10.2307/249008

Forster, C. H. Q., de Castro, P. A. L., & Ramalho, A. (2024). A Methodology for Questionnaire Analysis: Insights through Cluster Analysis of an Investor Competition Data. arXiv preprint arXiv:2402.06759.

Gavrila Gavrila, S., & de Lucas Ancillo, A. (2021). Spanish SMEs' Digitalization Enablers: E-Receipt Applications to the Offline Retail Market. *Technological Forecasting and Social Change*, 162(1), 120381. https://doi.org/10.1016/j.techfore.2020.120381

Krejcie, R. v, & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational And Psychological Measurement,* 30(3), 607–610.

Mahmud, N., Hamil, F. A., Ariffin, N. L. M., Pungot, S. Z. M., & Hasim, N. A. (2023). The Preparedness of Undergraduate Students to Take on the Gig Economy. *Information Management and Business Review,* 15(3(I), 399-404.

Mohamed, S., & Mat, N. H. N. (2023). Gig Work in Post Pandemic Times: Does it an Agile Work Structure?. *Journal of Entrepreneurship and Business*, 11(2), 56–68. https://doi.org/10.17687/jeb.v11i2.1014

Mpofu, T., Tsibolane, P., Heeks, R. & Van Belle, J. P. (2020). Risks and Risk-Mitigation Strategies of Gig Economy Workers in The Global South: The Case of Ride-Hailing in Cape Town. *International Conference on Social Implications of Computers in Developing Countries* 2(4) 26-38.

Muhyi, S. N. A., Omar, S. I., & Adnan, S. F. (2023). The Drivers Force the Gig Workers into Gig Economy: The Case of Malaysia. *Journal of Business and Social Development,* 11(1), 1–12. https://doi.org/10.46754/jbsd.2023.03.001

Nawawi, N. H. A., Ramli, R., Khalid, N., & Rashid, S. F. A. (2023). Understanding the Presence of the Gig Economy in Malaysia. *The Malaysian Journal of Consumer and Family Economics*, 31(1), 274–293. https://doi.org/10.60016/majcafe.v31.11

Radic, V., Markovic-Blagojevic, M., Radović-Markovic, M., Stevanovic, M., Radic, N. & Nikitovic, Z. (2022). Challenges and limitations of the Gig Economy and Possible Implications for Education. *Journal of Entrepreneurship*, 26(2), 1-8.

Razak, S. S. A., Wahab, H. A., Jusoh, A., & Ramli, N. (2023). Young Workers on Digital Platform Work: A Review of Rights and Protection in Malaysia. *International Conference on Business and Technology* 2(4) 480-489.

Saieed, Z. (2024). The Straits Time. More Malaysians Opting for Gig Work, Raising Fears of Skilled Workers Shortage. https://www.straitstimes.com/asia/se-asia/more-malaysians-opting-for-gig-work-raising-fears-of-skilled-workers-shortage

Shen, M., Yu, L., Xu, J., Sang, Z., Li, R., & Yuan, X. (2024). Shaping the Future of Urban Mobility: Insights into Autonomous Vehicle Acceptance in Shanghai Through TAM and Perceived Risk Analysis. arXiv preprint arXiv:2405.05578.

Universiti Teknologi Malaysia (2024) Facts and Figures https://www.utm.my/about/facts-and-figures/