

Generation differences in the gig economy in Vietnam

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ABSTRACT

The development of digital technology is rising. It creates favorable conditions for the workforce and increases participation in the gig economy. Online jobs are getting more approachable and convenient. For many reasons, there have been differences in generations in the gig economy. Therefore, managers need to have conversation methods and policies to attract workers of each generation to participate in the gig economy. The study has been conducted to identify, analyze, evaluate, and quantify the influence of factors on the intention of different generations to participate in the gig economy. Data was collected from 374 workers of three generations (X, Y, Z) who have not yet participated in the gig economy in Vietnam - an emerging market with both potential opportunities and challenges for managers and investors. The research hypotheses were tested by Partial Least Squares Structural Equation Modeling (PLS-SEM). Results have shown that each generation has different intentions to participate in the gig economy. Factors including perceived risk, current income, skills, flexible working time, and platform, which also differently affect these generations' intentions. Some managerial implications and future research were suggested.

1. Introduction

The gig economy is identified as the establishment of a capital-labor relationship between employees and employers through a digital platform, which mediates workers' supply and consumer of professional demand for the completion of a small task or "gig" that operates at once as a market intermediary and a "shadow employer" (Friedman, 2014). Carnahan, Burtch, and Greenwood (2017) indicated that a gig-economy platform is defined as a digital, service-based, and on-demand platform that can arrange flexible work (e.g., Grab, Uber, Upwork, Freelancer, Fiverr, etc.). The gig economy also has opportunities and challenges, such as creating social connections and learning new routines and skills. Furthermore, Covid-19 has already affected the supply and demand of the labor market. The volatility of the gig economy increased with the news of Covid-19. The gig economy has the potential to keep the world going even in the toughest of times, such as Covid-19 (Umar, Xu, & Mirza, 2021).

The online gig economy is defined as an environment in which temporary placements are common, and organizations sign short-term contracts based on commitment or request through the digital platform to meet service or demand with flexible time (Carnahan et al., 2017). Nowadays, Information and Communication Technologies (ICTs) are developing. There is a new form of

work organization that has flexible tasks based on demand and availability (Grimshaw, Cooke, Grugulis, & Vincent, 2002; Holtgrewe, 2014) for small and medium-sized enterprises to find gig workers. According to Aristi and Pratama (2021), the online gig economy is defined as a business model in which two parties (employee and employer) agree to have a temporary or short-term agreement to do one or more projects without a permanent working relationship.

The gig economy emerged as the main subject in an independent review of modern recruitment practices. It includes jobs that work through application platforms, are done locally, and require workers to be physically present to trade and distribute (Huws, Spencer, & Joyce, 2016). The gig economy refers to a free market system in which traditional businesses hire independents, freelancers, and short-term workers to perform tasks or individual jobs. Gig workers do not have a policy for insurance or paid leave (Ashford, Caza, & Reid, 2018). Gig workers included traditional independent contractors, freelancers and temporary staff who work for selected hours a week (Mukhopadhyay & Mukhopadhyay, 2020).

To succeed in the gig market, creating a brand for themselves, reputation (Gandini, 2016), digital skills, and entrepreneurial skills (Majovski & Davitkovska, 2017) are decisive factors for workers. Working remotely brings them a new position in the global value chain. Moreover, they become a link in the chain and require to change in human resource management (Donnelly & Johns, 2021). Therefore, in the state of changing jobs from full-time work, workers tend to choose jobs with flexibility in time. The recent growth in gig economy participation can be attributed in part to technological advances that enable this sort of flexibility (Hall & Krueger, 2018).

There is a common reason that digital platforms have low barriers to entry and provide flexible time for workers. Therefore, they are able to work whenever and wherever they like (Chen, Rossi, Chevalier, & Oehlsen, 2019; Mas & Pallais, 2017), which results in an increase in gig work and allows workers to combine work with a variety of life situations and choices. This improves productivity and workers achieve work and life (Malone, 2004; Sundararajan, 2017).

Vietnam's economy grew by 5.2% in the fourth quarter of 2021, 5.1% in the first quarter of 2022, and 7.7% in the second quarter of 2022, and inflation at 4% is lower than other developed and emerging markets (World Bank, 2022). The service sector accounted for 40.95% of the economic structure in 2021 (General Statistics Office, 2022). Vietnam ranks 15th in the world and accounts for 1.24% of the world's population. Particularly, the population between the ages of 15 and 64 accounts for more than 69% of the population of Vietnam (Population, 2022). Vietnam has enough conditions for the gig economy to develop and it is also an interesting case to study generation differences in the gig economy.

A survey of 400 companies in Vietnam and 1,200 job seekers in terms of employment status in 2021 found that 24.3% of workers have chosen to work part-time (Navigos Group, 2021). Hong (2022) also showed the trend of shifting from just doing one full-time job at a fixed company to freelance work, independent projects short-term collaborators, or no working contract in Vietnam. 53% of knowledge human resources have participated in the gig economy: 14% are fully gig workers, 26% whose permanent jobs are willing to accept outside jobs, 13% have part-time jobs such as teaching English after working hours, online selling, insurance selling, and consulting, ... However, academic research on the gig economy in Vietnam is still limited there have been only some articles in Vietnamese newspapers: Thanh nien (2019); Pham (2020); Economy and Forecast Review (2021); Hong (2022).

What drives Vietnamese workers to participate in the gig economy? This study was conducted in order to clarify the difference between generations (X, Y, Z) in the intention to participate in the gig economy as well as the factors affect this intention in Vietnam.

Generation X (Gen X) individuals were born between 1965 and 1975 (McShane & Von GLinow, 2000). Gen X employees like working in a team, having a good education and high skills, also not being afraid to change jobs (Burke, 1994). They are the creators, flexible to revolutions (Zemke, Raines, & Filipczak, 2000), and like working flexibly (Joyner, 2000). They usually possess solid technical competencies and skills (Zemke et al., 2000) as they focus on developing skills and learning. This generation has not accessed the internet and digital technology and learned to use it as adults (Prensky, 2001).

Generation Y (Gen Y) individuals were born between 1980 and 1994. Gen Y employees are identified as highly self-absorbed, self-confident, and have a strong knowledge about ICT, and technology (Niemiec, 2000). They seek flexibility (Martin, 2005) and like to be independent (Crampton & Hodge, 2006). However, they lack process-focused (Crampton & Hodge, 2006) and teamwork (Alsop, 2008). Although they have good communication and information technology, they also ability to identify problems and are comfortable working (Gorman, Nelson, & Glassman, 2004; Howe & Strauss, 2000). Besides that, the core role of technology is the main factor differentiating millennials and earlier generations, influencing their expectations and perceptions.

Generation Z (Gen Z) individuals were born between 1995 and 2010 (Bejtkovský, 2016). They live in the digital age with mobile phones, messages, the Internet, the World Wide Web, YouTube, and other new technologies (Kapil & Roy, 2014) with high creation and innovation (Bejtkovský, 2016). They are well aware of the high technology. Also, they stick together in their team (Ozkan & Solmaz, 2015). They look for competitive salaries and benefits compared to other generations (Bejtkovský, 2016). This generation is well-integrated with information technology and the internet. Therefore, their electronic communication skills like e-mails, chats, and Skype are well polished. Other than that, they are highly project-oriented and ready to move with targets and achievements (Bejtkovský, 2016).

2. Literature review and hypotheses

The Theory of Planned Behaviour (TPB) of Ajzen (1991) was used in most previous studies in terms of intention behaviour with the factors named attitude, subjective norms, and perceived behavioral control. However, previous studies related to the gig economy showed that subjective norms and perceived behavioral control did not affect the intention behaviour. To clarify it, three experts were asked in the first qualitative research. They do agree with those studies due to three reasons. Firstly, not many people understand the terms of the gig economy, so it is hard to give useful advice to others. Secondly, people who want to participate in the gig economy, often have a love of innovation and getting rid of the framework of the old things; therefore, they do not want to be affected by others. Finally, when choosing to change jobs from full-time to flexible hours, maybe because they want more time to take care of their family or other personal reasons. They prefer to manage the limited time with so many complicated activities to the perceived behavioral control.

Table 1

Relevant previous studies

	Best (2017)	Kässi and Lehdonvirta (2018)	Kaine and Josserand (2019)	Aristi and Pratama (2021)	Banik and Padalkar (2021)	Conclusion
Inherited results	Differentiate long-term and temporary jobs. Platform economy and skills are key factors in the attending gig economy	Flexible time is useful for workers to control the job. It is better to focus on the results than the workers controlling	An overview of the gig economy through variables such as risk, income, skills, policy, and platform economy	Explain the importance and four fields of business in the gig economy by the platform economy: delivery service, professional service, shared property, and manual goods	Discuss the effects of the gig economy in terms of productivity, jobs, income distribution by the platform economy, skills, and the country's policies	Participation in the gig economy must be through the platform economy. Gig workers have flexible time to arrange work. In addition, the factors of risk, skills, and policies have influences on the participation
Research gaps	An interesting area of study is the impact of the populist movement in the home country on abroad employment by migration, followed by employment and development. There should be their combination	Only study on three application platforms: Amazon Mechanical Turk (Mturk), MobileWorks (MW), and Cloud Factory (CF). It is possible to apply flexibility in time management of other application platforms in Vietnam	Does not give a clear overview of the gig economy. However, the surge in inquiries and reports shows the level of public interest and policy in the resurgence of the gig economy	There exists a gap in gender, generation, geography, and socioeconomic when Indonesians participate in the gig economy	It is necessary to examine social variables specifically related to the accessibility and use of information technology. In addition, the demand for gig jobs is influenced by participating government policies regarding subsidies, differences in age groups, and understanding of workers' skill levels when they join the gig	Study the difference of age groups when participating in the Gig economy through the generation variable to test the intention of each generation (X, Y, Z) to join this economy

Source: Reviewed by authors

The gig economy is getting more growth due to the adoption of digital platforms with low barriers to entry. Applying the platform economy, the jobs are not only flexible in terms of time but also working place. The workers need more skills to control their gig work more efficiently. The current income and perceived risks also affect the intention to participate in the gig economy. Reviewing of previous studies related to the gig economy (Table 1.) showed that perceived risk, current income, skills, working time, and the platform economy could allow gig workers to choose the desired jobs with more efficacy. The generation (X, Y, Z) difference should also be tested in this intention.

2.1. Perceived risk

Gig work is often precarious and fails to provide the safety as traditional work (Chen, 2018); in the absence of training, health, or retirement, risk operations are moved from employer to workers (Bajwa, Gastaldo, Di Ruggiero, & Knorr, 2018). Another risk is that workers invest in tools or equipment that support their work, but the account on the platform application is disabled leading to risks for workers (Stewart & Stanford, 2017). Lack of benefits in terms of health insurance, workplace health, and safety policies (Fox et al., 2018), increased health, well-being, and safety risks, especially in ride-sharing (Christie & Ward, 2019). Risk is also approached in a more subjective way with research on how employees perceive and accept risks at work. Still, there is an objective risk due to a lack of income predictability (Doucette & Bradford, 2019), uncertain project frequency, and uncertain working hours (Gandhi, Hidayanto, Sucahyo, & Ruldeviyani, 2018).

In the general Asian cultural context, Vietnamese people are aware of the risks when they participate in the gig economy, such as welfare, policy, physical, legal, and background risks applied to their work.

H1: Perceived risk negatively affects the intention to participate in the gig economy

2.2. Current income

Income is lower than in traditional jobs (Friedman, 2014), with long working hours (Carmody & Fortuin, 2019; Graham & Anwar, 2018). Sun, Wang, and Wan (2019) analyzed the daily decisions on whether and how to participate in work depending on the hourly income rate. The healthcare cost and saving for leave should be calculated in their income (Arenas, García, & Otálora, 2018). Low and unpredictable income or limited hours make gig workers involved in a variety of occupations (Doucette & Bradford, 2019).

According to General Statistics Office (2021), the dependency ratio of Vietnam in 2020 is 69% while that of European countries is less than 36.4%. Therefore, income is an essential factor for employees to consider choosing, and changing jobs because they need to support other family members such as children, parents, grandparents. Therefore, income is also an important factor to consider when workers enter the gig market.

H2: Current income negatively affects the intention to participate in the gig economy

2.3. Skills

Ashford et al. (2018) emphasized that gig workers find themselves energized by job diversity. Gig work is associated with new opportunities to learn, where gig workers develop new skills through gig work. Gig workers should develop skills to enable adaptability with their work (Ashford et al., 2018) and be relevant to the relative skill with their job (Abhinav et al., 2017;

Ashford et al., 2018). The emerging picture is on-demand learning to match the labor demands demanded by application platform companies (Means, 2018).

The assessment of a person's ability is often based on the assessment of knowledge and skills. Knowledge sharing is more prevalent in schools and businesses in the trend of globalization. Anyone also needs to accumulate knowledge, so skill is a decisive factor for capacity assessment.

H3: Skills positively affect the intention to participate in the gig economy

2.4. Flexible working time

Various potential advantages to flexible scheduling, such as reducing work-family conflict (Shockley & Allen, 2007) and allowing a combination of paid work with life-prevent work full-time (Silver & Goldscheider, 1994). According to Mark (2022), there are 68% of 37,000 respondents support flexible working.

In another study by the Kaspersky security firm "Securing the Future of Work", about 74% of respondents want to work more flexibly and comfortably. In addition, a report from Upwork - the largest global freelancer application platform found that 84% of freelancers are enjoying their favorite lifestyle compared to 54% of traditional workers.

H4: Flexible working time positively affects the intention to participate in the gig economy

2.5. Platform economy

Online work was defined as work remoted via the Internet and paid salary based on the percentage. It can be performed at home, in schools, in cafes, or anywhere (Gupta, Martin, Hanrahan, & O'Neill, 2014). Typical tasks such as data entry are clerically standardized to easy measure. Online work can be distinguished from online freelance (paid by the hour or on a single assignment basis), as well as from local fixed gig work, such as driving and delivering goods. Internet-based business process-sourcing companies such as MobileWorks and CloudFactory provide online work to workers through their websites.

Application platforms link workers with employers through websites to gain awareness of job vacancies. In particular, the field of information technology allows me to easily create single jobs, such as website developers, software developers, and computer programmers. Gig work tends to involve the creation of small business websites or new types of software. This can allow employees to increase job satisfaction, with greater control over the entire job, sometimes from start to finish. People with a talent for media and journalism are also good candidates for gig work. In this regard, the services of photographers, technical writers, translators, and interpreters may require a niche (Torpey & Hogan, 2016).

H5: Platform economy positively affects the intention to participate in the gig economy

2.6. The differences in generation (X, Y, Z)

Aristi and Pratama (2021) show that the economy is more prevalent among younger generations and has great potential to become a new business model. Pham (2020) supposed that 53% of Gig workers aged 18 - 34 years old working in the gig economy as their primary income. Gig workers are usually young, 38% between the ages of 18 - 34% participate in the gig economy.

H6: There are generation differences in the intention to participate in the gig economy

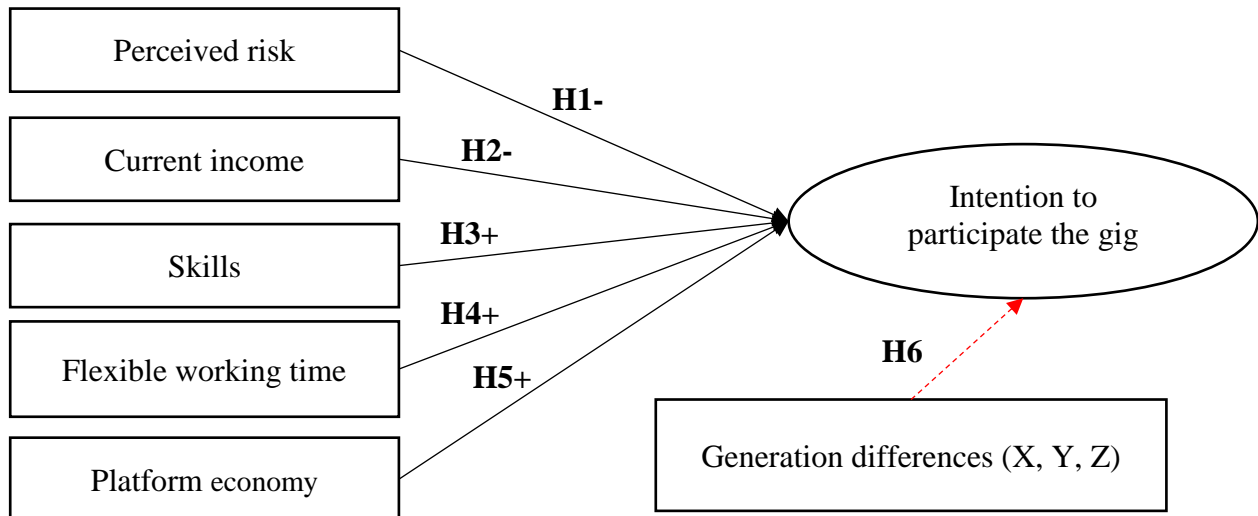


Figure 1. Conceptual model

3. Research methodology

The research was conducted in four phases. In the first phase, the conceptual model, research hypotheses, and preliminary scales were built from previous related studies: perceived risk was sourced by Kaine and Josserand (2019); current income was sourced by Kaine and Josserand (2019); Kassi and Lehdonvirta (2018); Banik and Padalkar (2021); skills was sourced by Best (2017); Kaine and Josserand (2019); Banik and Padalkar (2021); flexible working time was sourced by Kaine and Josserand (2019); Kassi and Lehdonvirta (2018); platform economy was sourced by Best (2017); Kaine and Josserand (2019); Kassi and Lehdonvirta (2018); Aristi and Pratama (2021); Banik and Padalkar (2021); intention to participate was sourced by Kaine and Josserand (2019); Kassi and Lehdonvirta (2018).

In the second phase, the first qualitative research was used by online group interviews with three experts - who have more than five years of experience in the gig economy - to discuss the proposed hypotheses and variables in the model. Then, the scales were converted into a questionnaire and sent to a group of 10 respondents - who have not yet participated in the gig economy- to discuss the possibility to clearly understanding scales. Final scales were made after this first qualitative research.

The quantitative research was carried out by the Google Forms application in the third phase. Respondents are Vietnamese workers who have not yet participated in the gig economy. They were randomly selected based on the non-probability method. The questionnaire had 24 questions measuring 06 variables of the research model by using 5 Likert scales (1 - strongly disagree to 5 - strongly agree) and generating information to test the differences. There are 24 observed variables, so the minimum sample is expected to have about 120 (Hoang & Chu, 2008). The authors selected a sample of 360 to improve reliability. The survey was prepared in Google Form and sent to respondents through social networks such as Facebook, Zalo, Gmail, and LinkedIn. The questionnaire has filtered questions to ensure suitable respondents. After collecting and cleaning 466 responses, the data of 374 responses was processed by SPSS 26 for descriptive statistics about frequency, percentage generation attribute of the sample, and Smart PLS 3.0 software to evaluate the measurement model including reliability level, composite reliability, average variance explained, heterotrait - monotrait ratio of correlations, variance inflation factor and statistical significance to quality assessment of the constructs.

In the fourth phase of this study, the second qualitative research was conducted with the same experts from the first qualitative research to discuss the results, conclude and suggest some managerial implications.

4. Results

The descriptive statistical results of 374 questionnaires analyze the demographic characteristics of the respondents' generation as in Table 2. The generation Y accounted for the highest proportion (44.1%), followed by the generation Z (29.7%) and the generation X (26.2%).

Table 2

Respondents' generation

Generation	Frequency	Valid Percent
X	98	26.2
Y	165	44.1
Z	111	29.7
Total	374	100.0

4.1. Measurement model evaluation

The reflective measurement model was used to measure the variables: perceived risk, current income, skills, flexible working time, platform economy, and intention to participate in the gig economy.

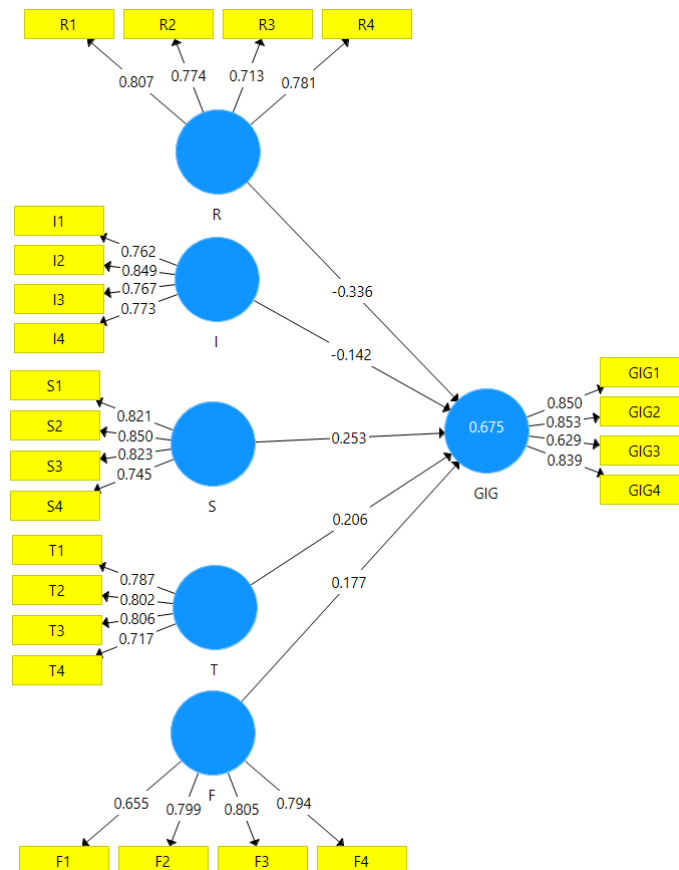


Figure 2. Analysis model by SmartPLS 3

In Table 3, the variables with a loading factor higher than 0.708 get the reliability level. Indicators ranging from 0.4 to less than 0.7 should be reconsidered (Hair, Hult, Ringle, & Sarstedt, 2021). Most observed variables have loading coefficients greater than 0.708, especially for observed variables F1 = 0.655 and GIG2 = 0.629. It is not recommended to automatically remove indicators $0.4 \leq \lambda < 0.7$ where the load factor falls within this range (Hair et al., 2021). Therefore, these two variables were kept to internal consistency reliability.

When analyzing the PLS path model, the Composite Reliability (CR) is recommended to run for Cronbach's Alpha with a satisfactory threshold of $CR > 0.7$. However, Hair et al. (2021) also suggested that the composite reliability tends to be higher than the actual reliability value. Therefore, the true value of internal consistency will be between the lower bound (alpha coefficient) and the upper bound (Combined Confidence - CR). Based on the results from Table 3, the indicator sets have $CR > 0.7$, and it is possible to conclude that the true value of the reliability for the indicator sets is within the threshold (coefficient α ; CR), according to the threshold suggested, the sets of indicators achieve internally consistent reliability.

Table 3

Reliability and validity measures

	Item	Description	Mean	Std. Dev.	λ	Cron-bach's Alpha	CR	AVE
R	R1	I recognize that X is often unstable.	2.94	1.147	0.807	0.774	0.853	0.592
	R4	I recognize that the company does not have a clear regulation - policy.	3.43	1.143	0.781			
	R2	I see a risk in not being able to access to X application.	3.23	1.092	0.774			
	R3	I recognize X will affect my health.	3.13	1.141	0.713			
S	S2	I can develop my own skills when doing X.	3.49	0.954	0.85	0.826	0.884	0.657
	S3	X gives me more skills to adapt to constant change.	3.66	0.963	0.823			
	S1	X offers the opportunity to develop new skills.	3.52	0.987	0.821			
	S4	I accumulate skills while doing X.	3.85	0.89	0.745			
T	T3	I am looking for a flexible time job.	3.55	0.972	0.806	0.784	0.86	0.607
	T2	I get good time management doing X.	3.63	1.037	0.802			
	T1	I recognize X proactive in terms of time.	3.69	1.036	0.787			

	Item	Description	Mean	Std. Dev.	λ	Cron-bach's Alpha	CR	AVE
	T4	I will switch jobs if I find flexible work time.	3.81	0.877	0.717			
F	F3	I recognize X app to help with personal branding.	3.41	1.023	0.805	0.766	0.849	0.587
	F2	I find it easy to find a job on X app.	3.69	0.894	0.799			
	F4	I recognize X app to provide useful information.	3.63	0.875	0.794			
	F1	I recognize X app easy to use.	3.79	0.89	0.655			
I	I2	My current income is enough to cover my daily living expenses.	3.54	1.191	0.849	0.797	0.868	0.622
	I4	My income is commensurate with the work I do.	3.45	1.077	0.773			
	I3	My current income is above the market.	3.07	1.042	0.767			
	I1	Salary is my main income.	3.59	1.213	0.762			
GIG	GIG2	I intend to participate in X instead of choosing traditional jobs.	3.16	0.987	0.853	0.806	0.874	0.637
	GIG1	I intend to participate in X when changing jobs.	3.41	0.958	0.85			
	GIG4	I intend to participate in X in the future.	3.45	1.01	0.839			
	GIG3	I do not intend to stay in my current job for a long time.	3.01	1.207	0.629			

Note: Std. Dev.: Standard Deviation, X: the job that I intend to participate in the gig economy

According to Cooper, Schindler, and Sun (2006), for the outcome measurement model, “validity of convergence” refers to the degree of correlation between indicators that measure the same concept. The AVE index is used to evaluate convergence validity. Hair, Risher, Sarstedt, and Ringle (2019) suggested $AVE \geq 0.5$, the measurement indicators for a latent variable achieve the correct level of validity convergence. Table 3 shows that all AVE values were more than 0.5. Therefore, the indicators achieve convergence validity.

Then, the evaluation is continued through the step of checking the HTMT coefficient (Heterotrait-Monotrait correlation index). In assessing the validity of the loading discriminant in one set of indicators (Henseler, 2010), the HTMT value of more than 0.9 indicates that it is difficult to achieve a validity level of discrimination. Table 4 shows that all the HTMT values were significantly lower than 0.85, thus supporting the measures’ discriminant validity.

Table 4

Discriminant validity - Heterotrait-Monotrait Ratio (HTMT)

	F	GIG	I	R	S	T
F						
GIG	0.701					
I	0.371	0.682				
R	0.478	0.807	0.746			
S	0.585	0.734	0.353	0.48		
T	0.655	0.718	0.452	0.42	0.618	

4.2. Structural model evaluation

The results of the model path synthesis after running bootstrapping as shown in Table 5 for the hypotheses in the research model are accepted (P-value < 0.05) with latent variables: perceived risk, current income, skills, flexible working time and platform economy.

Table 5

Path Analysis Results

Hypothesis	Reg. Coeff.	f²	Std. Dev. (STDEV)	P Values	Results
F -> GIG	0.177	0.063	0.035	0.000***	Accepted
I -> GIG	-0.142	0.038	0.045	0.002**	Accepted
R -> GIG	-0.336	0.200	0.045	0.000***	Accepted
S -> GIG	0.253	0.128	0.050	0.000***	Accepted
T -> GIG	0.206	0.083	0.048	0.000***	Accepted

Note: Reg. Coeff. Regression Coefficients, Std. Dev. Standard Deviation, * < 0.05, ** < 0.01, *** < 0.001

To evaluate the level of statistical significance, the Bootstrapping method was performed to test. The results (Table 5) indicated the latent variables have P-value < 0.05. Therefore, the regression coefficients of the variables are all statistically significant (Hair et al., 2019).

Based on the criteria proposed by Cohen (2013) to apply to exogenous variables. If $f^2 < 0.02$, it does not play the role of explanation; If $0.02 \leq f^2 < 0.15$, there is a small level; the same if $0.15 \leq f^2 < 0.35$, there is a medium level; when $f^2 \geq 0.35$, there is large level. Based on the results of Table 5, it has shown that $R \rightarrow GIG$ has a medium level of explanation (Cohen, 2013). The remaining variables (F, I, S, T) have small explanations.

5. Discussions and implications

The study results showed that the intention to participate the gig economy in Vietnam was affected by the factors as following (1): perceived risk ($\beta = -0.336$, $p = 0.00$), current income ($\beta = -0.142$, $p = 0.002$), skills ($\beta = 0.253$, $p = 0.00$), flexible working time ($\beta = 0.206$, $p = 0.00$) and platform economy ($\beta = 0.177$, $p = 0.00$).

$$\mathbf{GIG = -0.336R + 0.253S + 0.206T + 0.177F - 0.142I} \quad (1)$$

Some previous related studies also supported them as Kaine and Jossierand (2019); Chen (2018); Fox et al. (2018); Stewart and Stanford (2017); Christie and Ward (2019); Gandhi et al. (2018); Friedman (2014); Sun et al. (2019); Arenas et al. (2018); Doucette and Bradford (2019);

Best (2017); Banik and Padalkar (2021); Ashford et al. (2018); Abhinav et al. (2017); Kassi and Lehdonvirta (2018). One interesting theoretical contribution comes from this research is the testing of generation differences when participating in the gig economy in Vietnam since there has been no academic research on this topic yet.

Regarding hypothesis H6, the result of Bootstrapping testing showed that $p(\text{Gen X} \rightarrow \text{GIG}) = 0.019 < 0.05$ and $p(\text{Gen Y} \rightarrow \text{GIG}) = 0.019 < 0.05$. Therefore, the testing differences are statistically significant. It is concluded that Generation Z intends to participate in the gig economy more than Generation Y and Generation X do.

MGA (Multiple-Group Analysis) is used to evaluate in more detail the difference in each factor affecting the intention to participate in the gig economy of generations (X, Y, Z). The difference between Gen Y and Gen Z for $I \rightarrow \text{GIG}$ with Path Coefficient-diff (Gen Y - Gen Z) = -0.24 and P-value = $0.005 < 0.05$ is accepted as statistically significant. It is shown that the impact of factor I on GIG in Gen Z is stronger than in Gen Y.

Similarly, the difference between Gen Y and Gen Z for $S \rightarrow \text{GIG}$ with Path Coefficient-diff (Gen Y - Gen Z) = -0.225 and P-value = $0.01 < 0.05$ is accepted as statistically significant. It is shown that the impact of factor S on GIG in Gen Z is stronger than in Gen Y.

Finally, the difference between Gen X and Gen Y for $T \rightarrow \text{GIG}$ with Path Coefficient-diff (Gen X - Gen Y) = 0.212 and P-value = $0.035 < 0.05$ is accepted as statistically significant. It is shown that the impact of factor T on GIG in Gen X is stronger than in Gen Y.

Some managerial implications are suggested based on these results to help organizations in Vietnam offer suitable recruitment and selection policies to attract these potential and qualified gig workers. To begin with, Gen X, this generation is quite cautious; they do not like boring and stressful workplaces even though they think it is a place to grow and learn. Therefore, managers need to offer jobs that need to have many skills to attract them as well as develop more skills for themselves. Working time also needs to be flexible as they can arrange their own flexible working time and full-time work.

$$\text{GIG} = 0.18\text{F} - 0.095\text{I} - 0.224\text{R} + 0.375\text{S} + 0.333\text{T} \quad (2)$$

Generation Y they are very loyal and cautious in the planning process. The perceived risk of Gen Y has the highest weight among the factors. Therefore, in order to increase the number of people of this generation participating in the gig economy, managers should provide specific welfare policies for gig workers in addition to supporting the contribution of gig employees: insurance, health insurance, etc. Besides, current income is also a factor that Gen Y is quite interested in as they are often married. Managers should offer a reasonable and competitive income when desiring to promote this generation's participation in the gig market.

$$\text{GIG} = 0.148\text{F} - 0.227\text{I} - 0.41\text{R} + 0.168\text{S} + 0.121\text{T} \quad (3)$$

Last but not least for Generation Z, in order to increase their participation in the gig economy, managers need to reduce the perceived risks such as offer more benefits, health insurance, etc. In addition, managers also need to open skill courses, give vouchers for courses, introduce necessary skill courses for their work so that can learn and gain more experience. From there, they can confidently participate in the gig economy.

$$\text{GIG} = 0.164\text{F} + 0.013\text{I} - 0.351\text{R} + 0.393\text{S} + 0.209\text{T} \quad (4)$$

To analyze more details of the factors affecting the intention to participate in the gig economy, Table 2 shows that employees often feel insecure because this job is unstable ($R1: \lambda =$

0.807, R4: $\lambda = 0.781$, R2: $\lambda = 0.774$, R3: $\lambda = 0.713$). Therefore, in case to increase the number of workers participating in the gig economy, managers need to make decisions to limit the risks for this work such as creating the amount of work from traditional work to gig, recommending suitable jobs for workers when searching in platform application. The companies should have additional policies for people in the gig economy, such as support for paying labor insurance, salary, and incentive bonuses. It is necessary to notify gig workers on the application in advance of the maintenance period as well as why the account is locked to the workers for a specified period before the application becomes inaccessible. Besides that, companies need to build an application system that can be accessed quickly, with good security, and that employees can easily access this application system.

Skills are important for workers in the gig market (S2 has $\lambda = 0.85$, S3: $\lambda = 0.823$, S1: $\lambda = 0.821$, S4: $\lambda = 0.745$). Therefore, in order to increase the participation of employees in the gig economy, managers can offer contests and awards for individuals with good achievements so that employees can develop skills such as time management, professional development, and self-management. In addition, organizations/enterprises can organize training programs (offline/online) to improve and extend skills to work-related issues. Giving vouchers to select to courses that improve and develop skills or creating courses in the platform for connecting and learning from each other in the same industry.

Next is flexible working time (T3: $\lambda = 0.806$, T2: $\lambda = 0.802$, T1: $\lambda = 0.787$, T4: $\lambda = 0.717$). Managers should offer many job choices that could do at any time or anywhere. Gig workers can work at different times and build schedules for themselves. Managers can also create the notice that reminds important tasks to do first or deadlines for tasks.

Along with the development of information technology, more platforms are born (F3 has $\lambda = 0.805$; F2: $\lambda = 0.799$; F4: $\lambda = 0.794$; F1: $\lambda = 0.655$). To be able to survive and develop in the age of technology with many changes, managers need to focus on continuous improvement and development of applications that can be easily used and have many accompanying utilities. Managers should provide videos to guide to use on platforms when users start joining the application. There are also tips or sets of criteria for increasing work for gig workers on the application. Moreover, the application can notify useful information gig workers so that they can promptly update the information of the organization/business.

Table 2 also showed that managers need to make wage policies for gig workers at least at the minimum level (I2 has $\lambda = 0.849$, I4: $\lambda = 0.773$, I3: $\lambda = 0.767$; I1: $\lambda = 0.762$). Workers have enough income to cover their lives. Then it is necessary to bench-match with the market prices to raise workers' participation in this market more actively; the company can increase the income for gig workers by applying bonus policies for those who achieve KPIs or get additional "gig", and also set up an emulation program for gig co-workers.

6. Conclusions, limitations, and future research

Generation (X, Y, Z) differences were found in the intention to participate in the gig economy in Vietnam. Generation Z intends to participate in the gig economy more than Generation Y and Generation X do. The factors affecting this intention are also identified: perceived risk, skills, flexible working time, platform economy, and current income.

However, there are still some limitations that should be studied in the future. Firstly, the sample was only in Vietnam. Other countries with different cultures and perceptions, as well as behaviors, should be tested in future research. Secondly, the basic theory and previous related studies on this topic are quite shortage. Qualitative research should be done in more detail to

explore other factors (such as family conditions, word-of-mouth, or disease pandemic) in the conceptual model. Differences in other demographic factors or geographic factors should also be studied in the future. Last but not least is the sample size. Future research should be done in a larger sample with an equal percentage of each generation to ensure the representative of the total sample.

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