

# ENTREPRENEURIAL CHALLENGES IN BUSINESS MODEL FOR THE GIG ECONOMY: AGENDAS FOR RESEARCH AND BUSINESS DEVELOPMENT

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## ABSTRACT

*Recently, the proportion of the gig economy based on part-time and freelancer labour is increasing in many economies with the advances of digital information technologies, changes of industrial structure, and development of internet and mobile information services. Many gig economy platforms basically share the characteristics of social enterprises in that they contribute to the interaction between part-time or freelancer workers and job providers. In this study, the current state of the gig economy is reviewed and entrepreneurial challenges in developing business models are suggested. In particular, agendas in business model for research and actual business development are explored and suggested focusing on how to increase positive social impacts of the gig economy. As a result, development and reinforcement of gig economy business models for web-based professional services, intermediary business models, and business models for public and social sector are suggested. Also, personalized recommendation and matching services, and diversification of jobs incorporated in the gig economy are suggested as the agendas for business model development.*

**Keywords:** Gig Economy, Part-Time Work, Freelancer Work, Business Model, Social Enterprise.

## INTRODUCTION

The gig economy is also called a part-time job economy, freelancer economy, or a free labour market system that is different from the traditional labour market based on normal labour contract. In the gig economy, organizations begin to work for some tasks with contracts for short-term employment with independent workers (Bank of Korea, 2019). All freelancers, independent contract workers, project-based workers, and temporary workers fall into the gig economy category. In general, the term gig economy refers to a situation in which the proportion of the temporary labour accounts for an increasing share in the economy in these days. In other words, it is an economic system that allows temporary contracts and works to be taken as necessary at industrial and labour sites. The term 'gig' comes from calling the performer, 'gig,' in an American jazz club in the 1920s who was able to work short-term when a full-time performer was short or was away. After the 2008-2009 US financial crisis, the term gig workers became popular as many workers lost their jobs and temporary workers increased rapidly. In other words, it can be defined as an institutional basis and production activity that allows individuals to enter into a certain industry and generate income without having a formalized employment relationship based on work contracts (Katz & Krueger, 2016). The academic interest came from Intuit's report (2010), which predicts that the gig economy will account for about 40% of the US labour market

by 2020. In these days, the gig economy platforms such as Airbnb, Uber and Lyft, that combine gig workers with job providers, emerged with great success and causing social controversy due to the conflicts with the existing labour market. The term gig economy has become an important term economically, politically and socially.

In these days, the subject of the gig economy is rising as an area which requires academic and analytical approach, and more delicate and planned policies, with the emergence of huge private platforms that enables a variety of temporary works and the dramatic increase of the number of part-time workers. In addition, it is expected that the proportion of gig economy will be increased along with the advances of digital information technologies and progresses of the Fourth Industrial Revolution, as machines and artificial intelligence get to replace routine human labours. However, the academic studies on the gig economy, especially on business models, are in its infancy up to this time because the history is not so long since the emergence of online platforms for the gig economy. Therefore, this study focuses on the extraction and suggestion of agendas for research and business development in the area of the gig economy. Chapter 1 of this paper is introduction, and chapter 2 describes the background of this study including the current state of the gig economy. The chapter 3 presents the agendas for research and business development as a core part of this paper, and chapter 5 is concluding remarks.

## **BACKGROUND**

### **Gig Economy Demographics**

The number or proportion of gig workers varies along countries and by survey method, but is generally less than 10% of the total workforce up to this time, and the proportion including independent or non-standard workers who are not employed on formal contracts is estimated to reach 10-30% of the total workforce in the United States and European countries (Manyika et al., 2016; Edelman Intelligence, 2018; MBO Partners, 2018; US Bureau of Statistics, 2018; Bank of Korea, 2019). Demographic characteristics of gig workers are generally young, educated, and have a higher percentage of men than women. Despite of a large proportion of young and educated gig workers, many of them are working in the fields of transportation and delivery where the educated are not needed, and which seems to be related to that the gig economy is staying in the immature early stage.

In the United States, the gig workers aged from 25 to 34 accounted for 24.9%, occupying the highest proportion among all ages, and 24.3% of ages from 45 to 54 was followed (U.S Bureau of Labour Statistics, 2018). The proportion of young people in the gig economy is much higher in European countries than in the United States. Germany, United Kingdom, Switzerland, and Austria. About 50% of gig workers were under the age of 35 in these countries, while it was close to 60% in Sweden. It also exceeds 40% in Italy and the Netherlands (Huws et al., 2017). It is well known that European countries have recently suffered from high unemployment while the U.S. remains almost fully employed with less than 5% unemployment. It can be estimated that the proportion of young people in the gig economy is growing in countries with high unemployment. In the UK, the number of gig economy workers is estimated to be about 2% of the total population (Balaram et al., 2017). By the education level, about half of American gig workers are college graduates and many of them have master's degrees or higher.

In the United States, when the platform type is classified into web-based and location based, the gig workers under the age of 35 in web-based platforms are 41.9 %, which is 10% higher than 31.5% of the location based platform. In addition, the proportion of college graduates and above is 67.0%, which is higher than 41.0% for all industries (U.S Bureau of Labour Statistics, 2018).

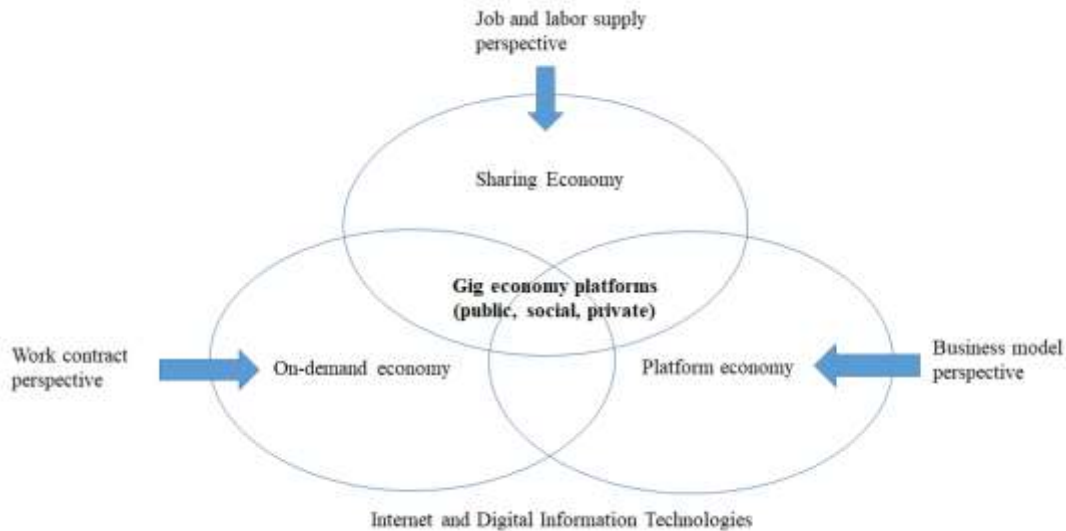
The gig economy is still in its infancy and is dominated by platforms run by for-profit private companies. On the other hand, the proportion of mainly young and highly educated workers is relatively high. In this respect, gig economy business model development need to be considered as a measure for the labour market for young generations. From this view, this study explores agendas for research and business development in business model for the gig economy focusing on reinforcing the positive social impacts, and suggests characteristics and requirements of the business model.

### **Relationship between Concepts**

The emergence of the gig economy has been influenced by the expansion of the Internet and mobile services and the development of on-demand economy, sharing economy, and platform economy (Bank of Korea, 2019). The on-demand economy is a business model that delivers products and services immediately to users' orders. Gig economy has emerged as a new axis of the labour market, with the demand for labour on demand and the increasing demand for temporary contract workers and freelancers in the labour market. The recent expansion of the on-demand economy on internet platforms has led to the change of the concept of gig workers from the traditional to the new one. In these days, the gig worker means the people who provide part-time or temporary works with job providers based on the short-term contracts with online platform companies. In the gig economy, firms hire workers with short-term contracts on demand, while the workers in traditional labour market are hired with formal employment contract. The proportion of the gig workers are continuously increasing in many countries.

The sharing economy refers to the economy where individual can lend or share the owners' resources such as goods, assets, knowledge, and labour for profit or non-profit. The gig economy corresponds to the sharing of jobs, labours, knowledge, and time among a variety of stakeholders in the sharing economy. For example, Airbnb's service is a business that earns a certain profit for the provision of shared services with the owners' space and facilities such as rooms, apartments, houses, bungalows, etc. Uber is a service that earns a certain amount of profit in return for sharing its vehicles, driving services and time. The platform economy describes the characteristics of an economic system in which various platform businesses do very important role and create great values. In the platform economy, many transactions and exchanges of goods, services, and information are carried out on digital internet platforms. The service platforms for part-time labour markets are related to the gig economy among them. The gig economy platform can be characterized as an open online digital information system where matching services between part-time workers and job providers can be done based on the on-demand economy and sharing economy. Airbnb, for example, is based on an Internet-based open online information system that provides accommodation and facility sharing services. This system is called a gig economy platform. The gig economy platforms can be serviced for diverse jobs and workers in public, social, and business sectors, although for-profit private platforms in the business sector are a dominating business model up to this time. Therefore, development of diverse business

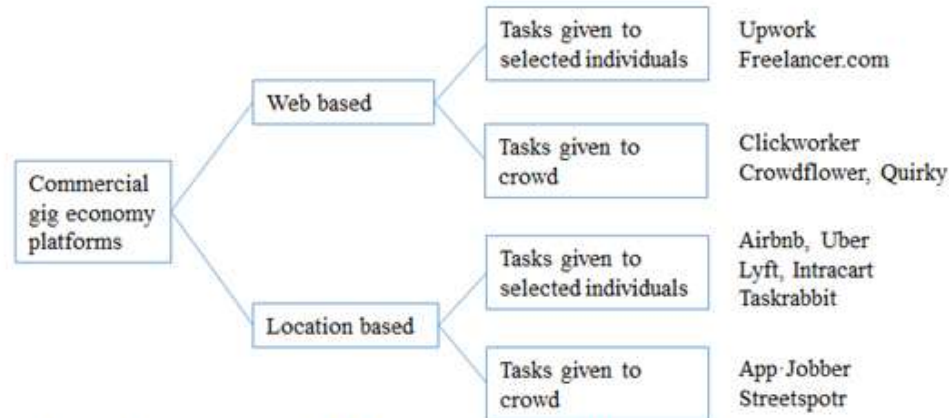
models in public and social sectors as well as in business sector need to be explored and suggested for the development of the gig economy. The Figure 1 shows the relationship between relevant concepts.



**FIGURE 1**  
**RELATIONSHIP BETWEEN RELEVANT CONCEPTS**

### Cases of Gig Economy Business Model

The gig economy based on digital platforms can be divided into web based and location based platforms (Berg et al., 2018). The web-based platforms don't majorly involve in physical services, so most or all tasks are done online, and the scope of the labour market can be expanded to global, not limited to a specific region. It includes online platforms that connect freelancers and experts to job providers in a specific professional service field, and a crowd labour sourcing platform where small simple tasks are carried out by a large number of online workers. It ranges from simple tasks such as customer call centre to the tasks that require professional knowledge, skill, and creativity such as software development, contents development, design, translation, and consulting. In contrast, in the location based gig platforms, services are provided in a specific region although the platforms are open broadly across the world, and mainly physical services such as transportation, delivery, cleaning, and errands are performed by online orders. Figure 2 (Source: Refigured from ILO (2018), Schmidt (2017)) illustrates the classification of the gig economy business model (Berg et al., 2018; Pesole et al., 2018; Schmidt, 2017).



Source: Refigured from ILO(2018), Schmidt (2017)

**FIGURE 2**  
**CLASSIFICATION OF GIG ECONOMY BUSINESS MODEL**

For example, in the web-based platforms, the Quick legal is a business model for the trading of professional knowledge that connects people who need legal advices to lawyers. The HowlyNerd connects part-time professional consultants who cannot work full-time due to retirement or parenting to job providers. The Top coder is a programming company with over 1 million programmers registered. In these days, various software development demands are increasing. The Fiber is an on-demand company that buys and sells services including music composition, graphics, translation, video editing, design, web analytics, and programming services online, supporting most of the work to be done remotely. A Korean platform Kmong links selling and buying of diverse talents and knowledge in design, software programming, contents, marketing, consulting, and others. The Wishket is a platform specialized in outsourcing in information technology industry that has more than 70,000 registered freelancers.

In the location based platforms, the Airbnb connects lodging spaces such as rooms, houses, apartments, bungalows, and islands to demanders. The Uber provides ride sharing services with the cars owned by the company or shared cars with the passengers. Passenger pay the fee for riding and the company get a commission from each payment. The Taskrabbitt makes it easy for the people around you to run errands. For example, simple errands such as shopping, lining-ups in front of a retailer's shopping mall on a product launching date, and delivering some products can be matched on this platform. For the errands, the payment intended is posted on the site by several applicants for a work, and one of them is selected by the errands provider, and commission is taken for each transaction by the platform company. The Deliveroo is a location based platform in UK who provides services for ordering and delivering food from restaurants. It receives commission from food buyers and affiliated restaurants. The Korean delivery platforms such as Yogiyo & Bedaltong have similar business models. Coupang Flex is a Korean retail platform company where applicants can work for part-time delivery services.

Kässi & Lehdonvirta (2018) classified the online labour (web-based gig) into six categories of software development and technology, creative and multimedia, clerical and data entry, sales and marketing support, and professional services. According to their investigation, the highest demand among these occupations was for software development and technology,

with roughly one third of the vacancies, and were followed by creative and multimedia, clerical and data entry work in turn. The demand for professional services including accounting, consulting, financial planning, legal services, human resource services, and project management services had the lowest demand out of the five categories. The reason why the demand for software development and technology, creative and multimedia, clerical and data entry are relatively high seems to be related to the long history of outsourcing and offshoring in these industries.

The gig economy is characterized by high autonomy and flexibility in the decision of whether or not to enter labour and in the selection of working hours. Because of these characteristics, the share of the gig economy is growing continuously in many countries. The importance of gig economy is growing not only for low-skilled workers who drive a car, deliver something, and clean houses, but also for professional workers with expertise and skills. The growth of the gig economy is largely attributable not only to the intrinsic nature of the gig economy itself but also to the development of so-called platform business models based on digital information technology. In recent years, the platform is commonly used as an online or offline space where various suppliers and consumers can freely gather, contact, communicate, contract, trade, exchange, pay, and advertise. The term platform has become economically significant since the digital platform business model has had a significant impact on the economy. However, the gig economy also has problems in job insecurity, falling wages, legal protection of the labour stability, and the problem of taxes, although the proportion is continuously increasing. Therefore, research and business model development to make up these weaknesses need to be done focusing on increasing positive social impacts of the gig economy. Also, appropriate government policies to relieve negative impacts of the gig economy need to be accompanied. Also, policies and measures to support young and educated gig workers who take up the highest share at this moment need to be considered and pushed forward.

## **AGENDAS FOR RESEARCH AND BUSINESS DEVELOPMENT**

The gig economy is still in its infancy and introduction stage up to this time and various efforts are required in business models, institutions, policies, social consensus, legal aspects, in order to settle it as a part of the future labour market and increase positive social impacts, including the improvement of service qualities. In particular, there may be various challenges in business model because the gig economy is operated on digital platforms where diverse technologies can be developed and adapted in this digital transforming age. In this study, the agendas for research and business development in the area of business model for gig economy are explored and suggested focusing on increasing the positive social impacts.

### **Research Challenges**

The scale and weight of the gig economy in the labour market is expected to increase rapidly with the advances of digital information technologies although the gig economy is still in its introduction stage up to this time. For the research challenges in the business model area, first, the roles of gig economy platforms in the new economic ecosystem based on digital information technologies need to be investigated and analysed in terms of the contribution to achieving the equilibrium of the economic system. The gig economy is being developed in the relationship

with sharing economy, on-demand economy, and platform economy that compose important part of the economic system in this digital age. Therefore, research on this issue will provide meaningful insights on whether the gig economy business model can be settled down as a part of the labour market in the future, or as a conclusion whether the digital platforms for gig economy could be sustainable or not. Therefore, the roles and contributions of the gig economy business model to the economic ecosystem need to be a domain for the research.

Second, the roles and contribution of the gig economy business model can be influenced by the characteristics of the business model increasing positive social impacts. So far, the services for the gig economy have been mainly provided by for-profit companies in business sector, as shown in the cases of well-known platforms such as Airbnb, Uber, DidiChixing, Lyft, and Deliveroo. Although there have been many positive contributions to each national economy, there also have been problems such as conflicts with existing labour markets, too high commission fees, problems in service quality and quality assurance. Therefore, what are the basic requirements and conditions of gig economy business model to increase the positive social impacts of the gig economy can be a big question for the research. The research on this question can contribute to ensuring the stability and dynamism of the labour market and achieving the challenges of settling the gig economy as a part of the future labour market.

Third, the possible business models in public and social sector and their roles need to be researched in terms of business model. Up to this time, for-profit platforms in business sector led the gig economy. However, if the services can be provided in public and social sector, it can provide more diverse chances to part-time workers and job providers. Also, the business models in public and social sector can contribute to increasing positive social impacts of the gig economy, and improving the stability of the labour market.

Fourth, issues on regulations for the gig economy can be a domain for the research in terms of business model. Where should be the boundary between regular labour market and gig economy platforms, what should be the scope of labours that can be allowed for the gig economy, how to solve the problem of conflicts between gig economy platforms and traditional industries can be important subjects for the research that can be approached from the business model perspective.

Fifth, how to find a right person or team for a task, how to develop and manage human resources, and how to improve the productivity and quality of labour in gig economy can also very important questions for research for the gig economy.

### **Agendas in Business Model Development**

The gig economy is in its infancy and introduction stage. Therefore, diverse business models need to be considered and developed to provide better services and increase positive social impacts. For the agendas for business model development for the gig economy, several challenges can be pointed. First, business models for web-based professional services need to be sophisticated and reinforced to support diverse types of tasks. Business models need to be developed to support diverse tasks offered from diverse professional industries. Also, the gig economy platform as a business model should support diverse size of projects from a task for a single person to a project for small experts group, diverse period of projects from one day to relatively long time projects, and diverse level of tasks from easy and simple to highly

professional. The well-developed business models can contribute to the expansion of the gig economy in the professional services industries, and give workers chances to develop diverse careers and personal capabilities through the gig economy.

Second, it is necessary to develop an intermediary business model that can collect information from diverse stakeholders of platforms, and both sides of job providers and demanders. The intermediary business model can deal with diverse information from the gig economy participants, and can develop diverse services to promote gig economy based on mutual trust, and can provide personalized information with recommendation for matching with the service demanders. However, it's very difficult for the intermediary business model to support all gig economy platforms including very small and simple task. Therefore, selecting the job categories that can be serviced through the intermediary business models can be the key part of the development. Also, business models can be developed based on big data and artificial intelligence technologies to realize targeting functions.

Third, it is necessary to develop gig economy business models in public and social sector in order to provide tasks and choices with various kinds of workers. The gig economy, at this moment, is based on for-profit private companies such as Airbnb, Uber, Lyft, and Deliveroo. In order for the gig economy to become a necessary axis of the future labour market, gig economy business models in the public and social sector can do a positive role in supplementing the weaknesses of private sector. As the gig economy grows in size, the large commission fees is likely to weigh on the economic system, and it also needs to be supervised for the trade at much lower wages in the platforms than in traditional services not to be resulted in a burden on part-time workers. Therefore, business models in public and social sectors need to be considered and developed for a balanced development of the gig economy.

Fourth, it is necessary to develop business models to accommodate a wide spectrum of labours in a variety of industries along with diverse job characteristics, wage levels, work periods, ranging from simple to professional jobs. The business models should support the gig economy for part-time workers to develop their careers through part-time jobs in order for the gig economy to be a part of the labour market in the future. In other words, depending on the characteristics of the jobs, various options should be given according to the level of hourly, daily, weekly, monthly jobs, and diverse wages depending on the level of professional jobs, creative jobs.

Fifth, in order to develop a trust-based gig economy, it is necessary to develop an information service that can manage individual experiences, careers, and reputation. In addition, platforms need to provide customized information based on accumulated workers' careers. In order to be able to accommodate professional, high-quality and high-paying jobs in the gig economy, the reputation and career management of the part-time workers need to be done based on trustable information. Therefore, the gig economy platforms, intermediaries, or government need to consider how to develop the career management system for gig workers as a part of the business model. The achievement of mutual trust can contribute to the development of the gig economy.

Sixth, the recommendation and matching system for diverse gig economy platforms in web-based services can support gig workers to make diverse composition of work schedule with small and big, simple and highly professional, and personal and team works. This business model also enables for the job providers and workers to choose the counterparts of the contract more easily based on diverse data including job descriptions, required talents, qualifications,



abilities, careers, desired jobs and working hours. Of course, the business models need to be developed to provide real-time services on Internet or mobile.

Seventh, in connection with the laws, institutions, cultures of each country in relation to taxes, workers' rights, and prevention of fraud, it need to be considered whether the business model should be developed considering on pursuing globalized standard services or localized services. Some gig economy platforms are now causing a lot of controversy over conflicts with existing services in each country. Therefore, for web-based services, business models which enable global services with standardized services would be more valuable, while the location based business models should be developed inevitably considering the ways of localization. The agendas for research and business development are summarized in the Table 1.

Research	Roles and contributions of gig economy in digital ecosystem
	How to increase positive social impacts of gig economy
	Possibility of gig economy in public and social sector
	Government regulations for gig economy development
	Career development and human resource development in gig economy
Business Model	Business models for diverse tasks and industries in professional services
	Development of intermediary business model
	Business models in public and social sector
	Accommodation of diverse spectrum of jobs
	Business model to increase mutual trust on workers careers and capabilities
	Personalization business model for recommendation and matching
Required Technology	Globalized or localized business model
	Computer system to handle heavy traffic data on Internet
	Sufficient data storage capacity (ex: cloud computing)
	Various data mining tools and artificial intelligence system
	Systems to support contract and transactions
	Supporting personalized services (recommendation and matching)
	Supporting worker's career management
Other technologies to prevent fraud, increase mutual trust, etc.	

### **Required Technologies**

Developing gig economy business models require a variety of hardware and software technologies. A computer system that can handle heavy traffic data on internet as quickly as possible is a basic requirement. Also, it is essential to secure sufficient data storage capacity to support various participants' access and interaction without restriction based on high capacity computer or cloud computing system. A data warehouse or data centre for the accumulation of huge data is also required to analyse and develop diverse additional services. In addition, various data mining tools and artificial intelligence systems can do a role to improve the quality of data analysis, and recommendation and matching system. Also, other diverse technologies to prevent frauds, to solve the problems of taxes, to increase mutual trust need to be required to support the business models.

## DISCUSSION AND CONCLUSION

The gig economy is still in its infancy and introduction stage. But the gig economy is the future to come, and already have a big impact on economy and society. Work flexibility has become more important for some workers and the scope of jobs a person has to undertake will be broader than ever before. The gig economy will become an important part of the labour market in the not too distant future, changing the patterns of people's working and the overall picture of society. The growth of the gig economy is closely related to the advances of digital information technologies. Employers can use gig workers around the world for their tasks, and gig workers can have a chance to experience diverse tasks and develop their careers in specialized areas controlling their works freely. For the start-ups who aren't easy to hire full-time workers, the gig workers can be a very useful option to adapt to fluctuating amount of tasks. However, the gig economy has also been showing some negative shades of lowering wages, growth of irregular workers, increase of instability of labour, difficulty in achieving mutual trust, problems of frauds, conflicts with existing industries, and too high commission fees. In addition, the size of the gig economy is likely to grow in the future with the rise of unemployment due to automation of manufacturing and services, and the tendency of flexible and free jobs in the fourth industrial revolution age. In order to enable the gig economy to play a pivotal role in the labour market, to solve unemployment problems and to improve welfare in the future, development of diverse gig economy business models is necessary. In particular, business model need to be developed to supplement these weaknesses and reinforce strengths of the gig economy. Pesole et al. (2018) asserts that on-line labour supply and demand mitigates the geographical constraints of job openings and job search activities, and facilitates job fragmentation into smaller units promoting labour specialization and productivity improvement. Therefore, increasing positive social impacts of the gig economy is a challenge in business model for the gig economy.

The gig economy business model has developed based on the platform business model up to this time, and has to be evolved increasing positive social impact including contribution to economy and consumer satisfaction. In this study, seven challenges in business model development including support for various professional services, development of intermediary for selected services, development of business models in the public and social sectors, inclusion of diverse spectrum of jobs, career development and management system, recommendation and matching system, and globalized or localized services were proposed focusing on the increase of positive social impacts of the gig economy.

This research was attempted to explore and suggest agendas for research and business development in the area of business model of the gig economy. Therefore, the suggestions in this research become the future research challenges in the area of business model. In addition, empirical studies on the current state of the gig economy in diverse industries would also be valuable for the expansion of understanding. The characteristics, scopes, and classifications of gig jobs, gig workers' needs and preferences in choosing part-time jobs, problems in composing job portfolios, human resources development and management in gig economy, and the direction of the development of the gig economy need to be included in the research challenges.

## ACKNOWLEDGEMENT

The second author Sung-Eui Cho is corresponding author of this paper (dcrsmk10@gnu.ac.kr). In addition, the first author Wonho Cho acknowledges that this paper was developed from a paper awarded in the student paper contest in the 2019 Fall Conference of Korea Society of IT Services.

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