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Master's Thesis of International Studies

A Study on Platform Worker's Working Environment

: Focusing on the Case of TADA drivers

플랫폼 노동자의 근무환경에 대한 연구

: 타다 드라이버 사례를 중심으로

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Abstract

A Study on Platform Worker's Working Environment : Focusing on the Case of TADA Drivers

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Structural changes are taking place in the economy, business and the whole society. Along with the Fourth Industrial Revolution, a new innovative business model called the 'Platform Economy' was born. The platform economy is a system that utilizes the innovative technologies of the Fourth Industrial Revolution to easily bring people together on platform and create a lot of opportunities and wealth based on the powerful network effects of people connected through the platform. Currently, already seven of the top 10 global market caps (Apple, Google, Microsoft, Amazon, Facebook, Tencent, Alibaba) are platform business companies and the success of unicorn companies such as Uber, Didi Chuxing, Airbnb and WeWork, which are worth more than \$1 billion, is also thanks to the power of platform.

Global companies that have grown on this enormous strength of the platform are rapidly breaking down traditional companies and completely reshaping the industry

ecosystem. In particular, major changes are already taking place in the labor market, which is directly affected by the industrial ecosystem. Amid the global ‘Gig economy’ trend, platform companies are luring workers by promoting new types of free, flexible and independent jobs. However, the reality of platform workers was quite different from what they claimed.

Therefore, this study examines how the platform economy is changing the working environment and how do workers feel about this new type of working experience. To this end, in-depth interviews were conducted with the drivers of TADA, Korea's leading mobility platform company. Based on the results of this interview, this study examines not only the reality of the changes in the working environment and the workers' experiences but also the prospects of future labor market and things to be improved for better working conditions.

Keywords: Platform Economy, Network Effect, Gig Economy, Working Environment, TADA

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I . INTRODUCTION

1. Background of the Research

“Uber, a smartphone-based car sharing company, first launched in March 2009 in San Francisco, USA. In less than five years, investors rated Uber's corporate value as more than \$ 50 billion. In addition, Uber has challenged the traditional taxi industry in more than 200 cities around the world and is ready to replace the taxi industry. Of course, without owning a single vehicle.” (Parker, Alstynne, and Choudary, 2016, p.31)

How could this be possible? From a traditional point of view, how can startups that do not have the resources necessary for their survival infiltrate the main business and conquer the market in just a few months? And why is this happening all around the world now? (Parker et al., 2016, p.32)

The answer lies in the power of the platform, a new business model in the Fourth Industrial Revolution. The platform connects people, organizations and resources into one integrated ecosystem, enabling them to create and exchange enormous value in a faster and more convenient way. And, based on this tremendous network effect of integrated ecosystem, platform companies can grow rapidly with innovative services that provide consumers with tremendous convenience, rapid service, and quality of life by easily connecting supply and demand through IT technology.

As we can also see from the success of top 10 global market caps like Google, Amazon and Facebook, and the success of startups like Uber, Didi Chuxing, Airbnb and Wework, etc. the platform is now the main key to the success. These companies are achieving tremendous growth just by providing a platform that connects users efficiently without their own products or contents. In this highly connected ecosystem, users create their own unique contents and share them with people from all around the world and attract more and more people. As platform businesses have sprung up and succeeded in such diverse fields, the abilities to create, expand and maintain the platform are emerging as new sources of success. Thus, in the future, those who dominate the platform will dominate the market and wealth.

However, we should be noted that while we are enjoying the joy of quick and convenient service in the age of hyper-connectivity based on the integrated platform ecosystem, there are also many side effects occurring on the other side of the reality. In particular, such rapid changes in the industrial ecosystem inevitably lead to a change in the working environment. Actually, we can already see that the status and poor working environment of these platform workers from all around the world are becoming a serious problem. And this is a very different reality from the rosy promotional statement: ‘free, independent, flexible work’ that Uber stated in the driver recruitment notice when they first launched in the U.S as the pioneer of sharing Platform Company in 2009. Moreover, the issue is more important because it is not just limited to the platform labor, but about to be a problem for all of us in any kinds of

business as the platform economy spreads rapidly.

Therefore, this study intends to find out what has happened in the platform working environment since Uber, the pioneer and successful example of sharing platform companies, launched in the US in 2009. To this end, this study examines the changes in the working environment brought by the platform economy and the working experiences and opinions of platform workers through in-depth interview. By interviewing drivers of TADA, a representative mobility platform company in Korea, this study intends to find out the reality of platform work and their real thoughts on this changed working environment. Furthermore, based on the result of interview, this study tries to find out what factors influence the satisfaction of platform workers and what aspects should be improved and implemented for the better working conditions for the future workers.

2. Research Questions

This study set up the following three research questions in order to examine the effects of the rapidly emerging platform economy on our society, especially on the working environment.

1. How has the platform economy changed the working environment?
2. What is the impact of the platform economy's changed working environment on (platform) workers? How the workers feel about this change?
3. What is the lesson for us from the example of platform workers in the rapidly changing platform economy trend? What should we keep in mind and improve for the future of workers and labor?

3. Organization of the Research

In order to understand the above research questions, this study interviews workers working in the platform economy. Based on the results derived from the interview, the impact of the rise of the platform economy on the working environment and workers is examined.

I begin by introducing the definition and the basic operation system of platform to show how the platform works and how it could expand widely and dominate the market by beating the traditional industry. In Chapter 2, I focus on improving the

understanding of the platform economy that currently leads the global economy. I analyze the definition, basic concept and function of the platform which connects the users and service providers. I introduce three main characteristics of platform, connectivity, sharing and expansion, based on the theory of network effect. Through these three main characteristics of platform, we could understand how the platform economy could succeed so dramatically without owning their own product. Then chapter 2 concludes with some side effects of platform economy on society.

In Chapter 3, I focus on the changes and differences of working environment in the platform economy. Referring to the Gig Economy trend, we confirm that the labor environment changed by the platform economy is not a temporary problem, but a fundamental change affecting the whole society. Then it examines the advantages and disadvantages of the newly changed working environment by referring relevant domestic and international examples.

In Chapter 4, the research design and method for qualitative research (in-depth interview) are introduced. Then the basic background information of drivers derived from the interview is sorted and organized to show what kinds of people work for Platform Company and find out some correlations between the characteristics of workers and their work satisfaction.

Chapter 5 analyzes the characteristics of the platform working environment by dividing them into advantages (autonomy, flexibility, independence) and disadvantages (management, control of workers) based on the answers of research participants. In

addition, I examine their motivation of participation, future job plans to find out who is mainly involved in platform labor and analyze the correlations between these factors and the satisfaction of platform labor. Lastly, this study examines the free thoughts of research participants about platform labor, which has a great impact on the lives of workers through a fundamentally different working environment from the existing traditional jobs.

Finally, in Chapter 6, I provide a summary of the findings from the interview and discuss directions for future research.

II. THE RISE OF THE PLATFORM ECONOMY

1. What is the Platform Economy?

'Platform Economy' refers to economic activities that generate additional profits by integrating various types of business models based on the network effect of the floating population and crowded places. In particular, the platform economy is an economic activity traded by suppliers and consumers based on digital networks in the Fourth Industrial Revolution. Within the platform ecosystem, platform participants comprised of different groups are creating a win-win effect, in which all participants gain the necessary value through interaction with each other.

To build such an efficient ecosystem, platform companies are utilizing core technologies of the 4th Industrial Revolution, which is made up of convergence of ICT technologies such as artificial intelligence, big data, and the Internet of Things. By mobilizing all these technologies, Platform companies connect people, organizations, and resources into an open platform ecosystem that enables all participants to create and exchange value easily and usefully through efficient, customized interactions that meet their needs.

The concept of the platform economy might seem simple, but it is a very innovative concept that radically changes business, economy and society. In fact, all industries that deal information as a core resource are candidates for the platform revolution, and

most industries fall into this candidate group. Therefore, it seems very natural that all of the world's fastest growing brands are platform companies. (Parker et al., 2016, pp. 33-34)

Table II-1. Largest Global Companies in 2018 vs 2008

**LARGEST GLOBAL COMPANIES IN 2018 VS 2008:
SEVEN OUT OF TEN ARE NOW BASED ON PLATFORM
BUSINESS MODELS**

2018				2008			
RANK	COMPANY	FOUNDED	US\$bn	RANK	COMPANY	FOUNDED	US\$bn
1.	 *	1976	890	1.	 PetroChina	1999	728
2.	 *	1998	768	2.	 EXXON	1870	492
3.	 Microsoft *	1975	680	3.		1892	358
4.	 amazon *	1994	592	4.	 中国移动 China Mobile	1997	344
5.	 *	2004	545	5.	 ICBC	1984	336
6.	 Tencent 腾讯 *	1998	526	6.	 GAZPROM	1989	332
7.	BERKSHIRE HATHAWAY	1955	496	7.	 Microsoft	1975	313
8.	 Alibaba.com *	1999	488	8.		1907	266
9.	 Johnson & Johnson	1886	380	9.		2000	257
10.	J.P.Morgan	1871	375	10.	 AT&T	1885	238

* Companies based on the platform model

Sources: Bloomberg, Google

As we can see on the left in the above table, seven of the 10 most valuable companies globally, which are marked with a star, are now based on a platform business model: the creation of digital communities and marketplaces that allow different groups to interact and transact. Companies like Apple, Google, Amazon and Alibaba have used Platform business model to grow exponentially and grab significant market share from established firms.

As shown in the table above, the global market capitalization of 2008 shows that most of the top rankings are made by manufacturing and financial institutions such as ExxonMobil and GE. However 10 years later, in 2018, platform giants such as Apple, Google, Amazon, and Facebook are leading the global economy. As of February 2018, start-ups using platforms for their business model such as Uber(\$68bn), Didi Chuxing(\$56bn), Airbnb(\$31bn), and Wework(\$20.2bn) were also strong among Unicorns with a corporate value of more than \$ 1 billion. (Lee et al., 2018, p.9) Increasingly, traditional companies are also attempting to leverage the platform as a driving force for innovation. Already, 70% of platform companies are leading the global economy now. (Lee et al., 2018, p. 10)

Apple has created a marketplace for app developers and users to trade in the "App Store," where they can buy and sell applications, and it also provides a marketplace for digital content distribution through iTunes. Microsoft has demonstrated its robustness while maintaining the dominant market share in the PC operating system, through its outstanding platform called 'Windows' where a great number of program developers and users have formed an ecosystem. Amazon has created a huge space for commodity sellers and consumers to trade without time and space constraints by opening its online shopping mall, payment and logistics infrastructure. Google, known for providing the most optimized search results, has grown into the world's leading search platform that connects searchers with web pages from around the world and expands its reach by taking over YouTube, the video sharing platform. Facebook, as the world's largest

social platform, is building an ecosystem in which personal services extend infinitely across the web, and expanding its influence infinitely. (Yoon, 2012, pp. 18-19)

As such, the platform ecosystem is already deeply embedded in our lives. Unlike the previous manufacturing-oriented industrial revolution, systems that create value and run economic activities within the platform will become more common in the era of the fourth industrial revolution. Accordingly, in a new era, those who can create a virtuous cycle of ecosystems where suppliers and consumers freely gather, exchange and create endless values based on the platform will eventually survive and dominate the future wealth.

2. Understanding the Platform

As mentioned above, the common keyword of the top 10 unicorn companies in the global market cap, or the newly emerging top 20 unicorn companies, is the platform. After all, as we can see clearly in these phenomena, the new era has come where even traditional companies like GE cannot survive anymore without leveraging the platform as a driving force for innovation. Now, from giants Wal-Mart and Nike to big farm machinery producers John Deere, GE, and Disney, everyone is working hard to adopt a platform approach to their business. As we can see, it seems very clear that the center of the global economy is moving to the platform, and this phenomenon will accelerate further.

Then what is the platform that makes it all possible and what characteristics does it have? The characteristics of the platform can be summarized by three keywords. The three keywords are ‘connectivity’, ‘sharing’ and ‘expansion’. Knowing these three keywords will give you a good understanding of the platform, and if you do these three well, you will be able to dominate the future industry as a platform leader.

2-1. Connectivity

2-1-1. O2O

Basically, most of the platform companies we know have the characteristics of O2O service. O2O means "Online to Offline" but also "Offline to Online", indicating the two-way flow between the online and the physical world. In other words, O2O service represents a new commerce model that connects offline business opportunities to online and it can be also called as ‘On-Demand’ service in that it provides service immediately in offline as it gets order from online.

In the background of O2O service development, the development of IT technology and the spread of smart phones played an important role. In particular, with the introduction of the iPhone at Apple in 2007, the concept of a smart phone was totally redefined as Apple created a mobile application ecosystem (platform) through the App Store. As a result, smart phones are integrated into mobile applications and create a standardized platform, creating an environment in which numerous types of apps can

be created around mobile. In addition, as Google launched the Google Play Store based on Android, the world has entered the world of full-scale smartphone applications.

With the easy access to various mobile services and contents through the App Store and the Google Play Store, the spread of smartphones has accelerated. As a result, smartphone users began to become accustomed to consuming services and contents through mobile. And this smartphone-friendly environment set the backdrop for the O2O world, where offline and online connections can be easily made with a single touch.

This easy connection between online and offline worlds has led to the further development of on-demand services, making customers' needs even more important. This is because while there were only a few places where customers could buy a certain product in the past, now we can buy it through the online and there are many more choices with various options and prices. As a result, companies have become more responsive to customer's behavior and decisions than before to be chosen by customers among many competitors both in online and offline.

In addition, the convergence of the online and offline sectors broke down the boundaries between industries. For example, if you buy clothes online, you can get a service that offers products after directly measuring them offline. On the contrary, customers who buy through online after measuring in offline stores are also increasing. In addition, there are also a growing number of new types of stores in China that

combine online and offline stores.

The environmental background that enables this online and offline convergence has facilitated the development of a platform that brings these two together more efficiently. Therefore, the most important thing for building a platform that connects online and offline is the converged talent who understands both online and offline markets. Even though the boundaries between domains are blurring, online and offline are clearly different domains. Therefore, we need to develop our knowledge and experiences in both areas in order to succeed in the platform service market where online and offline markets are closely combined.

2-1-2. Matchmakers

Aforementioned characteristics of the platform that connects online and offline can be summarized as services that make it easier to connect suppliers and consumers. And we can say that the platform is a structure that profits by acting as an intermediary between two parties by using the environment where O2O service can be developed. Most of the platform companies we know, such as Alibaba, Apple, Facebook, Google, Microsoft, Airbnb, and Uber, all grow their businesses by acting as effective intermediaries that provide a place where easy to access for suppliers and consumers. Therefore, some people call these platform companies "matchmakers."

These matchmakers are very different from traditional companies. Traditional manufacturers, for example, buy raw materials, make goods, and sell them to customers. But matchmakers don't buy raw materials. They just help people to get together. (Evans and Schmalensee, 2016, Preface) They just provide a convenient and efficient system and place where people can freely get together and interact. While the traditional economy was hardware and software oriented 'product economy', now the era of convergence economy has opened, where data and services are freely shared circulated through the platform. (Lee et al., 2018) In other words, what Matchmakers sell to people is not a tangible substance, but an "opportunity to reach out" to members of other groups as needed. Economists call matchmakers 'multisided platforms' because they provide physical or virtual platforms for multiple groups to get together. (Evans and Schmalensee, 2016, Preface)

Platform companies are still struggling to effectively matchmaking more demand and supply to their needs. To this end, they are constantly accumulating information and data about the participants who are communicating in the platform ecosystem they have built. This is because effective and accurate matching capability based on the accumulated data and the algorithm of artificial intelligence that analyzes it is the key to the success of the matchmakers.

2-1-3. Network Effect

Then how could platform companies, which, as we saw earlier, didn't even own resources, achieve this unprecedented rapid growth just by connecting and matchmaking? After all, the secret to the growth of the platform economy is the 'network effect' created by the people on the platform.

A network effect is the effect described in economics and business that an additional user of goods or services has on the value of that product to others. This is in line with 'Network Externality', which means that the more users use a particular product or service, the higher the value. It is also related to the economic term 'Demand-Side Economies of Scale'. In general, economies of scale mean that the average cost decreases as the production volume increases on the supplier side. (Ryu, 2016, p. 373) However, 'Demand Side Economies of Scale' exists in those industries where the value of a product or service increases in accordance with the number of users of that product or service. So, where the more users there are, the more valuable the product / service becomes. Therefore, Demand Side Economies of Scale predominantly exists in industries where networks are important, such as online social networks, online dating sites, online games.

The network effect is important because: (1) the more users are gathered, the faster the users increase, the higher the value of the product. (2) When a certain point is reached, the product tends to be selected based on the number of people who use it rather than the quality of the product. There are several products in the market that are

inferior in quality but enjoy a solid market position due to network effects. (3) And this eventually leads to a lock-in effect (also called a lock effect), leading to strong market dominance that even users who are dissatisfied with the product cannot switch to another product due to switching costs. (Ryu, 2016, p. 374)

Considering these powerful network effects, we could understand that network effects are one of the main characteristics of the platform and that designing a structure that makes good use of them is critical to the success of the platform. (Ryu, 2016, pp. 374-375) Facebook is one of the leading companies that well reflect network effects in the way the platform ecosystem works. Facebook is not simply satisfied with connecting people but has used numerous tactics to maximize network effects.

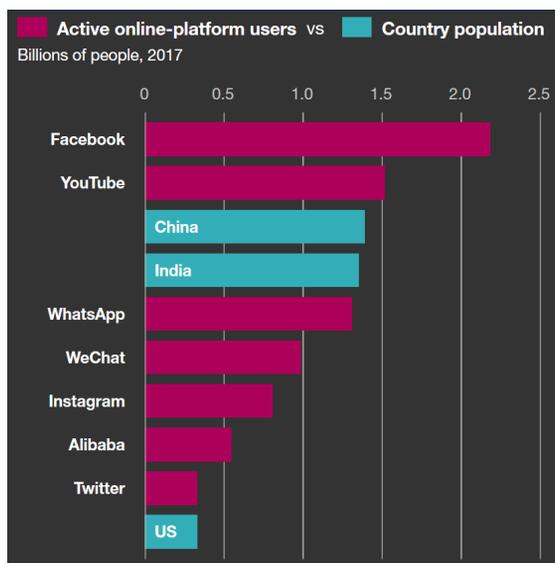
Facebook is designed to constantly encourage users to respond to their friends' activities which are continuously provided by Facebook algorithms. In this context, user activity is content that needs to be created and uploaded, such as text, photos, or videos. And it takes some time to upload contents and react to them. All other social networking services took such a structure for granted and did not consider it any longer. But, Facebook went further. It provided a "Like" button for users who might be too lazy to comment. Facebook's "Like" button may seem natural and trivial at first glance, but Facebook is creating significant network effects through this simple button. Not only that, Facebook is equipped with countless sophisticated psychological systems that enhance network effects. Ordinary users who use the service without much thought unconsciously perform the expected behavior intended by experts through

these sophisticated functions that experts have installed after a long period of thought and trial and error. (Ryu, 2016, pp. 375-376)

Facebook, which uses network effects most effectively, is now the world's largest social network service. With 2.41 billion monthly active users as of the second quarter of 2019, Facebook is the biggest social network worldwide. Active users are those which have logged in to Facebook during the last 30 days.

The number of Facebook's monthly active users (2.41 billion) is well above the population of China (1.4 billion) and India (1.3 billion), the world's two most populated countries. And this means that Facebook not only has the largest population in the world as a single country but also has the most powerful network effects in the world.

Figure II-1. The number of active online-platform users vs Country population



Source: Mckinsey

Facebook signaled the birth of a social network with surpassing one billion active users for the first time in the world in 2012. And now, the company stated that 2.7 billion people were using at least one of the company's core products (Facebook, WhatsApp, Instagram, or Messenger) each month.

Now, it will be hard to find anyone who doesn't use any of Facebook's products. Facebook demonstrates the status of a true platform company that has conquered the world through network effects.

As we have discussed earlier, the lessons of network effects are obvious. (1) In order to maximize network effect, you must actively design the sophisticated platform's algorithm as Facebook did. (2) And even after the platform is released, it is necessary to constantly consider and implement ways to further enhance the network effect. A platform that has succeeded in establishing solid network effects never fails easily. Once a user enters such a platform, even if they are dissatisfied with the platform, they will not be able to easily get out of this ant hell without showing their strong will. (Ryu, 2016, p. 377)

2-2. Sharing

As we can see from the aforementioned “matchmaker” concept of connectivity and the network effect, the big characteristic of the platform is that it expands the economy of voluntary cooperation and sharing through network effects without resources. In this

way, the sharing economy voluntarily expands and evolves within the platform ecosystem. And what makes this possible is the nature of the aforementioned platform's connectivity. In the offline environment, the value of sharing was small due to the high connection cost and the effect of diminishing returns, but in the online world, the cost of connecting is reduced thanks to the internet and it leads to the increase of overall value as the effect of increasing returns happen in sharing. In other words, as the market transaction cost decreases, the market actors' participation increases and the market becomes more efficient on its own. (Lee et al., 2018, p. 30)

Sharing Economy is expanding further as the Internet revolution has reduced the cost of connection and the cost of sharing is becoming almost zero through the platform. Referring to this phenomenon, Jeremy Rifkin explained in <The Zero Marginal Cost Society> that we are entering a hyper-connected society through the Internet of Things. And with the development of technologies such as 3D printing, the marginal cost zero, which was possible only in the infinite copying of software or digital content, occurs either in hardware or offline, resulting in the end of ownership and evolving into a "cooperative sharing society."

Consequently, the platform economy that optimizes, matches, and shares the remaining tangible and intangible resources as it moves to a hyper-connected society with the development of Internet technology will spread further, and ultimately will evolve into a social innovation where the entire market converges. In addition, the data accumulated in the platform ecosystem through this series of processes will be able to

efficiently solve many problems in the past market economy.

2-3. Expansion

The platform's features of connectivity and sharing, as discussed above, ultimately open the door for the possibility of unlimited expansion for platform companies. This is because platform companies are basically open networks that allow free entry, and if they go beyond the critical point based on such openness and maximize the network effects, they can easily expand the industrial domain with their market dominance.

2-3-1. Free Entry

Platforms are infrastructures designed to encourage producers and consumers to exchange value with each other. The two types of participants use the platform to build relationships and exchange products or services. After all, getting these participants to gather on the platform and participate in key interactions is the most important element of the platform's value-creating mission. Given this basic structure, the vitality and soundness of the platform depends on the value generated by partners outside the platform. (Parker et al., 2016, p. 232) Therefore, a network that allows free entry can grow infinitely with almost no barrier. (Parker et al., 2016, p. 66)

Let's think about Google's YouTube. Its high openness has made it possible to present a wide variety of contents, from commercial videos to amateur videos, from ridiculous to practical, political or inspiring. Without such a wide variety of user-created contents, YouTube would have had to rely on video material produced by some companies, making YouTube only a common video distribution system rather than a true innovative platform. (Parker et al., 2016, pp. 232-233) This free entry allows users to quickly and easily enter the platform and participate in value creation activities. It is a key factor that enables the platform to grow quickly. (Parker et al., 2016, p. 66)

However, this free entry, which allows the platform network to grow rapidly, can also cause rapid failure. This is because negative network effects occur when quantitative growth increases the number of possible matches between producers and consumers, making it difficult or impossible to find an optimal match.

Therefore, to avoid encountering these obstacles, free entry should be allowed, but must be balanced through effective curation. Curation here refers to the process by which the platform filters, controls, and restricts users' access, the activities they participate in, and the relationships they have with other users. (Parker et al., 2016, pp. 68-69) If the quality of the platform is well managed through this effectively managed curation, users can easily obtain the products or services that are just right for them, thus reducing the negative network effects and at the same time promoting positive network effects that attract more people.

2-3-2. Two-sided market and side switching

The general market we know is called a one-sided market. In the one-sided market, the seller deals only with the buyer as you have to go directly to the car dealership when you want to buy a new car. On the other hand, in a two-sided market, transactions are made via one company who acts as a platform that connects sellers and buyers. In other words, a company that acts as a platform forms a two-sided market in which both sellers and buyers become customers. Most platform companies form this two-sided market and expand the scale further through these two-sided network effects.

And in order for the platform's two-sided market to be properly formed and expand network effects, it must attract both side of market simultaneously. For example, it would be meaningless for Uber to have a single passenger and a thousand drivers. The same is true for a thousand passengers but only one driver. In other words, the passenger attracts the driver, and the driver attracts the passenger. As most of the platform companies we know are closely related to the two-sided market of supply and demand, it is very important to build a virtuous circle structure by having both markets grow together.

In a two-sided market, companies often offer low prices or various benefits to the consumer group, because it is easy to attract seller group when they secure the group of consumer in advance. That's why we use app markets such as App Store, Google Play, and Samsung Apps for free. In this way, providing a platform at a lower price than a cost to the buyer group is a loss for the platform company, and thus charges a

higher fee to the other group, the app developer. In this case, it can be said that the app developer subsidizes the group of buyers in this two-sided market, in that the app developers need the other more desperately than the buyers.

The growth of the platform is also facilitated by the "side switching" effect. 'Side switching' is an effect that occurs when a user in one side of the platform joins the other side, for example, when a person who has consumed a product or service starts producing goods and services that are consumed by another. On some platforms, users can easily and repeatedly switch their sides. For example, Uber recruits new drivers among its passengers, and Airbnb recruits new hosts among its guests. (Parker et al., 2016, p. 68)

2-3-3. Business Expansion

“Classic boundaries between sectors, markets, organizations and workers will fade. Ecosystems will increasingly cut across industry verticals and individuals will increasingly switch between being employees, platform producers/workers and platform consumers. The existing economic and societal order that assumes a clear separation between all these roles will then no longer suffice.” (Fijneman, Kuperus and Pasman, 2018, p. 25)

As the platform economy develops, the boundaries between industries are gradually breaking down.

Uber, the pioneer of global car sharing services, has grown rapidly since its establishment in 2009, serving more than 700 cities in 65 countries around the world, and become a leading global mobility platform. Uber started as a luxury car service 'Uber BLACK' at the time of its establishment, and has since segmented the car hailing service according to consumer needs. It has expanded its ride-sharing lineup by adding a variety of riding options to increase customers and grow its business. It offers several ride options with different price ranges, including UberX, Uber XL, Uber SUV, Uber SELECT, Uber BLACK, carpool service Uber POOL, and low-cost carpool service Express POOL, etc, some of which are cheaper than regular taxi services.

In addition, Uber continues to expand its business by launching new services, including food delivery, Business Uber, Uber Health and Uber Air, etc, based on data collected from its drivers and customers.

“Cars Are to Us What Books Are to Amazon”

- Uber CEO, Dara Kosrosahi

This statement by Uber CEO Kososahi shows that Uber's goal is not a ride-sharing business. Just as Amazon, which began selling e-books through the Kindle, is now at the heart of the Internet commerce system, Uber wants to go beyond a car service and be at the center of transportation and logistics system. To achieve this future goal, Uber is aggressively expanding its business.

Uber launched its delivery service 'Uber Eats' in August 2014 in partnership with

renowned restaurants in San Francisco to meet customers' needs to enjoy restaurant food at home. UberEats entered its 100th city in July 2017, two years and three months after its release, and expanded its service area to 200 cities at the end of 2017. Recently, Uber has also started a business of renting a 'kitchen' to a delivery restaurant. This is part of Uber Eats, which delivers food. It tries not just to "deliver" delivery food by taking control of the delivery food distribution network, but to carry out various subsidiary businesses.

In addition, the company is expanding its B2B area by launching 'Uber Central' in April 2017, which can provide Uber ride service to customers or guests for various customer service companies such as hotels, shops, and car service centers, etc. (Kang, 2018) It is also carrying out 'Healthcare Uber', which requests doctors' visits or delivers medical supplies, and a 'Cargo' service in which drivers operate convenience stores in their vehicles. Uber also launched a freight forwarding service 'Uber Freight' in May 2017, attracting more than 400,000 truck drivers and launched an electric bike sharing service called 'Jump' in 2018 in the US and Europe.

Uber also piloted a workforce service called 'Uber Works'. Based on its extensive database acquired through the ride sharing service, Uber Works provides waiters and safety personnel at the request of large venues or companies. The Financial Times said, "This move is intended to show that Uber can become a comprehensive platform that can go beyond simple transportation services to a variety of on-demand services. Uber Works could act as another source of income for Uber drivers."

Moreover, Uber is also aggressively developing new mobility, including self-driving cars and flying cars. In 2018 alone, Uber invested \$ 475 million on this new mobility business sector. Already, self-driving cars are in pilot phase and used by hundreds of thousands of passengers a year. For the flying car service, Uber plans to launch 'Uber Air' that calls flying taxi service from 2023 in Los Angeles and Dallas, Texas. With this steady expansion of customer-tailored services, Uber's corporate value, which stood at just \$4 million in 2010, stands at \$69 billion in early 2018. It is larger than that of major automakers GM, Honda and BMW, and Uber has even threatened not only the taxi industry but also the traditional auto manufacturing giants. (Kang, 2018)

Also in Southeast Asia, Grab, a ride-sharing company called 'Uber of Southeast Asia', is rapidly growing as a comprehensive platform company beyond the name of Southeast Asian flagship mobility platform, expanding its business to delivery, finance and other aspects of life. Similar to Uber, Grab also occupied the market by providing various customized vehicles such as Grab Bike and Grab Motorcycle, etc. to meet local traffic conditions in Southeast Asia. And based on this accumulated customer network, Grab could expand its business successfully.

As can be seen in the case of Uber and Grab, the platform companies have the strength to easily enter other business areas when expansion occurs through the virtuous cycle of network effects after surpassing the critical point of size. Of course, building a platform that can achieve powerful network effects based on economies of scale is not easy. However, once you succeed in building a powerful platform, you

could expand infinitely through network effects and dominate the market in the near future beyond the traditional strengths.

3. Side effects

As we have seen, the platform economy is dominating the market by expanding on the basis of strong connectivity, the network effect, and emerging as a core business model of future industries. However, we must always keep in mind that the platform economy, which is introducing this new and innovative business model and transforming the industrial ecosystem, has side effects that we have never experienced before.

3-1. Winner takes all

The global platform economy which revolves a large part around the seven ‘super platforms’ of Apple, Amazon, Microsoft, Google, Facebook, Alibaba and Tencent, has grown to an industry value of over \$7 trillion.

The most serious problem with the platform effect is that a handful of companies end up dominating their markets. Many platforms by their very nature prove to be winner-take-all markets, in which only one or two companies survive, and the platform owner is able to appropriate a generous portion of the entire value created by all the users on

the platform. For the powerful few, the rewards are obvious. For consumers, there are benefits as well in the form of greater convenience and lower costs, but the concentration of so much influence and wealth in so few hands is definitely risky societally, financially and technologically.

Currently, the sharing economy market is dominated by global startups funded by giant venture capitalists and concentrated on a few global companies such as Uber and Airbnb, and criticized as being contrary to the concept of sharing economy. Platform-based sharing economy firms have achieved enormous corporate value through exponential creation of value through sharing, but large sharing economy firms have become the main culprit of polarization as a result of Reed's Law that explains value increases exponentially. (Lee et al., 2018, pp. 106-107) Moreover, they are facing a deepening conflict with traditional industries, as seen in the conflict between Uber and the taxi industry, due to the winner-take-all and monopoly effect of dominating the market with rapid growth.

3-2. Anarchy

The New technology and ecosystem cause new problems that we have never experienced before. And what's worse, we don't know how to manage these problems. In other words, we are moving into unknown world where platform armed with advanced IT technologies rules and controls everything without giving us time for

preparation. We are exposed to the wave of Platform economy unarmed and defenselessly. And there are some signs that the problem is starting to emerge. For example, public trust in platforms has been damaged by a number of incidents. (Fijneman et al., 2018, p. 31) For consumers, there is the important topic of platforms extracting inappropriate amounts of wealth from (personal) user data, mostly in models based on free services. Platforms may use data to engage in discriminatory pricing and behavioral discrimination and may violate privacy and other rights. The Facebook and Cambridge Analytica scandal¹ is a well-known example of this. (Fijneman et al., 2018, p. 23) Therefore, the important thing for the stable and long-term success of platform companies is the element of trust. Platforms can only realize their full potential when users put their trust in them. However, recent media coverage on several cases has once again proven that this trust is fragile, and platforms are now starting to consider their options to enhance trust by implementing institutions. These options include oversight and/or audits on their processes. (Fijneman et al., 2018, p. 25)

While there are many problems of transparency, security and fairness happening in the platform economy, the regulation of the activities of online platforms has generally not been straightforward in most countries. This is because of dynamics of the sector,

¹ The Facebook–Cambridge Analytica data scandal was a major political scandal in early 2018 when it was revealed that Cambridge Analytica had harvested the personal data of millions of people's Facebook profiles without their consent and used it for political advertising purposes. It has been described as a watershed moment in the public understanding of personal data and precipitated a massive fall in Facebook's stock price and calls for tighter regulation of tech companies' use of personal data. (Source: Wikipedia)

the apparent rule-avoiding behavior of many online platforms, and the perception — encouraged by some of the online platforms — that, because their activities represent an entirely new business model resulting from rapid technological change, they should not be treated in the same way as any existing economic activities. (Garben, 2017, p. 3)

Even though there are lot of difficulties to regulate and control the platform ecosystem which is totally new and complicatedly correlated with many business and people, we can see the changes and moves from many countries for making laws to regulate platform's power.

III. PLATFORM ECONOMY AND CHANGES IN THE WORKING ENVIRONMENT

One of the most dramatic changes in the platform economy is the labor market. As the platform economic revolution is inevitable in almost all industrial sectors in order to succeed in the future, it seems obvious that the working environment will fundamentally change as the industrial ecosystem changes. Then what will the changing working environment look like?

1. Gig Economy

The Gig Economy is spreading around the world. Gig economy generally refers to an economic environment in which a workforce is flexibly supplied to carry out a specific project or timed unit of task. Recently, Gig economy has been defined as a new labor market trend that works on the basis of digital labor platforms such as Uber. (Choi and Kim, 2019, p. 1) In other words, it is the Gig economy that sees the platform economy from a labor perspective.

The gig-economy is usually understood to include chiefly two forms of work: "crowd work" and "work-on-demand via app." Crowdwork is that is executed through online platforms that put in contact an indefinite number of organizations, businesses, and individuals through the internet, allowing connecting clients and workers on a

global basis. The nature of the tasks performed on crowd work platforms may vary considerably. Very often it involves "micro tasks": extremely parceled activities, often menial and monotonous, which still require some sort of judgement beyond the understanding of artificial intelligence. (De Stefano, 2016, pp. 473-474)

"Work-on-demand via app," instead, is a form of work in which the execution of traditional working activities such as transport, cleaning, and running errands, but also forms of clerical work, is channeled through apps managed by firms that also intervene in setting minimum quality standards of service and in the selection and management of the workforce. (De Stefano, 2016, pp. 471-472)

As we can see from these two forms of work, the spread of the Gig economy where labor is mainly done through the Internet or the app, began with the growth of platform companies, which basically connect supply and demand globally or regionally based on digital technology. In other words, based on the accessibility, convenience, and price competitiveness provided by the platform system, a new and convenient form of employment is possible, which is totally different from the traditional offline employment. And as this phenomenon intensifies around the world, the International Labor Organization (ILO) estimated that the gig economy has the potential to drastically change the future way of labor supply, the size and content of jobs and the industrial structure. (Berg, Furrer, Harmon, Rani and Silberman, 2018)

Gig economy has positive anticipated effects of creating new alternative jobs with specific capabilities or skills through the digital platform, and promoting labor

participation of the economically inactive population through labor flexibility. On the other hand, there are also many opinions that the gig economy can be a factor in lowering the quality of employment and destabilizing the workers' income stability. Because as most Gig workers are employed by platform companies in the form of independent contractors or sole proprietors, they can't be protected by the rights of the labor law and even basic welfare benefits are not guaranteed.

Therefore, this study intends to identify the current state of working conditions for platform workers, which are rapidly increasing worldwide. To this end, I would like to first look into the advantages and disadvantages of the changing labor environment caused by the rise of platform economy.

2. New Working Environment in the Platform Economy

2-1. New Jobs

2-1-1. Quick and easy employment

The biggest advantage of the Gig economy is quick and easy employment. This is resulted from connectivity, a key feature of the platform economy. In fact, in the Gig-economy technologies provide access to an extremely scalable workforce. (De Stefano, 2016, p. 476) Anyone can connect with their local and global resource providers

through platform and easily find the person to do the work they need at any time with a single click or touch. This, in turn grants unheard levels of flexibility for the businesses involved. Workers are provided “just-in-time” and compensated on a “pay-as-you-go” basis, in practice they are only paid during the moments they actually work for a client. (De Stefano, 2016, p. 476)

New working environment in the era of Gig economy, based on the way of ‘just-in-time’ provided workers and compensated on a ‘pay-as-you-go’, intensifies the division and fragmentation of work and ‘Knot-working phenomenon’. Knotworking, refers to the style of work that is knot-like flexibly banded, scattered and moved around according to the constantly changing goal of work in the era of the Fourth Industrial Revolution. This flexibility and autonomy of “Knot-working,” which voluntarily and freely cooperate around the object and goal of the work, has the advantage of enabling creative work and efficient learning in a rapidly changing era. (Lee et al., 2018, p. 67)

2-1-2. Free, Independent, Flexible Working Environment

The survey found that the Millennial Generation (the generation born around 1980-2000) places more importance on self-improvement and flexibility than cash, and prefers to work at the time of their choice. It was also found that the balance between work and life in labor is more important for them than any other factors such as positive work environment, job security, and work interest. (Kessler, 2018, p. 40)

Based on these results, it seems that the Gig economy is the emergence of new jobs that the Millennial Generation has so much yearned for.

Since Uber has few offline offices and doesn't own any vehicles, it was virtually all about its business activities to launch a marketing campaign for passengers and drivers when entering the new city. Passengers were offered free trials through coupons. The driver was offered something much more powerful than this.

“No Shift, No Boss, No Restrictions”

This short phrase contains the essence of the message that Gig economy companies represents to seduce workers. (Kessler, 2018, p. 32) What do you think of this phrase? For those of us who are used to traditional jobs, it feels like a miraculous job pops up. No hard shifts, no bosses watching me, no restrictions! Indeed, most of the Gig economy jobs, such as most crowd work or on-demand jobs, promote workers to come freely at any time and work and earn as much as they want without any restrictions.

Picture III-1. Promotional phrases of Uber

Drive when you want Make as much money as you need



Make great money

You can drive and make as much as you want. And, the more you drive, the more you could make. Plus, your fares get automatically deposited weekly.



Set your own schedule

Only drive when it works for you. There's no office and no boss. That means you'll always start and stop on your time—because with Uber, you're in charge.



Safety behind the wheel

Uber is dedicated to keeping people safe on the road. Our technology enables us to focus on driver safety before, during, and after every trip.

Source: Uber Homepage www.uber.com

Actually, as we can see not only in simple crowd work but also in booming on-demand jobs of the transportation and delivery such as Uber, Lyft, Grab and Deliveroo, most of the jobs in the Gig economy are low wage, flexible jobs with low entry barriers that anyone can easily work at any time. In this way, Gig economy is offering new job opportunities - platform labor - for workers with little knowledge or skill. In addition, the Gig economy also allows highly educated professionals to promote their knowledge and skills to customers around the world.

In this era of platform economy, workers work in highly efficient system where people with the right knowledge or abilities, from simple chores to special skills for big projects, get together freely and quickly when they want, get done and scatter. This has enabled not only companies but also workers to significantly reduce the costs of searching for human resources or jobs and transactions, creating an environment where workers can work whenever they want to work and quit whenever they want to quit. And this reminds us of the rosy future with the end of long and hard labor, meaning that we are not working for the boss, but for ourselves.

2-2. New Restrictions

Aforementioned advantages of quick and easy employment and the free, flexible and independent working environment through the connectivity and the reduced transaction costs of the Gig economy clearly open the new opportunities for workers. However, as

there are two sides to everything, Gig economy can also make the poor working conditions even more miserable.

2-2-1. Quick and easy layoff

Being able to be hired quickly and easily means that people can be easily used and abandoned. As easily hired, workers are used and discarded easily as consumables. This is because of the changed working environment where anyone can easily find the worker they want at any time with a single touch or click.

In addition, most of these Gig economy jobs are non-face-to-face through the web and apps, causing the dehumanization of labor. In the platform economy, you don't have to manage employees in person. Therefore, as the human nature has completely disappeared in the relationship between company and workers, inhumane exploitation of labor and dismissal are becoming serious. (Kessler, 2018, p. 153)

Moreover, such easy employment and dismissal intensify competition among workers. And the competition is expanding across regions and further across the world through platform ecosystems. As a result, the value of labor decreases more and more, and workers are forced to work harder and longer than their competitors to earn enough living expenses.

This is especially well represented in the way of workers work at Amazon's Mechanical Turk. Mechanical Turk, which was founded in 2005, is an online crowdsourcing agency run by Amazon. When clients upload their work, an unspecified crowd of workers choose the work they want. But, works uploaded on Mechanical Turk are usually very simple and pays only a few cents. There are many kinds of miscellaneous work such as tagging an image, entering a contact in a spreadsheet, or writing a product description for a website. It takes almost an hour to earn a dollar from these things.

Christy, who works at Mechanical Turk, runs straight to the front of the computer when the alarm goes off, wherever she is in the house. In Mechanical Turk, thousands of workers were competing for high-wage work, and anyone who applied first was the winner. ... Christie was afraid of missing a good job, so she didn't even want to leave the computer, let alone go outside. Unlike a fast-food restaurant or cleaning company employee, she had to work smarter and longer to make more money because she was only paid during her working hours, not during her breaks.

(Kessler, 2018, pp. 108 & 110-111)

In the case of digitally performed online work, wages tend to be much lower than offline work because workers have to compete with much more workers from all over the world.

"It was like the lowest price competition in the labor force." (Kessler, 2018, p. 161)

As the Gig economy spreads around the world, direct employment is disappearing from most platform companies. They are simply hiring workers in the name of freelancers or independent contractors and the basic rights and welfare benefits they have to offer to employees are being avoided. The Gig economy has not only created an environment in which companies can exploit freelancers and temporary workers as regular employees, but has also legally increased the number of independent workers. Nonstandard workers employed in this way are not provided with any protection or safety nets which have to be provided to employee by law. (Kessler, 2018, p. 306)

However if you look deep into the reality of Gig work environment, you can find out that platform companies are managing and supervising their workers as if they hired them directly as a regular employee. Of course, they are not doing it in the traditional way through bosses or managers, but in a new way that we have never experienced before.

2-2-2. The reality of free, independent and flexible working environment

As we have seen, platform companies are providing workers with free, flexible and independent jobs, and for this purpose they are choosing temporary employment types such as independent contractors or freelancers. In fact, however, the working conditions of Gig economy workers show that they are being supervised by a new type of invisible management using IT technology rather than working freely and

independently. As platform companies and their ecosystems spread starting with Uber, the new way of managing workers and coordinating works has been established by using new technologies within app-based platform system. (Kessler, 2018, p. 94)

Uber has found a great way to manage independent contractors through its app.

According to the 2017 New York Times report, “Uber has been consistently experimenting ways with hundreds of social scientists and data scientists to have drivers to work longer and more diligently even at times when they are less profitable by providing various visual effects and non-cash compensation with little real value.”

(Kessler, 2018, pp. 143-144)

First of all, Uber has introduced a surcharge that increases rates in certain time zone in order to increase the number of drivers working during busy hours. Through this surcharging system, Uber sends below messages to drivers at certain times.

“Do you really want to close? There are a lot of requests for boarding in your area right now. It's a great opportunity to make more money. Don't stop now!” (Kessler,

2018, p. 143)

And because Uber doesn't provide drivers with information about passengers, drivers had to accept all the boarding requests, including short-distance requests with little profit left. In addition, Uber made sure that the drivers didn't cancel the job that they had accepted by suspending drivers who canceled accepted requests too much.

Moreover, the frequently changed Uber's fare system without any notice caused further confusion among drivers.

In Kansas City, where Abe lives, fares for 30 kilometers from the airport to the city center were cut from about \$38 to \$22 in January 2015 in the name of New Year's discounts. Uber made a similar rate cut in 47 other cities around that time, and implemented a "profit guarantee system" to prevent such rate cuts from diminishing returns. But to benefit from this, the driver had to accept 90 percent of boarding requests and be online for at least 50 minutes every hour. It basically means that drivers should work only through Uber, which wasn't mentioned at first when Uber promoted their free, independent and flexible working environment.

(Kessler, 2018, p. 145.)

In these ways, Uber pretends to offer the right to choose working hours freely and flexibly. But in reality, it is designing a way of working through subtle restrictions such as surcharge and profit guarantee systems so that drivers can only make money when they work longer in busy hours. Moreover, the flexible working hours that drivers can choose from are actually the time zones arranged on the basis of customers' demand and basic rates, indicating that there are few options for the drivers.

Uber also controls drivers indirectly through suspension or customer evaluation. It asks passengers to rate drivers with a five-star rating after using the service and almost all Gig economy companies use the similar rating systems. Cleaning company Handy

also uses a five-star rating system and UpWork uses a way that the customer's ratings and reviews are displayed on the worker's profile. (Kessler, 2018, pp. 99-100)

As such, Gig economy companies that do not have managers are building effective management systems by rewarding and punishing workers through algorithms based on the aforementioned evaluation system. However, such a system is at risk of being judged by prejudice or personal feelings of customers, and the opacity and uncertainty of this evaluation system may cause some workers to regard it as arbitrary and unfair. (Kessler, 2018, p. 100)

In fact, even long before Gig economy was born, large companies outside Silicon Valley began to pull out of their direct employment. Startups like Uber have only introduced new strategies and technologies to make such a move more efficient. These startups have segmented labor into piecemeal work, automatically assigned them to workers, and established techniques to use apps as management tools. Consequently, it can be said that the universal model has been created that companies other than startups can follow. (Kessler, 2018, p. 295)

Julie Sweet, head of the North American division of Accenture, a professional services company with clients in 40 industries in 120 countries, told me in June 2016 that there may soon be a company hiring only CEOs, CFOs and other top executives. "These days, the conditions are very good for outsourcing various departments of the

company. Our main workforce also can be outsourced at any time.”

(Kessler, 2018, pp. 295-296)

Gig economy companies' unstable hiring of non-regular workers including freelancers, temporary workers and independent contractors, with their abnormal behavior of managing and supervising them like their direct employees shows that they are passing the risk burden from businesses to workers. While Gig economy firms are benefiting from the convenience of cheap employment of workers without paying attention to the guarantee of workers' rights or benefits, Gig economy employees are driven to an unprecedentedly unstable life without receiving even basic benefits such as health insurance, retirement pensions and support for the unemployed, etc. As the job security and protection from danger provided by traditional stable employment have been disappeared, now workers have to endure all those instabilities and dangers on their own in this harsh reality.

And not only the Gig economy workers but also even the regular workers who are working reliably in traditional workplaces cannot be relieved in this trend of unstable working environments. Given the proliferation of the Gig economy and the rapid growth and scalability of the platform companies that support it, it is not too soon the days of this changing working environment will become a reality for all of us. The innovation of platform companies using algorithms that combine artificial intelligence and big data thanks to the fourth industrial revolution and the development of technology has certainly brought us a convenient life. However, it seems that the time

has come to consider whether the innovation of platform companies that provide these cheap and quality services may be the result of exploitation of workers.

IV. RESEARCH QUESTION AND METHODOLOGY

1. Research Question

This study began with the interest in the Platform Economy and its impact on labor market. Platform companies such as Uber, Lyft, Grab and Deliveroo, etc. who have grown rapidly through platform-based innovative services, are leading the Gig economy by promoting the new types of jobs they have created. Then are these jobs they offer really new and alternative jobs that free, flexible and independent as they said? This study set up the following three research questions in order to examine the effects of the rapidly emerging platform economy on our society, especially on the working environment.

1. How has the platform economy changed the working environment?
2. What is the impact of the platform economy's changed working environment on (platform) workers? How the workers feel about this change?
3. What is the lesson for us from the example of platform workers in the rapidly changing platform economy trend? What should we keep in mind and improve for the future of workers and labor?

In order to find out the answer, this study conducted an in-depth interview of workers in TADA, Korea's representative mobility platform, to find out the reality of the platform working environment. Based on the results of the interview, this study examines platform workers' working environment, experiences and perceptions in depth, and further discusses the desirable directions for the development of future labor market.

2. Research Methodology

2-1. Research Design

2-1-1. Qualitative Research: In-depth Interview

The purpose of this study is to derive comprehensive results on the working environment, experience and satisfaction of the platform economy workers, and to examine whether the platform economy provides new alternative jobs as is currently discussed and promoted. For this purpose, qualitative research based on the in-depth interview is appropriate rather than structured questionnaire to investigate whether new jobs in the platform economy play a role in contributing to workers' autonomy, independence, and quality of life. Therefore, by conducting in-depth interviews, this study focused on three main aspects of their work environment and experiences: 1)

motivation for participation, 2) working environment and experience, and 3) thoughts on platform jobs. Based on this, I tried to deepen my understanding of workers' thoughts and feelings about the new jobs created by the platform economy.

2-1-2. Recruitment

After conducting a literature study on the platform economy and the gig economy, the objective of this study was set to conduct an in-depth interview on the workers in the mobility platform industry, which is the hot topic of the labor environment issues. To this end, the study selected people who are working as drivers for 'TADA', largest mobility Platform Company in Korea.

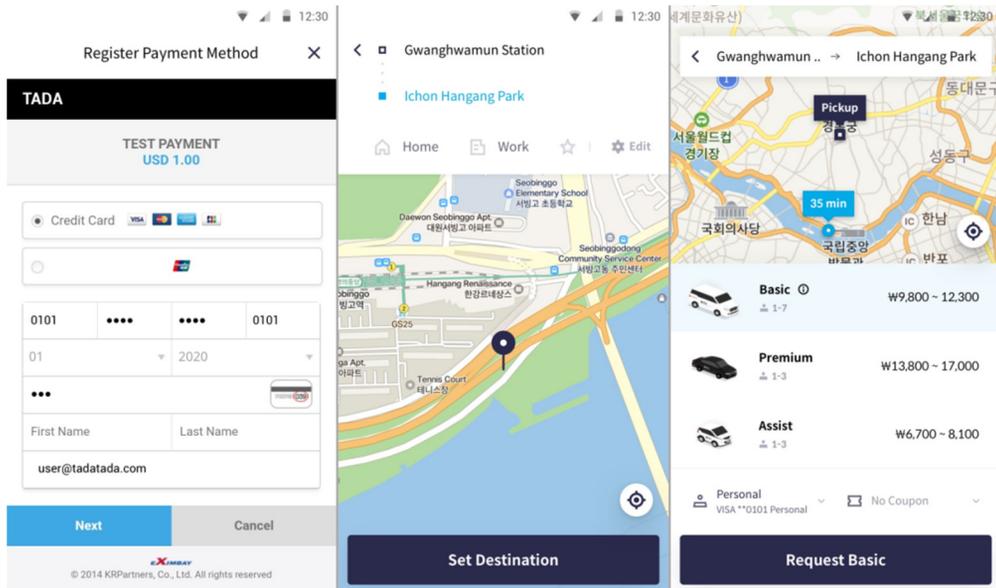
'TADA' is a mobility platform company providing a ride-hailing service launched in October 2018 by its operator Value Creators & Company (VCNC). It provides real-time mobility services to customers in Seoul by renting 11-seater vans and drivers from its parent company 'SOCAR', rental car-based car sharing service provider.

Picture IV-1. An 11-seater van of TADA



Source: Google image

Picture IV-2. How to use TADA service



Source: TADA app

TADA is gaining a huge popularity from passengers based on the innovative services such as large vehicles (can carry maximum seven passengers), pleasant indoor condition (with spacious and comfortable seats, free wi-fi and smartphone chargers), ride without a refusal of any request from customers and friendly responses. Along with these customer-friendly services, in just one year since its launch, Tada has been growing at a high speed with 1,400 vehicles and 9,000 drivers. As such, Tada has gained popularity through its outstanding service and has grown to threaten the traditional taxi industry, establishing itself as Korea's representative mobility platform company. Therefore, in order to derive optimal research results, we have selected 'TADA' the most successful mobility platform company in Korea as the research company in that they have the largest number of drivers and customers.

The primary sampling of the study participants was carried out after collecting preliminary information in online communities and open chat rooms where TADA drivers exchange information. To hear opinions on the platform economy from people from diverse backgrounds, I recruited people who have worked for TADA over three months, which can be said to have sufficiently experienced work on the mobility platform without any other conditions.

2-1-3. In-depth interview procedure

After conducting literature research focusing on the Gig Economy and the Platform Economy, especially the Mobility Platform cases, TADA, a mobility platform service company to be investigated for in-depth interviews, was also systematically investigated how they function and manage workers. Based on this prior study, semi-structured open questionnaires were constructed and pre-interviewed with three participants. Based on the results of this pre-interview, we have compiled further key questions and additions that should not be missed during in-depth interviews.

The in-depth interviews were conducted face-to-face in participants' preferred locations for about a month from September 17. After the researcher first explained the purpose and procedures of the in-depth interview, the participants proceeded to state their experiences, thoughts, feelings, etc. Basically, a semi-structured questionnaire was conducted first to investigate the participants' basic background, and then the

participants' responses to in-depth questions by researcher were followed. On average, in-depth interviews took for about one to two hours per person.

V. RESEARCH RESULTS

1. Data Analysis

1-1. Characteristics of Participants

Participants are 12 drivers who are service providers of Korean mobility platform ‘TADA’, and all participants are male due to the characteristics of the industry. The average age is 42.3 years old, with 41.6% (5 people) in their 30s, 33.3% (4 people) in their 40s, 16.6% (2 people) in their 50s, and 8.3% (1 person) in their 60s. The average working period of participants is 8.58 months, of which seven or more were people who had never worked in related industries such as driving or other mobility platforms before. The 75% (9 people) of participants were contracted freelancers and the remaining 25% (3 people) were dispatched employees who were assigned to the agency and work regularly. Half of the participants were single, and half were married all of whom were heads of a family with children. In addition, participants rated overall work satisfaction on a scale of 10, with an average of 5.75 points.

Table V-1. Characteristics of Participants

	Age	Education	Employment type	Experience (Month)	Full/Part time	Marital Status	Satisfaction (out of 10)
A	51	University Graduate	Dispatched	9	Full	Married	6
B	34	College Graduate	Dispatched	10	Full	Single	7
C	33	University Graduate	Freelancer	10	Full	Single	3
D	55	University Graduate	Freelancer	7	Full	Married	3.5
E	61	Highschool Graduate	Freelancer	6	Full	Married	3
F	35	University Graduate	Dispatched	6	Full	Single	9
G	47	University Graduate	Freelancer	10	Part	Single	6.5
H	32	University Graduate	Freelancer	5	Part	Single	7.5
I	41	University Graduate	Freelancer	13	Full→Part	Married	6
J	31	Highschool Graduate	Freelancer	6	Part	Single	9
K	44	University Graduate	Freelancer	10	Part	Married	5
L	44	Graduate School	Freelancer	11	Depends	Married	3.5

1-2. Categorization

The interviews I conducted were semi-structured open-ended. Questions were broken up into three general themes. The first topic is an analysis of the working environment and experiences, which consisted of questions about participants' basic employment-related issues such as contract type, working hours, income, and welfare and the advantages and disadvantages of the working environment. Regarding the working

environment, the focus was placed on the areas related to the autonomy, flexibility and independence of the working environment which are promoted by the platform companies. On the contrary, a variety of constraints or restrictions on drivers by TADA during the working hours were also examined.

The second topic is the analysis of the motivation of participation and career plans. Through the analysis of participatory motivation, the study examines the reasons why the participants work for TADA and analyzes what kind of people consider participating in the platform labor, which is also called as Gig Economy. In addition, the participants were asked about their career plans, such as whether they were willing to work more for TADA in the future or whether they thought this kind of jobs could be the main source of income, to find out their realistic thoughts on platform labor.

The third topic is the discussion of platform labor and the future of labor. Participants were asked what they thought about platform labor, what the future of these jobs would look like, and what the impact of platform labor on workers. In addition, we discussed the improvements they hope for Tada, and what government and social participants should strive for a better working environment.

In-depth interviews were conducted around these three major themes, and the research results were also analyzed and organized according to this categorization.

2. Working Environment and Experiences

As we've seen earlier, platform companies attract workers by promoting that they offer a new job that allows workers to work freely, flexibly and independently. Indeed, the interviews results showed that the research participants felt autonomy, flexibility and independence in their work compared to traditional jobs. However, the interview result also shows that the indirect (or invisible) constraints and controls of platform companies on workers are also widely exist.

Based on the research results, the characteristics of working environment in the platform economy can be divided into two categories, the one that has been improved (autonomy, flexibility, independence) and the other that has become worse (new management style and control).

2-1. Autonomy, Flexibility and Independence

Participants agreed that technological advances clearly made their work environment convenient, and generally acknowledged that the app-based working environment of platform companies is more convenient than existing companies.

Participants were found to be particularly satisfied with time flexibility in that they can choose the time they want to work.

“I wanted to have a free time in the afternoon. Even though I have to work from 6 am

and it's hard to get up early, I am satisfied in that I can spend the afternoon time freely as I want. (Participant F)”

Especially, participants who work for TADA for a part-time and have a main full-time job are particularly satisfied with this autonomy of selecting work schedules freely.

“I'm doing it to enjoy my freedom as a freelancer. I've been thinking about other similar driving jobs, but I didn't choose them because I had to work full-time there. And as I'm self-employed, when I am too busy I can easily cancel my work schedule without awkward face-to-face contact. That's why I'm planning to continue working as a freelancer at TADA. (Participant G)”

“In my case, since I have another full-time job, the best thing of this work is that I can adjust my working hours as I please. I can work only when I want by choosing schedule once a week. (Participant J)”

“I only have time to work on weekends as I have a full time job during weekdays. I chose this work to freely adjust my working schedule on my own and start work in the afternoon after enjoying weekend mornings. Although the competition for schedule is very severe and application closes quickly sometimes, I like the fact that basically I can work when I want. (Participant K)”

“As I am a director of photography, I have irregular break season and a lot of free time between shooting schedules. So it's nice to work flexibly and make use of break time. (Participant L)”

And most participants were satisfied with the fact that they have no bosses and could work autonomously and independently. They say they feel independent and free in that they work alone in their own space, with no managers or anyone to care about.

“It's comfortable because I don't have to face someone in person while I work. And it's relaxing that there's no one I should care about as I work alone. (Participant F)”

“I think it's clearly freer and more independent working environment compared to the traditional jobs. I don't have to confront people at work and I work alone comfortably in my boundary. And it's very simple working system because I get the results based on the time I worked. (Participant H)”

“It's convenient to work alone, without anyone interfering me. But sometimes it's hard to work alone for too long. Still I am satisfied with the facts that I can work alone with no interference, there's a lot I can control and I can rest when I want to. (Participant I)”

“When you don't have any customers, you can enjoy your free time and stay at home in the car. Actually, it's funnier than my full-time job as there's no boss to care about. (Participant J)”

“It's good because I don't feel like being managed. In addition, it's very convenient and good because there are no situations where you have to call or make an uncomfortable face-to-face contact with your boss when you can't work or something has suddenly came up. (Participant K)”

One of the most interesting things was that many participants felt convenient in the way they work through the app. The app automatically handled everything related to work from customer matching to payment. This automatic working system make drivers can only focus on driving and have nothing to care about. In addition, the participants thought it was very convenient and new way of doing things that they can even deal with an accident or other unusual, emergency situations during the work by just simply filling out forms and sending them along with photos through the app.

“They are amazing. They have created a system that is completely controlled through the app. I think it's the perfect system that the app controls, manages and handles everything. (Participant D)”

This is definitely a feature that only platform companies can offer to workers. Platform companies are taking full advantage of technological advances and incorporate them into their work practices, creating a new working environment that workers have never experienced before. And the fact that they are paid as much as they worked seems to be an advantage as well, given that their pay is calculated by the hourly wage.

“One of the best things is that you don't have to worry about sales while you're working, and you don't have to care about payment as well. There's nothing to care except driving. (Participant B)”

“It's good to be able to focus on driving, because everything is contained in the app. I can manage everything related to work through my phone screen. And it's convenient that I don't have to worry about finding customers because company automatically matches me with customers. (Participant H)”

“It's very convenient because all the work is done through the app! (Participant I)”

“I think it's a lot better than the traditional jobs as I can handle everything through the app! If anything happens while you are working, you just simply fill out the form on your phone and notify to agency without any unnecessary paperwork. Even when customer vomits, you can just take a photo and send it to the agency through the app. Then they take care of everything for you. (Participant K)”

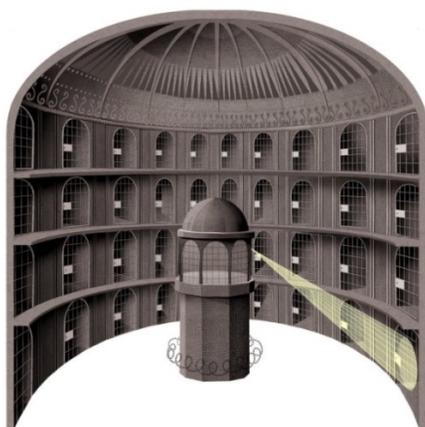
“The work system itself is very convenient. You can check all your salary and driving records through the app. I can't deny the convenience of technological advancement. (Participant L)”

2-2. New Management and Control through the invisible hand

We have seen above how free, independent and flexible the work environment in the platform economy is. However, there was the other side of the reality of platform labor which was much worse than I thought. There were so many indirect controls and restrictions done by invisible hand, which is technology. There was no management

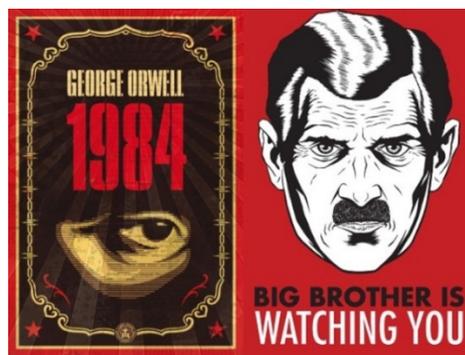
and supervision through the boss. But there was the invisible hand monitoring the workers in real time in the ecosystem of the platform by using advanced IT technologies. This sophisticated and thorough supervision through IT technologies reminds me of the Bentham's 'Panopticon' and 'the Big Brother' of <1984> by George Orwell.

Picture V- 1.



The Structure of 'Panopticon'²

Picture V-2.



'the Big Brother'³ of novel <1984>
written by George Orwell

Source: Google Image

These kinds of mechanical supervision through the app allow more scary and tight

² The utilitarian Bentham thought 'minimum cost, minimum surveillance and maximum effectiveness' can be realized through 'Panopticon'. The monitoring system of 'Panopticon', pursuing the maximum effectiveness, is very similar to that of platform companies that use cutting-edge technologies to easily manage thousands of workers in real time.

³ 'Big Brother' is a fictional character and symbol in George Orwell's dystopian novel <1984> published in 1949. In the society that Orwell describes, every citizen is under constant surveillance by the authorities, mainly by telescreens. The people are constantly reminded of this by the slogan "Big Brother is watching you": a maxim that is ubiquitously on display.

management than the existing monitoring by human (boss) possible. This is because it has become possible to monitor workers in real time through the GPS inherent in mobile phones that platform workers always carry and check frequently for their work.

On the surface, it may seem like an autonomous and independent working environment. But in fact, the level of its management and supervision on workers were not different from the traditional jobs at all, and in some ways, workers were being monitored even more severely than in the traditional jobs due to the development of technology. In addition, considering that most of platform workers receive few benefits as they are normally freelancers or independent contractors, they are working in a worse environment than traditional workers.

2-2-1. Work Arrangement

One of the aforementioned advantages, free scheduling, was actually not 100% free, flexible system. Basically 'TADA' controls every schedule of workers and arrange work load based on their own standards. However, these standards are confidential and many workers have doubt and complained on their work arrangement during the interview.

"If you only work when you want as the platform companies promoted, you'll end up having a hard time getting work schedule. Because TADA wants workers who can work as long as possible. After all, it's a coercive system, not free scheduling system.

(Participant D)”

“They say you can work autonomously, but I honestly don't know whether it is really autonomous. It's not what we usually think of freelancers. It's hard to get preferred working area or hours. And they say that it's okay to work only for 5 hours (minimum work hours at TADA) a day but actually TADA wants workers to work 10-11 hours. So if you choose to work for only 5 hours you can't get the preferred schedule.(Participant C)”

“There's a rumor that TADA doesn't arrange work schedule to drivers who have high driver level. Because they should give more incentive pays to high level drivers. So I think they arrange more work schedules to drivers who have low driver level as basic level (the lowest level) drivers don't get any incentives. I don't think that's totally a fake rumor. I think TADA is trying to minimize their spending while their deficit continues. (Participant H)”

In addition, many participants mentioned that the company is reducing the working cars for efficient operation based on data accumulated so far in order to reduce the company's serious deficit.

“There are about 1,200-1,300 TADA vehicles in Seoul, but I think less than half of them actually operate. Since the company's deficit is severe, it seems to be intended to reduce the deficit cost. As the number of cars decreases, the waiting time for customer

increases and the quality of service decreases accordingly. Drivers can't offer good quality service to customers as their working environment is getting worse due to an intense workload. The loss or side effects caused by company's policy to reduce its deficit are ultimately transferred to customers and drivers. (Participant G)''

''They don't tell us the exact number of cars, but we can feel that the cars in operation are decreasing. They're trying to make a maximum efficiency by not allowing drivers to rest. I think they found the most efficient way to operate cars based on the accumulated data analyzed by artificial intelligence. (Participant H)''

''I'm definitely feeling the difference. You can feel it when there are more workloads than before and when there are not many options to choose for working schedule. Depending on the data accumulated at the headquarters, it seems that the changes in demand according to time, day of the week, and holidays are reflected immediately. And drivers are bound to follow this policy unconditionally. (Participant I)''

''In the past, I used to sleep for hours sometimes when I work at night time, but now it's impossible. Now, drivers don't have time to rest during the working hours as the company reduces working cars based on the accumulated data. And they forced us to go to waiting area, which is very far from the current location, meaning that there are many demands in the waiting area. Calls (ride requests) are continuously getting caught while we are moving to waiting area. Drivers are getting less and less time to rest. If you apply for an 11-hour work schedule, you're really working for the whole 11-hour. So even though I used to work the whole week, I can't do it anymore. It's too

exhausting. But TADA doesn't care because there are still many applicants who want to work for them. (Participant L)''

As such, the working conditions of the workers were not improving over time, but rather getting worse. Because of the structure that platform companies are able to accumulate data and operate their working system more efficiently over time. Consequently, while the company's resource management methods become more efficient, the workload of drivers becomes heavier as time goes by, leading to the low quality of overall service.

It could also be seen that how the company induce workers working hours as they wanted through various ways such as 'the peak-time surcharge system' and the provision of extra incentives for consecutive working hours.

''On weekends, there is an additional 2,000-3,000 won per hour on Saturday peak hours (11 am-4pm). And if you don't rest and work more than 80% of your allotted time, you get paid an extra 10,000 won. (Participant H)''

''The pay system has been changed about 10 times so far. The head office sets the peak hours on its own. And depending on when you're resting, your pay is reduced differently. I think the pay system normally changes almost every 15 days. It's so confusing. (Participant L)''

2-2-2. Management of Working hours

From the interview, I could find out that TADA managed drivers' working hours by forcing them to move to the 'waiting area', which is very far from their current location, to get as many call requests as possible while drivers are moving to the other region. And the company could monitor drivers in real time through the app with GPS. Whenever they get abnormal signals from driver's car, they call directly to the agency and the agency call to drivers right away to check the situation.

"They keep forcing us to go to the waiting area during the working hours. Because they know that I'm getting a customer's call while I'm on the way to the waiting area. And if you're not in the waiting area, after 10 minutes, you'll get a warning sign saying you're too far from the waiting area. The warning window pops up a few times, and then you get a call from the company. And these warnings can be the reason for suspension or layoff. (Participant D)"

"It's annoying to move to the waiting area. And it was when the alert for far from the waiting area was less than 2km away, but it's been reduced to 1km, so we're being managed more tightly than before. So last time I got a call from the company right after I was off from the waiting area. In addition, the company also called me right after I refused customers' call requests three times in a row. I think drivers are being managed in real time through the app with GPS. (Participant F)"

“If you go outskirts of Seoul, there’s not much request call from customers. While I can easily find the toilet in Seoul, it’s hard to find it when I go outskirts of Seoul. So I take a little detour to find the toilet sometimes, then I get a warning call from the agency right away. It’s almost in real time. And as TADA force us to go to the waiting area which is very far from the current location, there is getting less and less time left for drivers to rest. (Participant H)”

“It’s annoying that I have to move to the waiting area right after dropping the customer off. I used to have a free time for 20-30 minutes after dropping off the customer, but these days I got a warning sign almost right after arriving at the destination. (Participant K)”

“The GPS device is monitoring where I go and where I have rested and for how long time. And all the driving information such as speeding or routes, etc. is registered in the black box or the app. The company can check everything in real time. And Even if the customer is over-timed while dropping off, the app recognizes this as a break after arrival at the destination, so there are some errors and side effects. I wonder how much more they want to control the drivers! I think they will even monitor and control every single behavior of drivers in the car. Increasingly, surveillance systems are being upgraded. I feel like being dehumanized and becoming a working machine. (Participant L)”

2-2-3. Performance Evaluation

It was found that Tada manages the driver's work attitude through the customer evaluation. When drivers arrive at destination, they are evaluated by the customer with a star rating system, which is directly linked to the driver's income, effectively controlling the driver's behavior. There were many drivers who couldn't say anything to customers because they were afraid of bad evaluations and they were under a lot of stress due to this unilateral evaluation system.

In addition, there were many questions have been raised about fairness in the driver level system, which is directly related to incentive pay. The driver level consists of four levels, in order of BASIC → GOOD → BEST → PERFECT.

Picture V-3. TADA Driver level system



Source: TADA Homepage(<https://tadatada.com/>)

This is based on drivers' previous month's performance, and incentives are paid differentially according to this level. (PERFECT 10%, BEST 8%, GOOD 5%, BASIC 0%)

“Star ratings are becoming a driver constraint. The rating system that the customer evaluates affects the driver's level, which in turn affects the incentive pay, so in the end the drivers cannot tell a thing to customers. (Participant A)”

“We have to show unilateral loyalty to customers... Because the customer's star rating is immediately reflected in the system and affects the performance and salary... I think this unilateral system makes some crazy customers. (Participant I)”

“I tend to get annoyed with nothing as I am working in a small space for a long time. When a customer doesn't say hello or answer to me.....and people who don't come out right away after the arrival....You know, when we're stuck in traffic, I often hear customer's sigh in the back...I can't help but care those small signs of dissatisfaction as these signs are directly related to customer's review. (Participant F)”

“The star rating system is a subjective evaluation by each customer, but the most stressful thing is that it directly affects our paychecks. The incentive pay difference based on customers' review is quite large. I feel like I'm the slave of customer's review. Even though the drivers also can evaluate the customer, I doubt if it's really working as the client's evaluation of driver system which is directly applied to driver's paycheck. (participant K)”

There were also many complaints from drivers in that the company has never disclosed under what criteria the drivers were rated for. Although TADA noticed on their webpage that the level of driver is assessed comprehensively based on service

kindness and app usage (operation history), many of the drivers who have experienced this system for some months doubt about its consistency and fairness.

“The head office rates a driver's level, but nobody knows the rating standard. We have to know the criteria so that we can try to improve our level, but we don't know what the standard is. Besides, we don't know the sales figures. We only drive and get paid the total settlement later through the head office. Only the head office knows the exact sales figures of each driver. I don't think they've cheated on our paycheck much, but I have a lot of complaints about this kind of overall opaque operation system. (participating A)”

“I'm dissatisfied with the fact that they are not revealing fares to drivers. The problem with driver ratings also makes a lot of talk about fairness. We can't know what the criteria are at all. It seems that this problem is caused by the different driver level allocations according to the agencies. But I can't know for sure what the real reason is, as it is confidential information. (Participant B)”

“There is no exact regulation or standard for driver level ratings. In the beginning, the head office used to give a lot of the highest level('Perfect level') to lure many drivers but these days, we're getting less and less of that.(Participant D)”

“They don't give us a clear indication of the driver rating criteria, and we also can't know what the reason is when the customer dissatisfied and gave us a bad rating. The head office doesn't share that information. I need to know the reason so that I can

change and fix my problem. (Participant G)”

“Most drivers who only work on weekends get a basic level. TADA seems to be trying to get as much data as possible, so...it seems that they only give a perfect level to drivers who work more than 20-25days a month. (Participant I)”

2-2-4. Punishment and Layoff

TADA was also in full control of its drivers through indirect punishment and layoff through the dispatchers who provide the drivers to TADA. Moreover, with more than 90% of drivers being freelancers, layoffs were much easier than normal companies. As a result, they often fire drivers unilaterally without giving a reason for layoff and ignore driver's complaints. Due to these unreasonable and inhumane processes, drivers often felt that they were not treated as a human being but just as a working machine that can be dumped anytime without reason.

“(He got a call during the interview) It was a call from my agency. They told me to switch to freelancer (he was a dispatched worker who work and get paid regularly) from next month as they got a call from TADA. I think TADA is trying to increase the number of freelancers and reduce the regular paid dispatched workers like me. I’m getting worried that freelancers have to apply for schedules on a daily / weekly basis and there are many days when they can't be assigned for a work.” (Participant F) ”

“Tada places great importance on punctuality. I can't work even if I am a little bit late, as they cancel my work arrangement right away. Even if they allow me to work, I get 30 percent cut of my day's salary. It's a little different depends on agencies, but if I am late, the agency cancel my work arrangement and force me to take a mind training class. That's why we have a lot of time-obsessed stress. And if you are absent without notice more than two times, you will be fired. Smoking in the car during the working hours is also the reason for dismissal. And I've seen quite a few cases around me who have a poor driver level were fired due to CS problems. Because I'm a freelancer, I can cut it easily at work. The company can dismiss drivers easily as most of them are freelancers. (Participant G)”

“It depends on the agencies involved, but generally if you're late for more than 15 minutes, you can't work that day or you get a pay cut. For a while, they fired all those who were late. They fired drivers so easily. At some point, the company had to reduce the working cars, but they had a lot of drivers. So they fired drivers with trivial reasons or mistakes. After they cut as many people as they want, it seems that they have loosened the control or punishment a bit these days. However, this is the fundamental disadvantage of non-regular workers. Although I'm not a non-regular worker but a freelancer legally, I can always get laid off whenever they dissatisfied with me. That's why everyone is so worried. (Participant I)”

3. Motivation of Participation, Career Plan and Satisfaction

The result of the interview shows that the old people who have no choice but this job after retirement or people who work for full-time at TADA were highly dissatisfied with their job. In addition, marital status also had a significant effect on satisfaction. The married drivers who have higher burden on the livelihood and have children had the greater sensitivity and dissatisfaction with their working environment. On the other hand, young people who still have a lot of choices or those who work only for part-time generally have higher levels of satisfaction than the average. It also showed that dispatched workers who were hired by agency and worked regularly were more satisfied than freelancers.

“After working as a sales manager for over 20 years, I retired and looked for other self-employed businesses and also got a taxi license from a job program. I got to know TADA when I was trying to work for a taxi. And I chose to work for TADA because I could rest on weekends while I should work six days a week for Taxi Company. But, I am thinking of it as a temporary job because of the limited length of contract. Because even though I'm the head of my household and this is my main full-time job, TADA has been trying to avoid the labor law, and only offer contract on 3 month-3month-6month and after passing these three phases of period, they offer only maximum two years of contract on a yearly basis to avoid labor law. So I am considering other driving job where I can work as a regular worker with long term contract and basic rights of laborer. (Participant A)”

In fact, two months after the interview, Participant A told me that Tada's unilateral instruction made it clear that all of the dispatched workers would not be re-signed anymore and all previous dispatched workers would likely to quit or work as a freelancer.

There were quite a few people who are studying or seeking another job to get a more stable job, while they are working for TADA to earn additional income.

“I was preparing for an exam, but after studying for a long time, I felt depressed and lost self-esteem. So while I was trying to change my mood and earn some money, I found the TADA and I thought that I could do it easily as it doesn't need any special knowledge or skills for work. ...Although I worked for quite a long time (10 months) I'm going to quit soon and start to study again. The treatment is not getting better, but only getting worse and worse. It's so disappointing. (Participant C) ”

“There's not much to do after retirement and become an elderly person. I was looking for something else to do, and I thought it was better than construction worker. ... I'm doing it because it's not very difficult, but I'm constantly looking for other jobs. Many drivers are always considering changing jobs as it's hard to earn lot money from driving and people think driver as a poor job... I think this can't be a full-time job, because no matter how long you work, you have no job security or benefits. (Participant D) ”

However, younger generations who worked for part-time or were not married yet were generally satisfied and willing to continue working. In general, single, young people who have less burden of living or who work at Tada for a part-time job were more satisfied with their jobs than the average.

“I’m preparing to be an actor, and I usually work freely, so I’ve never had a regular job. I’ve only had part-time jobs.....Even though TADA notified that I will be changed to freelancers (now dispatched regular worker), I think I’ll continue as long as I can. Because I can work longer than previous part time jobs and as I work longer than before I earn more money now. And there was some stress in the beginning, but after I changed my mind, it’s not that stressful, and I can now understand most situations. (participating F)”

“I found this job while I was looking for a part-time job. I like it because I like driving and I can work regardless of the weather. ... I think I’ll keep doing to enjoy the freedom of freelancer and can consider it as a full-time job if there are some improvements in salary and benefits. (Participant G) ”

“I was preparing for the qualification exam, and after I took the test, I was waiting for the results for a few months. Then one of my friends recommended this job and that’s how I started. The hourly wage is good and I like driving. And there’s a fun of meeting diverse people and I’m satisfied that I can work alone comfortably and get paid based on my working hours. I also enjoy driving all around Seoul. ..but I don’t think it’s a regular job. I don’t think anyone in their 20s or 30s would consider this as their

permanent job. Although I don't have much to complain about this job, I'll only work for two more months while I am waiting for the test results. (Participant H)”

“I work for a funeral service company, but I used to work for Tada as a full time worker when I was off work for a while. In the beginning, there were only dispatched workers. It has changed a lot after a lot of agencies coming in. Moreover, the working condition is getting worse and the intensity of the work is getting stronger. So I'm back on my previous job (funeral service) and work for TADA only on weekends as a second job. Since I came back to my original work, I think I will continue to work at TADA for my extra income for a while. But I only recommend it for a second job! I think it's impossible to work at TADA for a full time worker in current working condition. (Participant I)”

Based on the results of these interviews, unlike the platform companies' promotion of a new concept of free jobs, the reality is that such platform labor is no different from another type of non-regular work or part-time job, and most of the participants consider it as only a temporary job. In addition, most of the people who work full-time at TADA are middle-aged men who have difficulty finding work after retirement or those in their 30s and 40s who have no special skills or knowledge and are preparing for other regular job.

All in all, participants regard platform labor only as a part-time job or temporary job, and say that they can never work for a long time due to too poor working conditions and too little pay to work as a full-time worker.

4. Discussion of platform labor

Interviews showed that the participants have the biggest complaint on the way platform companies employ workers by deftly avoiding labor laws. Employment is the most sensitive issue to participants because it is closely related to workers' basic rights, such as workers' salary, welfare benefits and the right to form a union, etc. Not only Tada, but also many platform companies around the world, are using workforce cheaply and efficiently in an unreasonable and malformed way of employment that cleverly bypasses labor laws. And these abnormalities worsen the poor working conditions of platform workers.

TADA's employments are divided into two main categories: freelancers and dispatched workers employed by agencies, with the majority of freelancers accounting for more than 90 percent. Of the total 9,000 drivers, only 600 dispatched workers are employed under the Labor Standards Act by agencies. The remaining freelancers are not guaranteed any basic rights and interests of laborers such as four major insurances, paid annual leave, paid vacation time, etc. and they can be dismissed easily at any time.

Although Tada did not recognize them as laborers and did not provide them with any rights or welfare benefits, it is problematic in practice because Tada has supervised direct work commands such as education, work arrangements, management of work hours, work performance evaluations, disciplinary actions, and contracts.

And this unusual way of employment basically creates a structure in which workers are easily controlled and exploited by platform companies. Participants, in particular, spoke a lot during the interview that they feel like they are “consumables.”

“It feels like people are turning to consumables because the barriers to entry are so low. Employment stability is too low. One day, I went to work at dawn, but suddenly there was no dispatch, so I asked the dispatching company to say that it was not possible. It was a job for me, but the business responded insignificantly by missing it. So I sent an e-mail to the head office, “Tada,” but the head office said that they were not involved. ... On the other hand, when I called because the app GPS was not caught, it told me to spend my personal break while fixing the error, and then came back after a while and told me to stop working. I drove the reason to my cell phone problem, but when I went to the service center, it wasn't my cell phone problem, but it was an app issue. In this way, I am a freelancer, so I can work and cancel when I want, but I am suddenly doing that and I am very unstable. It's like a double-edged sword. I saw a case where I was suddenly fired without warning. (Participant C) ”

“Yeah...it can be said that it's kind of creating jobs.....,but I think it's not a good job but just a low quality job. I think these kinds of jobs only worsen the irregularization of job. (Participant B) ”

“There are also self-driving cars, and I think that this job will eventually disappear. Worry about... It's likely that more platform jobs will continue in the future, which is not good for workers. I don't think there are people who do this and think they are

workers, unity among workers and it will be harder for them to voice their voices. In short, it is used as a consumable. (Participant F) ”

Many participants also claimed that there should be some relevant institutions and law implemented.

“I don't think the future of platform labor is good. It seems to be an inevitable phenomenon due to the change of technology. Innovation is fast but the government system is too late. In the United States, platform workers tried to create unions and attempted to create institutions in California. So I think there should be government support to create relevant institutions in Korea as well. And I think the reality of platform workers working environment is worse than in the 1980s. The barriers to entry are so low that people feel like they are falling into consumables, and there is no future. The quality of life and the future plan is impossible with this job..(Participant C) ”

“I think a legal system needs to be made more. In the United States, it was made a while ago. I think it is urgent to introduce our country. I have a one-to-one business relationship, so I need help from my country. This platform labor is going to be a long-term job and workers can work long and stable. There are so many things that work in the simple Alba style. I think there will be a lot more of these jobs in the future. If the legal system is maintained, it will be positive, but in this way, it will be negative for workers. (Participant D) ”

“I know there are no laws related to this new labor. As well as those who deliver, there's a big risk after an accident... I want a bill to come up. And when you want to work as a freelancer, it's good to work but it doesn't seem like a good long term. Workers' rights are not guaranteed, they may be able to work forever, and their work is unstable. (Participant J)”

VI. CONCLUSION

This study starts from the question of the impact of the rise of the platform economy on the labor market. Many platform companies are promoting their new alternative jobs created by the technological revolution guaranteeing that these new jobs offer flexible working hours, independence without boss and autonomy that are different from traditional jobs. However, in-depth interview with workers shows that the reality was quite different from promotional phrases.

To examine the reality of working environment in the platform economy, in-depth interviews were conducted with drivers who work for 'TADA', which is a Korean representative mobility platform company. By conducting in-depth interviews, this study focused on three main aspects of their work environment and experiences: 1) motivation for participation, 2) working environment and experience, and 3) thoughts on platform jobs. And through these in-depth interviews with drivers, I could derive comprehensive results on the platform working environment, experience and satisfaction of the platform economy workers and examine whether the platform economy provides new alternative jobs as is currently discussed and promoted.

Based on the results of in-depth interviews and literature studies, I could derive answers for three research questions.

First of all, the answer to the first question (How has the platform economy changed the working environment?) is can be explained by the "app-based automatic working

environment" where the core technologies of the fourth industry, such as big data and artificial intelligence, are integrated. Technology has changed the way we work. The biggest difference in working environment between traditional companies and platform companies is that the non-face to face, app-based work environment has become possible through the development of technology. This change has brought great convenience to workers, but the side effects also have been evident. Consequently, based on the research results, the characteristics of the app-based work environment that has significantly changed the previous working environment can be divided into two categories, the one that has been improved (autonomy, flexibility, independence) and the other that has become worse (new management style and control).

Participants agreed that technological advances clearly made their work environment convenient, and generally acknowledged that the app-based working environment of platform companies is more convenient than existing companies in two aspects. The first reason is that most tasks can be handled quickly and conveniently with a few touches through the app without ineffective face-to-face and paperwork procedures. Basically, every participants agreed that it was convenient to select and cancel work schedules at any time through the app, and that all tasks such as customer assignment, directions, and payment were handled automatically by the app. This make drivers can only focus on driving and have nothing to care about. In addition, the participants thought it was a very convenient and new way of doing things that they deal with an accident or other unusual, emergency situations during the work by just simply filling

out forms and sending them along with photos through the app.

The second reason is that they are working with no boss as many platform companies promoted. They say they feel independent and free in that they work alone in their own space, with no managers or anyone to care about.

On the other hand, the disadvantages offsetting the advantages of this platform working environment are largely due to two aspects: 1) the mechanical management/supervision system through the app and 2) the extremely efficient operation of personnel and resources that have become possible through IT technology.

First, looking at the indirect (mechanical) work management supervision system through the app, it was found that it is more scary and tight management/supervision than the existing human (boss) monitoring. This is because it has become possible to monitor workers in real time through the GPS inherent in mobile phones that platform workers always carry and check frequently for their work. Furthermore, monitoring through machines was causing more inconvenience because no mistakes from human or mechanical error were taken into account in the system. Most of the participants in the study were unhappy about the fact that they would be immediately called and interrogated in real time just by bypassing the way to the bathroom for a while or by mistake going to a path other than where the app was guiding them. In addition, the participants felt unfair in that they would only suffer losses as the machine doesn't take into consideration of diverse situations such as when they spent time at the destination for helping customers or when customers came out late for a ride and when they were

unable to work due to malfunctions in the app, etc.

In addition, the customer evaluation system is also a big constraint for platform workers. Most of the platform companies use the customer evaluation system as an effective means of maintaining the integrity of workers and high quality service. TADA also uses its customer evaluation system to control drivers by relating it to the driver level system which affects the drivers' incentive pay. As the customer evaluation affects drivers' incentive pay which is a big part of their additional revenue, drivers were effectively controlled and constrained. Drivers had no choice but to respond to customer's unreasonable demands or misbehavior because they had no choice but to be aware of the customer evaluation system which is directly related to their paycheck. In addition, some customers, who know this system, wield their power of evaluation and take more irrational and misbehaviors to drivers, which would not be possible for taxi drivers. Due to this fact, many TADA drivers picked 'customer service' as the most stressful part of the ride.

Secondly, it was ironically the technological advances that made the platform working environment even worse than before. Advances in technology allow platform companies to utilize big data and artificial intelligence algorithms to analyze and utilize it, allowing them to operate their manpower and resources more efficiently. And these advances were transforming the working environment into a structure in which workers, one of platform companies' resources, were forced to work more restlessly than before. In fact, TADA drivers who were working at the beginning of the service

were initially satisfied with the platform working environment. However, the majority of long-term workers who worked for almost a year were able to feel that the working environment has worsened over time. First of all, TADA has forced workers to work more during busy hours and in busy areas based on the accumulated data on demand and drivers' working pattern. Moreover, TADA has made its workers to work tightly by adjusting the number of vehicles to operate according to demand. They reduce the number of working cars and shorten the working hours of drivers when there is no demand. Most of the study participants complained that while they were not that busy and used to do a moderate intensity of work, now they are literally working for 10 hours with no time to go to the bathroom for 10 hours. These kinds of efficient resource management of platform companies that enabled by advanced IT technology have created a world in which workers can be effectively exploited in new ways that have never been seen before.

Then, how does this changed platform working environment affect workers? The answer to the second question of this study could be found by examining how workers feel about these changes, and by investigating the level of their satisfaction in the platform company. The results showed that the participants' satisfaction was largely influenced by two factors: contract type and the participant's personal situation (mainly two factors: the marital status & whether they work for full time or part time at TADA).

First of all, TADA's contract type consists of dispatched workers who work like regular workers on a regular basis, and freelancers who select their work schedules freely. Currently, 90 percent of the TADA drivers are known to be freelancers with 10 percent of the dispatched workers. The dispatched workers belong to the dispatch companies which provide manpower to TADA were provided with basic four insurance, annual leave, paid rest (one and a half hours during the 10 hours of work time) and meals by the dispatch companies. On the other hand, freelancers, who are free, independent contractors and only work when they want to, are not guaranteed those aforementioned basic rights and welfare of worker at all. Also, as they have no paid time off unlike dispatched workers, they were working too hard with no rest to earn even a little more money.

In addition, unlike the dispatched workers who work on a regular schedule by extending contracts at regular intervals, freelancers were often unable to work because they often fail to receive work assignments on the desired day or time depending on demand and supply. And because of the nature of free contracts, freelancers were easily dismissed for no reason. As we can see from these facts, the majority of platform workers, who are mostly freelancers, do not receive any basic worker's rights and welfare benefits. And this poor working condition makes platform workers feel anxious about their future, which has a great impact on their satisfaction of work. Therefore, while the three dispatched workers of total twelve study participants had an average of more than seven points of satisfaction (out of 10), the other nine freelancers

showed only an average of five points of satisfaction.

The second most important factor for worker's satisfaction is the individual circumstances of each participant. Among many factors, marital status and whether they work for full-time or part-time shows a great correlation with their satisfaction. First of all, looking at the marital status, half of the participants (6 people) were married with children and they had more stress and dissatisfaction with their working environment as they have much higher burden on their livelihood than single person. On the other hand, unmarried participants were generally more favorable to TADA's free and independent working environment and showed relatively high level of satisfaction as they are generally less financially burdened. According to the interview, the satisfaction level of six unmarried people was 7 points, which is 2.5 points higher than the average work satisfaction of six married people, 4.5 points.

Also, it was found that whether they were working full-time or part-time had an impact on their satisfaction of work. Based on the result of the interviews, many of those who work full-time for TADA are old retirees who have little or no chance to choose a job other than this, or people who have little or no skill or knowledge. On the other hand, those who work part-time at TADA are mostly have their main regular job and do this only on weekends or their free time for additional income or meeting new people, etc. Therefore, while those who work for full-time at TADA are more likely to have negative feelings or desire to improve their working environment as they are desperate and wish to work longer, those who work for part-time are generally satisfied

that they can work when they want to, and are often having fun in their work. As a result of the interview, the satisfaction level of six full-time workers was 5.25, which is lower than the average satisfaction level of part-time workers, 6.25.

Finally, what research participants felt in common about the platform working environment was concerns about the inhumane working conditions and mechanized workers caused by unstable employment and app (platform)-based, automated working conditions. As we already know, most platform companies provide services that connect supply and demand, so they prefer to hire freelancers for efficient management of human resources based on the fluctuating data of supply and demand. TADA also currently employs 90 percent of freelancers and about 10 percent of dispatched employees, but even those 10 percent of dispatched employees were unilaterally terminated contract by TADA during and after interviews. They were worried about the future, saying that they know that TADA is planning to hire all their workers as freelancers, which means that the working environment will be much worse. In addition, we could anticipate that the more freelancers there are and the easier it is to hire and fire them, the more intense competition there will be among platform workers for a limited work schedule. Therefore, many participants were very concerned that TADA is already assigning more work to those who work longer without off-days and this system and algorithm will be upgraded and lead to more severe competition among TADA drivers.

For these reasons, most research participants agreed that platform work is a new type of very low-quality, unstable job that is worse than the existing part-time jobs as the platform working system is a harsh structure that abuses workers over time through accumulated data. After all, new jobs in the era of the Fourth Industrial Revolution were found to be a brief happiness enjoyed only in the early years of service, and as time goes by, workers are more severely exploited and ultimately sacrificed to pave the future way for the provision of an automated (self-driving car) system.

As a result, most of the research participants also regarded this unstable and poor job as only a temporary job. Some participants nonetheless wanted to work longer because they had no choice of other jobs, but they complained that they had to quit for their own health and survival because of the increasingly poor and exploitative system changes.

In this one-sided, unilateral employment relationship, the drivers are feeling more helpless in that there is no way to communicate with the head office directly. And drivers were dissatisfied with the fact that even when they got fired, they couldn't even know the exact reason, and that most of the key things related to their work, such as customer ride fare and driver's level criteria, etc. are mostly private. Due to this one-sided communication and information asymmetry, the relationship between TADA and drivers has changed from an initial partnership to a ruthless employment-exploitation relationship that is no longer trusted. Because of this inhuman working environment, participants commonly said that they seemed to have fallen into the working machines

and consumables. One participant described this situation as “TADA was a good uncle in the beginning, but now they are just horrible gangmaster.”

Finally, based on the lessons from the example of TADA drivers, what should we keep in mind and develop for a better working environment in this new platform economy world? Already, not only in the world but also in Korea, there is a strong backlash by the taxi industry to prevent the mobility platform such as Uber and TADA. In addition, in Korea, the powerful taxi workers' union is working together to pressure the National Assembly to lay bills aimed at preventing the mobility platform TADA. But even if these efforts were successful, the global trend toward a platform economy would be unstoppable. In fact, the interviewees (TADA drivers) knew better than anyone that this trend could no longer be stopped. As a result, they are already seriously and realistically worried about the future of workers, jobs and job automation in the platform economy world.

According to the interview, many said that the most urgent thing is the establishment of law and institutions in line with the times of fourth industrial revolution. The study participants talked a lot about the institutions and laws of protecting workers and employment system, which are currently urgent issues. However, as I listened to their thoughts, I thought it was more urgent to reform the educational system that would support and help workers to adjust to the Fourth Industrial Revolution era in order to prepare for the fundamental change of industrial ecosystem rather than just short-term

problem solving through employment institutions. Because the overall structure of economy has dramatically changed and is still changing, and it's hard to keep up the pace of transformation of society only with some implementation of institutions and law. As the world becomes more and more digitalized rapidly, not only the certain amount of platform workers but all of us should be prepared for at least a basic understanding of digital skills.

“Before the Internet, it would be really difficult to find someone, sit them down for ten minutes and get them to work for you, and then fire them after those ten minutes. But with technology, you can actually find them, pay them the tiny amount of money, and then get rid of them when you don't need them anymore.”

- Lukas Biewald, CEO of Crowdflower

Lukas Biewald, the CEO of Crowdflower, well described the reality of current labor market in the era of platform economy. As the Gig economy spreads around the world along with the rise of platform companies, direct employment is disappearing from most platform companies. They are simply hiring workers in the name of freelancers or independent contractors and the basic rights and welfare benefits they have to offer to employees are being avoided. In this new employment system, workers who are easily hired through the internet are used and discarded easily as consumables. Moreover, such easy employment and dismissal intensify competition among workers. And the competition is expanding across regions and further across the world through platform ecosystems. As a result, the value of labor decreases more and more, and workers are forced to work harder and longer than their competitors to earn enough living expenses.

You might think that this trend is just a matter of platform labor which remains only a relatively minor part of the labor market at the moment. However, it should be remembered that the innovative platform business model born from technological advances is already spreading across all industries, and the problems of platform workers will soon become problems for all of us. As we have been seeing, more new platform companies will be emerging and more people will take part in platform economy hoping for a better future which is totally not. Moreover, the speed and impact can be more destructive and transformative than our expectations. Therefore, not just the platform companies but all industries should be noted that preparations need to be made through consensus among all participants, including workers, companies, government and society, in preparation for future changes in the labor environment that have not been experienced before.

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※ APPENDIX

Pre-Interview Questions

On Participant's Basic Information

1. Gender:

2. What is your age? - Born in: _____ year

3. What is the highest level of education that you have completed?

① High school graduate ② Graduate of a college ③ Graduate of a university

④ Post graduate study ⑤ Other

4. What is your marital status? ① Married ② Single

4-1. How many people, including yourself, live in your household? Do you have children?

4-2. Are you considered your household's primary breadwinner?

5. How long have you been working for TADA? _____ year _____ month

5-1. Is your income from TADA the main source of your income?

5-2. Do you have experience in other related industries (shared car and taxi companies) besides TADA?

5-3. What kind of job did you work in before?

6. What type of contract do you currently work for TADA?

① Freelancer ② Dispatched worker

[Original Pre-Interview Form in Korean]

< 심층인터뷰 사전조사 설문지 >

안녕하십니까? 저는 서울대학교 국제대학원 국제지역학 전공 석사과정에 있는 신성 입니다. 본 연구는 플랫폼 경제 종사자의 경험 및 만족도에 대한 종합적인 결과를 도출하여, 플랫폼/공유경제가 현재 논의 및 홍보되고 있는 것처럼 새로운 대안적 일자리를 제공하는 역할을 수행하고 있는지를 조사하고자 합니다. 또한 이러한 연구 결과를 바탕으로 급변하는 노동시장 속에서 플랫폼 업체들의 역할과 노동시장의 미래 그리고 이에 대비한 바람직한 발전 방향을 제시하는데 그 목적이 있습니다. 업무로 바쁘신 와중에도 불구하고 심층인터뷰 사전조사 설문에 응해주셔서 진심으로 감사 드립니다.

1. 성별:

2. 귀하의 연령은 몇 세입니까? 출생년도: _____년 (_____세)

3. 귀하의 최종 학력은 어떻게 되십니까?

① 고등학교 졸업 ② 전문대 졸업 ③ 대학 졸업 ④ 대학원 이상 ⑤ 기타

4. 귀하는 결혼을 하셨습니까? ① 기혼 ② 미혼

4-1. 귀하의 가족 구성원은 몇 명입니까? 자녀가 있으십니까?

4-2. 귀하가 가족구성원을 부양하는 가장입니까?

5. 귀하의 타다 드라이버 경력은 몇 년/개월입니까? _____년 _____개월

5-1. 타다를 통한 수입이 주수입원/부수입원입니까?

5-2. 타다 외에 다른 관련업종(공유차량 및 택시 업체)에 종사한 경험이 있습니까?

5-3. 이전에 무슨 직종에 종사하셨습니까?

6. 귀하가 현재 타다에서 근무하는 계약유형은 무엇입니까?

① 프리랜서 ② 파견업체 소속

- 설문조사에 응해주셔서 감사합니다. -

In-depth Interview Questions

• Working Environment

- Contract type:
- Working hours:
- Income: In an average week how much do you earn?
 - Are there any income changes compared to the previous? If so, how do you feel about this change? (better / no change / worse)
- How satisfied are you with the fairness of your pay?
- Have you ever had any issues being paid?
- Welfare benefits:
- Do you have a savings, rainy-day fund, or nest egg in case of emergency or long period of unemployment?

The Pros and cons of working for TADA:

- Pros/advantages or cons/disadvantages:
- How often do you find your work stressful?
 - What is the most stressful part of this work?
- Have you ever felt threatened or had a dangerous experience? Please describe.

- Do you feel as if the platform (TADA) controls you?
 - How they control and manage you during the work or when you made a mistake?
- Do you feel uncomfortable working the way you work on a digital platform, such as using apps?
 - Do you have any complaints about app-based working environment?
 - On the contrary, what is the convenience of doing the work with the app?
- Are there any changes in the work environment compared to the beginning?
- If somebody asked you what is the best part and worst part about this work, what would you tell them?

• **Worker's Experience and Career Plan**

- What made you start doing this work?
- What were you doing before you started doing this work?
 - Why did you quit?
- What has been the biggest surprise or most interesting things about this work?
- Do you see this work as your career or something temporary?
 - (If temporary), how long do you imagine yourself doing this? What is the reason?
- Would you recommend this job to your family or friends?
- What is your future career plan?
 - Is your experience with TADA helpful for career planning?

- Are you willing to work on other platforms?
- What do you wish you would have known about this work before you go started?
- Do you find this work rewarding? How so?
- Overall, how satisfied are you with this work? Rate your score out of 10.

- What do you think of platform work? What do you think the future of this kind of work is?
- What do you think the increase of these kinds of jobs means for workers in the future?

- If you had a one-on-one meeting with president of TADA what would you tell him about the work, the pay, how you're treated and your overall experience? Is there anything you want them to fix or make improvements?

- Lastly, is there anything else you want to say or add? Please feel free to talk.

국문초록

플랫폼 노동자의 근무환경에 대한 연구 : 타다 드라이버 사례를 중심으로

신 성

서울대학교 국제대학원

국제지역학 전공

4차 산업혁명과 함께 ‘플랫폼 경제’라는 새로운 혁신적 비즈니스 모델이 탄생하면서 경제, 기업, 사회 전반에 구조적인 변화가 일어나고 있다. 플랫폼경제는 4차 산업혁명의 혁신적인 IT 기술들을 활용해 플랫폼에 사람들을 모이게 하고 그 플랫폼을 통해 한데 연결된 수많은 사람들의 강력한 네트워크 효과를 바탕으로 무궁무진한 기회와 부를 창출하는 시스템이다. 이미 현재 전세계 10대 기업들 중 애플, 구글, 마이크로소프트, 아마존, 페이스북, 텐센트, 알리바바의 7개가 플랫폼 비즈니스 기업이며, 시가총액 10억 달러 이상 규모의 유니콘 기업들의 성공도 대부분 플랫폼의 힘 덕분이다.

이렇듯 엄청난 플랫폼의 힘을 바탕으로 급격히 성장한 플랫폼 기업들은 기존의 강자였던 전통 기업들을 무너뜨리며 산업 생태계를 완전히 재편하고 있다. 특히 산업 생태계의 직접적인 영향을 받는 노동시장에도 이미 큰 변화가 일어나고 있다. 글로벌 ‘긱 경제’ 추세 속에서 플랫폼 업체들은 쉽게 일하고 그만둘 수 있는 새로운 형태의 자유롭고 유연하며 독립적인 일자리들을 내세워 근로자를 유혹하고 있다. 그러나 실상을 살펴보면, 플랫폼 노동자들의 현실은 플랫폼 업체들이 주장하는 환상과는 사뭇 달랐다.

따라서 이 연구는 급격히 성장하며 전세계 시장을 지배하고 있는 플랫폼 경제가 노동환경을 어떻게 변화시키고 있는지, 그리고 근로자들은 이 새로운 유형의 직업과 근무경험에 대해 어떻게 생각하는지를 조사하고자 한다. 이를 위해 한국의 대표적인 모빌리티 플랫폼 업체인 타다(TADA)의 운전자들과 심층인터뷰를 진행하였다. 본 연구에서는 이 심층인터뷰 결과를 토대로 플랫폼 경제로 인해 변화되고 있는 근무환경의 실태와 이에 대한 플랫폼 노동자들의 경험과 생각들을 심층적으로 살펴보고, 이를 바탕으로 향후 직업과 노동의 미래, 그리고 좀 더 나은 노동환경을 위해 플랫폼 경제시대의 급속한 흐름 속에서 우리가 유념하고 개선해야 할 사항 등을 알아보려고 한다.

키워드: 플랫폼 경제, 네트워크 효과, 깃 경제, 근무환경, 타다,

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