

Asymmetric Information of Sharing Economy

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ABSTRACT

The purpose of this article is to explain the extent to which information asymmetry influences the partnership relationship between application providers and application partners in economics. This article will focus the argumentation on power imbalances in the relationship between application providers and application partners for online transportation service providers such as UBER. Furthermore, this article will explore how information asymmetry affects the likelihood of power position inequalities in negotiations between the application provider and the driver. The study in this article will use multi-disciplinary based scientific literatures either of the economics, information systems, and management. The information asymmetry arising from the rules made by the application provider has the effect of weakening the driver's position in the negotiation process with the application provider. Thus, due to the existence of information asymmetry, the driver voluntarily binds to the protocol of the provider without having the ability to question the advantages and disadvantages associated with the protocol. For this reason, an institutional role like driver's cooperative is needed to intervene the information asymmetry and bridge the interests of drivers in a shared economy.

Keywords- Sharing economy, asymmetric information, digital platform.

1. INTRODUCTION

In the past decade, the development of the sharing economy, often known as the economy on-demand or gig economy [1], has experienced rapid development in terms of income [2]. Sharing economy is a service or sale of commodities to consumers using digital platform through mobile or web applications [3], formed or managed by an organization [4]. One of the important characteristic of sharing economy is the position of employees; for example, in UBER, drivers are partners, not workers [5].

The motivation to partner in a sharing economic scheme is driven by flexibility and autonomy in determining work time in addition to earning income [6]. In addition, sharing economy, such as in online transportation, often do not require highly skilled workers [5]. However, regardless their position as partners, drivers are often in an unfavorable position, especially when related to the unbalanced contribution to them. The research presented in [3] found an ambivalent and ambiguous relationship when determining the contract between the application provider and the application partner, aka the driver.

This article aims to examine factors that influence the optimal contract achievement between the application provider and the application partner, especially related to the influence of information asymmetry. In particular, although on the one hand the use of digital platforms can reduce information asymmetry between application providers and consumers through the use of online platforms [7], on the other hand, there is still an imbalance of information

between application providers and application partners. For example, application providers, such as UBER, increase control indirectly to partners by providing limited information which lowers the bargaining power of partners [8]. This situation causes a sub-optimal relationship between the two, which is mainly influenced by information asymmetry.

In this article, the argument related to the effect of information asymmetry on the negotiation process between application providers and partners will be based on a series of interdisciplinary literature. This article synthesizes the literature in the fields of economics, information systems, and management.

2. WHAT IS SHARING ECONOMY ?

The phenomenon of sharing economy is characterized by a non-ownership and temporary-access redistribution of material goods or assets of money, space, or time that is highly dependent on information technology, and it makes consumption very accessible, flexible, and easy to share [9]. Sharing economy has become very popular in overcoming the increasing urbanization amidst limited availability of land and increasing population contributions, which makes people prefer to share space to store their goods and their temporary nature [10]. Most of the facts say that leases or peer to peer contracts born from the global economic crisis in recent years have resulted in people trying to get additional income from an alternative job that is considered very difficult at the moment to work [11].

The research presented in [12] to map the sharing economy in three core organizations that were developed from various literature. The three basic core buildings of sharing economy are (1) economic access, which consists of various associations to sharing underutilized assets from resources or skills associated with anyone who optimizes their use for the latest, short lottery; (2) economic platform, which is a forum for meetings that make a decentralized transition between fellow individuals through a digital platform to realize most of the production activities of individuals related to peer-to-peer and to facilitate and control transactions remotely, in which the digital technology reduces transaction costs that were traditionally incurred by information retrieval; and (3) Community-based economies, which are agreed upon through non-contractual and non-hierarchical forms of interaction to do work or assist in projects, or make connections.

The work presented in [2] a study on ten sharing economic sites regarding prices that were lower than market prices. The economic-sharing platform is also for people to get money in ways that previously were not safely and easily available. What is conveyed about the sharing economy is the socioeconomic system for exchanging goods and services, but, by agreement, no sharing practice is needed, accepting the transfer of ownership with the help of money [13].

Sharing economy also gave rise to the term of gig economy; some argue that sharing economy is the same as gig economy [1]. In a recent study, four types in gig economy were identified [14]: a). Free agents: those who actively choose independent jobs and earn their main income from independent jobs; b). Casual earners: those who use independent work for extra income and do so by choice; c). Reluctant: those who make the main living from independent work but prefer traditional jobs; and d). Financially strapped: those who do additional work independently because of need.

Gig economy attaches an emotional form of work in the process of delivering core services. This is the result of feedback and rating system that regulate the social interaction of workers/drivers and consumers/clients. The ranking or feedback given by the consumer will ensure that the data generated by the consumer will be attached to each driver. This formally forms the reputation score used by consumers/clients as a form of worker/driver's evaluation and proxy to be trusted. Therefore, this requires workers to be obliged to engage in emotional work attached to the main components of the work [15].

3. WHAT ABOUT ASYMMETRIC INFORMATION?

Three different definitions from the literature introduce the concept of Information Asymmetry: (1) the information asymmetry model assumes that at least one party in a transaction has relevant information, while the other does not [16]; (2) information asymmetry occurs when the knowledge of one contracting party is lower than the other party,

regarding the actual intentions of the opposing parties and planned activities [17]; and (3) the asymmetric perspective of information that information is imperfect because obtaining information is very expensive [18].

Asymmetric information is determined by two components: the extent to which basic information is common between participants and the level of coordination or communication between team members [19]. Asymmetric information scenarios can be grouped into two main categories [20]: adverse selection and moral hazard. Adverse selection refers to parties, where one party does not know the type or quality of goods (people) of the other parties in the market, while moral hazard is an action taken intentionally by an agent to withhold an effort that has been mutually agreed upon [21,22].

Companies that are already established and have high technology when entering equity partnerships with smaller companies or smaller partners have a tendency to misuse their partners [23,24]. Smaller companies or partners may need to be careful to reach partnership contracts with companies when information asymmetry is high because older partners tend to misuse smaller company's technologies [25].

The literature proposes several mechanisms to overcome information asymmetry, including contract incentives and monitoring [26,27,28]. Another argument for overcoming uncertainty due to information asymmetry is to include the perspective of institutions in the study of many problems that have cooperative structures [29].

4. NEGOTIATIONS BETWEEN APPLICATION PROVIDERS AND APPLICATION PARTNERS IN SHARING ECONOMY

The transaction and negotiation processes in sharing economy is conducted through Android and IOS-based smartphone applications, which connect companies, drivers, and consumers through an algorithmic management process and market mechanism [30].

The information control and negotiation process in an economic sharing platform application is dominated by application providers. This is based on the process of pricing (surge pricing), determining drivers and evaluating them using a management algorithm system created by the owner of the application [31,30]. The use of an algorithm management system allows the entire work experience of the drivers to be mediated, controlled, and manipulated by the owner of the application [32].

Drivers are not in a position of negotiating terms and conditions in the application. When UBER driver gets orders through the system, they have about 15 seconds to accept or reject. They take the risk of unprofitable trip, but they do not have the option to take or risk a system suspension, or termination and permanent removal, due to the cancellation of unprofitable fares [31]. Unilateral price reduction for passengers requires drivers to work longer hours to maintain their income level [30].

5. THE EFFECT OF INFORMATION ASYMMETRY ON NEGOTIATIONS BETWEEN APPLICATION PROVIDERS AND PARTNERS

Application platform mediates the company and the drivers. This platform informs companies about driver's activities, including performance and location, and serves as constant monitoring and supervision tool [8]. Meanwhile, drivers do not know where and when passengers are obtained, and what rates are charged; all is based on the application, known as gamification work [32]. The asymmetric information obtained by the driver is not the by-product of UBER's application design, but it is a fundamental part of its business model [8].

Drivers of online-based transportation services are classified as independent contractors or work partners, not employees [5]. Although UBER is campaigning that a driver can "be his own boss", in [32] found that none of the drivers considered themselves as entrepreneurs in their work with UBER. The partnership between drivers and the company causes the former to refer themselves as flexible workers and to receive uncertain income. Little is known about the fairness of the efficiency of the ridesharing platform [33]. Furthermore, driver's relationship with the application owner is generally categorized as high dependency [34,35]. Drivers can only talk about complaints addressed to them with office employees, not with higher management [31], and office employees cannot provide more detailed decisions and information; they take cover behind the existing system.

6. DISCUSSION: INTERVENTION INSTITUTION FOR OPTIMAL RELATIONSHIPS BETWEEN APPLICATION PROVIDERS AND PARTNER

Platforms that provide organizations or individuals with access to low-skilled workforce cause exploitation on workers because the latter are highly dependent on the former, making them in a low bargaining position [35], questioned whether independent workers in such platforms are truly independent and whether companies using the platform are very dependent on independent workers. In addition, flexibility in workforce requires companies to quickly increase their operations scale using minimal costs. Furthermore, the company's efforts to reduce the cost increase the risk for their workers.

The company's large resource causes imbalances in work relationships since the company, as the system owner, can change terms and conditions, making workers as partners stand in a weak position. Hence, they voluntarily bound themselves to certain protocols set by the application provider that sometimes harm them. By force, they accept the terms and conditions, or leave the partnership. This difficult choice make them feel exploited.

To increase information symmetry that help improve fairness, we suggest drivers/partners to establish worker associations that accommodate drivers with limited information, cooperatives for example [29]. The cooperatives should be managed by people who are experts in information and technology, algorithm workflow, and law, so that hidden information can be explained and driver's right can be secured.

The cooperatives also reduce incomplete contracts caused by uncertainty so that opportunities are large enough for the emerging contingencies [36]. The contract here can also be interpreted as a compensation instrument designed to eliminate the impact of asymmetric information.

An appropriate contract is a relational contract that cannot calculate all future uncertainties; it is based on past, present, and future expectations of relationships between the actors in the contract [37]. The contract in question refers to the degree of implicit, informal, and non-binding (non-bidding). If there are problems in the contractual relationship, it is usually not resolved through a court of law but is achieved through a balance of cooperation and coercion, communication, and strategy.

We also suggest the government to provide facilities and incentives so that start-up companies in this field grows well. Competitions in this area requires such companies to maintain their reputation in the eyes of drivers and consumers. This reputation is very important for drivers. According to in [38], reputation provides effective solutions to the problem of information asymmetry.

7. CONCLUSION

In sharing economy, the application used by companies, as the owner of large resource, causes differences in employment relations. The company as the system owner has more right for information than drivers, so it can change rules. Drivers as partners are very weak due to asymmetric information. They voluntarily bind themselves to certain protocols set by the application provider. They are "forced" to accept the terms and condition, or leave the partnership. This difficult choice makes drivers exploitable.

The role of associations or unions becomes very important in reducing information asymmetry. The associations can be in form of cooperatives established by courage-based transportation providers association. The cooperatives are responsible for the making of complete contracts in the form of relational contracts.

This study uses literatures of several case studies in several countries, so the information asymmetry problems have not been comprehensively discussed. The ever-changing rules of company's application and new regulations from the government require a deeper study. Therefore, it is expected that future studies incorporate elements of information technology and algorithm management so that asymmetric information problems can be identified.

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