

THE SOCIAL WELFARE FACTORS OF PUBLIC TRANSPORTATION DRIVERS WITH ONLINE APPLICATION AS A RESULT OF THE 4.0 INDUSTRIAL REVOLUTION IN TRANSPORTATION

WAHYU SARDJONO¹, BAMBANG SHERGI LAKSMONO² AND ENDANG YUNIASTUTI²

¹Information Systems, Management Department, BINUS Graduate Program – Master of Information Systems Management

Bina Nusantara University
Jl. K. H. Syahdan No. 9, Kemanggis, Palmerah, Jakarta 11480, Indonesia
wahyu.s@binus.ac.id

²Social Welfare Science Study Program, Post Graduate Program
Faculty of Social Science and Political Science

University of Indonesia
Kampus Baru UI Depok, Jawa Barat 16424, Indonesia

Received August 2019; accepted November 2019

ABSTRACT. *The presence of the digital industry is driving changes in modes of public transportation from conventional to modern using online applications. The positive impact of the presence of the digital industry, especially on transportation routes for the community is the existence of new jobs and sources of income. However, on the other hand, the existence of online transportation also presents various problems. This paper will provide an overview of the factors that affect the social welfare of online transportation drivers, using a qualitative approach through questionnaire distribution to respondents who work as public transportation drivers with online applications. The results showed that there were 4 (four) dominant factors related to social welfare and social protection for two-wheeled online transportation drivers caused by legal vacuum in the status of partnership pattern. Therefore, by producing these factors, a model that can formulate the current condition of motorists can be created, which can then be simulated to determine predictions of the social welfare conditions of online transport drivers in the future and can be used as an alternative to building one of the policy instruments and governance of public transportation operations with online applications.*

Keywords: Social welfare, Public transportation, Digital economy, Online application, Industrial revolution 4.0

1. **Introduction.** In line with the rapidly increasing population growth, it will also be followed by the need for public transportation facilities for the public such as public transportation, taxis, and motorcycle taxis. Meanwhile, in terms of social and economic aspects, the public transportation sector in Indonesia can provide opportunities for the community to work. Of the many modes of transportation that have developed in Indonesia, people generally prefer to use two-wheeled transportation or motorbikes, this is because of the increasing congestion in the Jakarta area, as well as the public can use this motorcycle as a means of livelihood known as the name of the motorcycle taxi. Then in line with the development of the industrial revolution 4.0 that can be utilized in the transportation sector, the role of ojeg has also changed to online ojeg [1]. And in 2010, PT. Go-Jek Indonesia was founded by Nadiem Makarim and Michaelangelo Moran, a company engaged in transportation services with online applications as an intermediary that connects motorcyclists with their customers, so that the business processes of these activities become effective and efficient [2].

From the several factors related to online transportation, one of the interesting factors to be studied further is social factors as a means of production which in this case is the driver of online transportation, because this role is very influential for the sustainability of the type of work in the informal sector concerning welfare online transport riders. This is because knowledge and research on the impact of industrial evolution 4.0 on social welfare has not been done much in 2015, GOJEK Indonesia company launched a mobile application based on Android and IOS as a liaison between transport drivers and their customers. The latest data from websites launched for the GOJEK application have been downloaded 655,165 times until April 2019. While the number of mobile users in Jakarta and Bali according to the Indonesian Statistics Agency and the Indonesian National Development Planning Agency, is more than 10,000,000. Thus, it can be concluded that there is still a very big difference between the number of mobile users and the number of GOJEK app downloaders. GOJEK application quality must be maintained, to increase the number of downloaders; therefore, this also needs to be explored further in relation to the growth and development of online transportation which in turn has an effect on social welfare factors for online transportation drivers. The results of the presentation in this paper are expected to help companies to measure the performance of online transportation riders as well as to measure the performance of the level of social welfare for people who work as online transportation drivers so as to achieve a competitive advantage for transportation companies in general. This paper is appointed and presented to look at the social welfare factors of transportation transport drivers with online applications in the current era of the digital economy in order to support the readiness of the people in the current industrial era 4.0.

2. Literature Review. James Midgley defines social welfare as a condition of human life created when various social problems can be managed properly; when human needs can be fulfilled and when social opportunities can be maximized. In Indonesia, the definition of social welfare cannot be separated from what has been formulated in Law No. 6 of 1974 concerning the Main Provisions of Social Welfare article 2 paragraph 1: "Social Welfare is a system of life and livelihood of material and spiritual & social which is covered by a sense of safety, morality, and inner and outer peace, which allows for every citizen to make efforts to fulfill the best physical, spiritual and social needs for themselves, their families, and the community by upholding human rights and human obligations in accordance with the Pancasila" (Adi [13]). Workers' social security (Jamsostek) is part of a social protection system that provides protection not only to those who work, but also to the entire community. According to Scott [14], the concept of traditional social protection focuses more on short-term protection programs, such as protection mechanisms for the community on the effects of shocks such as those caused by natural disasters, unemployment, and death. The foundation of social protection in a country must at least cover four important points: 1) guarantee access to health services; 2) education, and other basic social services; 3) basic income security guarantees for children with the aim of facilitating access to nutrition, health, education and other important needs; 4) income security guarantees for active age residents who are unable to obtain the necessary income; and income security for the elderly (Bappenas [15]).

3. Methodology. A performance evaluation method has been designed to assess the cloud computing services used for the computer network. To this end, the evaluation process for a computer network is divided merely into the cloud-specific evaluation.

1) This research is a mixed methods study with the main approach of this research a qualitative approach supported by a quantitative approach. The informants of this study were determined through a Purposive Sampling technique by determining the

criteria of the informants needed in the study consisting of key informants, main informants, and additional informants. This qualitative research began in June 2015, preceded by pre-eliminatory research, followed by FGD in November 2017, then the field research ended in July 2018.

The researcher used several methods of data collection as follows:

- ① Observation,
 - ② Interview,
 - ③ Library Study,
 - ④ Documentation,
 - ⑤ Focus Group Discussion (FGD), and
 - ⑥ Questionnaires.
- 2) To complement and strengthen the data, the researchers also distributed questionnaires to 102 Go-Jek riders in Bandar Lampung and 102 Go-Jek riders in Jakarta. The reason for choosing the Bandar Lampung and Jakarta for the location of this study is based on the literature review and observation. The researchers saw the activeness of Go-Jek riders in Bandar Lampung and Jakarta in social activities and in voicing opinions to achieve prosperity. Researchers also intended to see the development of consumers in 2 (two) settings area to give a picture of well-being in the development of a growing market in the Bandar Lampung and Jakarta which represent the major cities in Indonesia.

4. Results. A total of three resource acquisition and release scenarios have been investigated in this experiment based on a short and long time period. From the results of the field findings through the FGD, the Go-Jek riders revealed that they were the ones who were harmed by the partnership implemented by PT. Go-Jek Indonesia. This is because the company is often arbitrary in making new regulations that turn out to be detrimental to riders and decision-making not through deliberations with Go-Jek riders. Regulations are very detrimental to Go-Jek riders, especially regulations regarding fares. Rates that often change and without prior notice to Go-Jek riders cause the significant decreasing in income. The fare war causes the competition among online transportation companies in reducing fares or giving discounts to consumers. As a result, the income of Go-Jek riders decreases and becomes uncertainty every day. When compared with the average gross income of Go-Jek riders in Jakarta, it was found that 59 respondents had the average gross income in the range of Rp2,000,000-Rp3,000,000. While the number of riders with a gross income of Rp1,000,000-Rp2,000,000 is 43 respondents. And surprisingly, none of the respondents in Jakarta stated that the average gross income was over Rp3,000,000. This is totally different with the previous results in Bandar Lampung, where there are at least 3 people who have gross income above Rp3,000,000. This can be seen in Figure 1.

From the gross income, if it is reduced by operational costs, the net income obtained by the rider is much lower. There are 76 of 102 respondents in Bandar Lampung claimed to only get Rp1,000,000-Rp2,000,000 net income per month. Meanwhile, 22 respondents received a net income about Rp2,000,000-Rp3,000,000. And only 3 respondents received net income above Rp3,000,000. It shows that the biggest net income of Go-Jek riders is only around Rp1,000,000-Rp2,000,000 per month. Then when compared to the average net income of Go-Jek riders in Jakarta, it was found that 53 respondents had a net income about Rp1,000,000-Rp2,000,000. While 49 others answered that their average net income was around Rp2,000,000-Rp3,000,000. Overall, it can be concluded that Go-Jek riders in Bandar Lampung with the average net income in the range of Rp1,000,000-Rp2,000,000 is more than the Go-Jek riders in Jakarta. However, from the results of the Jakarta's questionnaires, there were no riders who had a net income of more than Rp3,000,000. This is different from the results in Bandar Lampung where there were 3 respondents

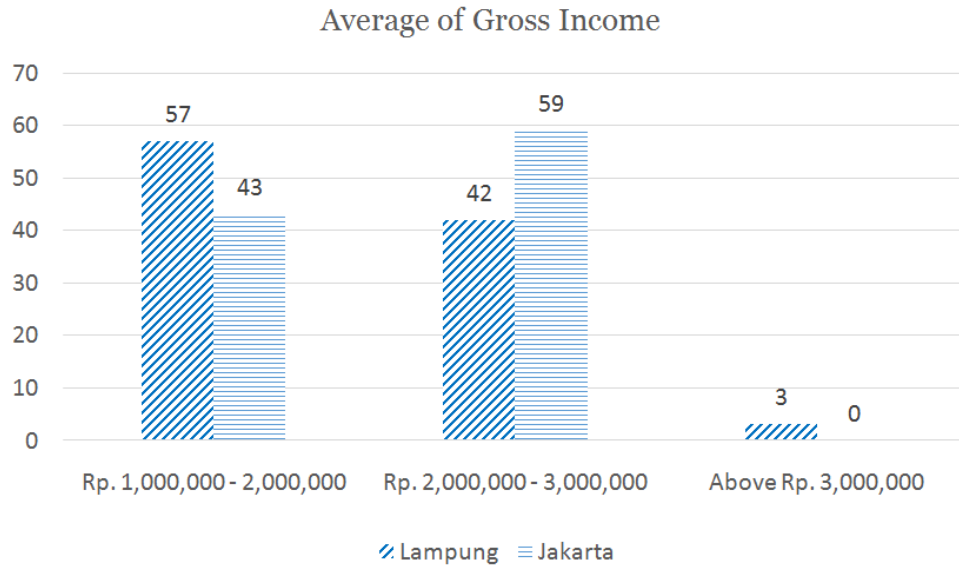


FIGURE 1. Average gross income of Go-Jek riders in Bandar Lampung and Jakarta (Processed research questionnaire (2018))

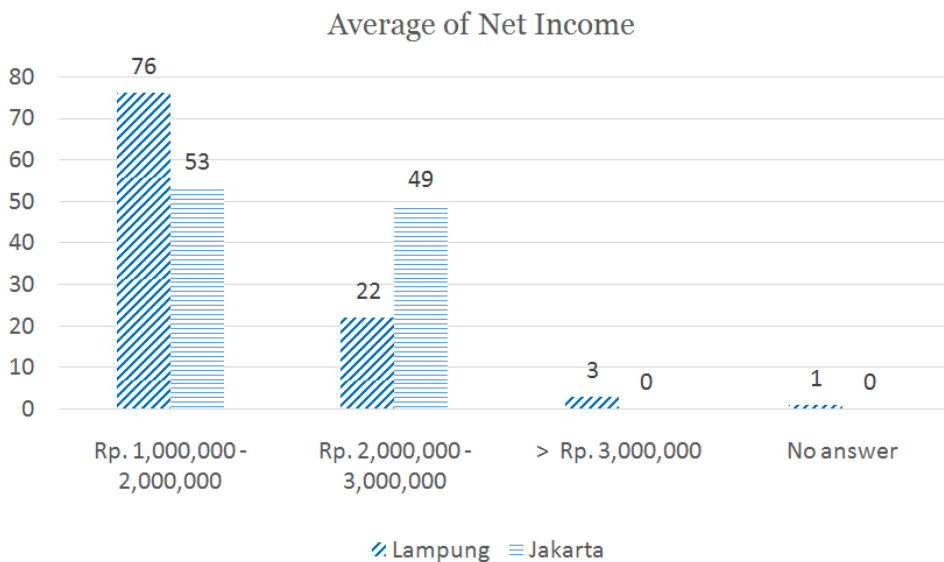


FIGURE 2. Average net income of Go-Jek riders in Bandar Lampung and Jakarta (Processed research questionnaire (2018))

who had net income above Rp3,000,000. The amount of net income earned by the Go-Jek riders can be seen in Figure 2.

Then, in the average amount of monthly expenses issues, it was found that most of respondents in Bandar Lampung spent Rp1,000,000-Rp2,000,000 each month. The number of respondents who have an average monthly expenses about Rp1,000,000-Rp2,000,000 are 53 respondents. And 32 others had an average monthly expenses around Rp2,000,000-Rp3,000,000. Then the remaining 17 respondents had an average monthly expenses more than Rp3,000,000. When we compare with the average monthly expenses of Go-Jek riders in Jakarta, 34 of 102 respondents in Jakarta spent Rp1,000,000-Rp2,000,000 each month, 63 respondents spent Rp2,000,000-Rp3,000,000 each month, and 5 others spent over Rp3,000,000 in every single month. It was very interesting because the riders who had monthly expenses about Rp2,000,000 and above is more than the riders who had monthly expenses under Rp2,000,000. The comparison can be seen in Figure 3.

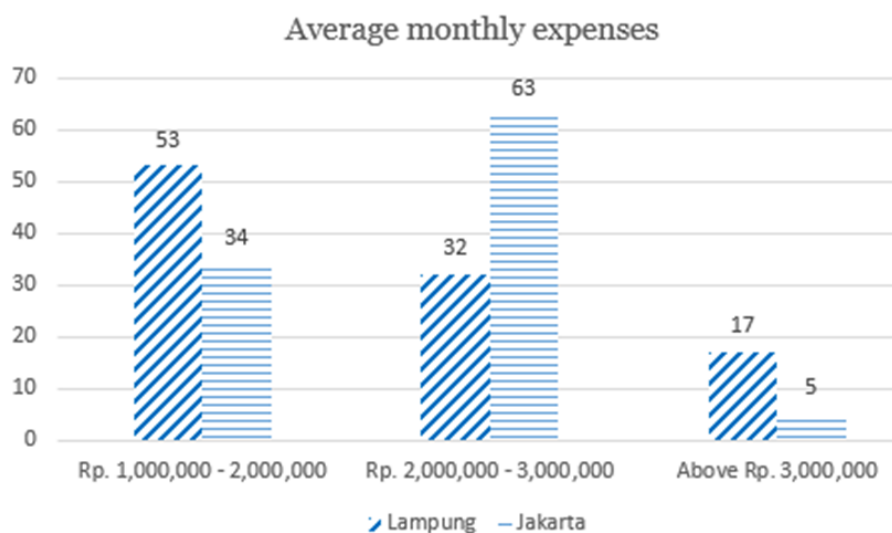


FIGURE 3. Average monthly expenses of Go-Jek riders in Bandar Lampung and Jakarta (Processed research questionnaire (2018))

Then when it was viewed from the average gross income and net income of Go-Jek riders in Bandar Lampung, it can be seen that the income does not meet the average monthly expenses. From the previous net income diagram, it can be seen that the average amount of Go-Jek riders' net income is Rp1,000,000-Rp2,000,000. This shows that the income is not enough to fulfill their daily needs, especially for Go-Jek riders who have quite a lot of family dependents and do not have other jobs besides being Go-Jek riders. However, even though online transportation riders are informal workers, social welfare is the right of all Indonesian citizens without exception. According to Elizabeth Wickenden, social welfare includes regulations legislation, programs, benefits and services that guarantee or strengthen services to meet the basic social needs of the community and maintain peace in the community. Meanwhile, according to Suharto [16], there are 3 (three) conceptions of social welfare, namely: 1) living conditions or conditions of prosperity, namely the fulfillment of physical, spiritual and social needs; 2) institutions, arenas or fields of activities involving social welfare institutions and various humanitarian professions that carry out social welfare businesses; and 3) activities, namely an organized activity or effort to achieve prosperous conditions. To clarify the picture of social welfare flows for informal workers, especially online transportation riders, researcher describes the flow of the theoretical framework in Figure 4.

Figure 4 shows the flow from the main problem which is the impact of digital work resulting in the emergence of new work patterns, namely the pattern of partnership with the economic sharing system. The ideal condition that should be in determining an agreement is on bargaining, so that the rights and obligations of the partnering parties can be fulfilled even at a minimum level. In the pattern of the partnership agreement with the sharing economy system, especially for two-wheeled online transportation, this bargaining process is ignored so that information asymmetry occurs. This information asymmetry is caused by the lack of transparency of information from the partners, namely PT Go-Jek, PT AKAB and Go-Jek partners, especially related to social protection rights that need to be obtained by partners. The government must be present in the form of a regulator with the formulation of policies that can bridge the partnership pattern with the sharing economy system so that it can provide social protection, especially for workers' partners. The policy is made to protect the partners, on the legality of a company's business, related to social protection guarantees for workers' partners should have included the social welfare provided.

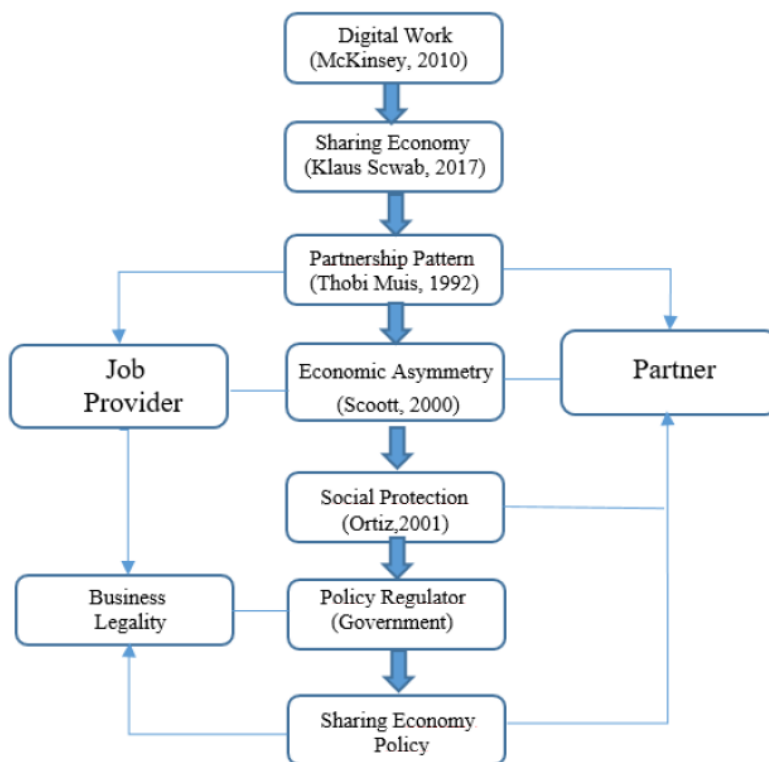


FIGURE 4. Flow of the theoretical frame work (Processed by researchers (2018))

5. **Discussion.** Viewed from the concept of social welfare, the welfare of two-wheeled online transportation riders is indeed still not fulfilled well as evidenced by the absence of legislation, programs, and services that guarantee the social needs of two-wheeled online transportation riders. Even though legislation, programs, and services that guarantee social welfare are the government's obligations that must be carried out to achieve the social welfare of the entire community. In addition, if it is viewed from the three main concepts of social welfare presented by Suharto (2010), the three conceptions are still not well implemented. To fulfill basic needs, there are still obstacles due to continuous fare changes that occur at any time so there is no certainty of income. As a result, two-wheeled online transportation riders who have a lot of dependents find it difficult to meet basic needs, especially in the midst of rising prices of basic commodities and current fuel oil cost (BBM). Besides that, until now there is also no institution that organizes social welfare businesses (UKS) specifically for two-wheeled online transportation riders. Whereas two-wheeled online transportation riders throughout Indonesia have reached hundreds of thousands of people, there needs to be an institution that helps to organize social welfare efforts (UKS) for them. Until now, in Jakarta, there is only a labor organization named the Indonesian Metal Workers Union Federation (FSPMI) which helps two-wheeled online transportation riders to advocate for their welfare because some two-wheeled online transportation riders in Jakarta join this group. And also there is a group called GASPOOL (Combined Admin Shelter Rider Ojek Online Lampung) in Bandar Lampung which express its aspirations several times to improve the welfare of two-wheeled online transportation riders to the Commission III of DPRD Bandar Lampung and the Central Parliament but all these efforts have not yet produced the results.

With all the shortcomings in fulfilling social welfare for two-wheeled online transportation riders, the authors propose a policy model of partnership working patterns for two-wheeled online transportation riders. This model involves an integrated system across sectors, in the sense that there is a need for good cooperation and coordination between sectors because the issue of work patterns and social protection for two-wheeled online

transportation riders requires intervention from various parties, especially the relevant ministries.

In the proposed model, there is an initiative on social security schemes for informal sector workers as partnering parties. This policy proposal requires a bargaining process in determining the agreement. The success of the bargaining process must be supported by the infrastructure needed to determine the agreement, including flexibility in regulation, meaning that regulations must be able to keep up with technological progress so that it can be used as a reference if problems occur. By involving worker partners at a certain level, it is an appreciation to partners and placing partners in an equal position with the company (equality on partnership regulation).

Agreements generated in the bargaining process can be applied, taking into account several factors, including:

- 1) The availability of technology and reviews of social media and online. In the digitalization era, the success and progress of a business are greatly influenced by technological progress and highly dynamic social media. Providers always upgrade service systems and periodic studies in this area continuously and continuously (kaizen).
- 2) The optimal service model is needed in online businesses because consumer trust determines the progress of digital business.

6. Conclusion. In terms of social welfare, it was found that there were deficiencies in fulfilling social welfare for two-wheeled public transportation drivers, when viewed from the aspect of welfare which included work opportunities, opportunities for access and social participation, as well as addressing the needs of life, social welfare conditions for two-wheeled public transportation drivers in Bandar Lampung, slightly better than public transportation drivers for two wheels in Jakarta. Some factors that cause better conditions for public transportation drivers for two wheels in Bandar Lampung are competition among fellow public transportation drivers with online applications that are not as strict as in the Jakarta area because there are not as many in Jakarta. In addition, the price of staple goods in Bandar Lampung is also not as high as in Jakarta. However, overall the welfare of public transportation drivers for two wheels in both cities (Bandar Lampung and Jakarta) indeed tends to decline, although at the beginning of the emergence of public transportation for two wheels, they experienced a significant increase in income because the tariff offered was better and competition was still minimal because the number of public transporters of two-wheeled vehicles is not too much. Therefore, the authors propose a partnership work pattern policy model in which there are initiatives on social security schemes for informal sector workers as partners. This model also involves various parties, including motorists, as a form of appreciation to partners and places partners in an equal position with the company (equality in partnership rules). With this policy model, the legal basis of the working patterns of public transportation partnerships with online applications will become clearer so that the principles of partnership will be obeyed in the agreement and the absence of information asymmetry between the company and drivers as partners, so that this causes the social welfare business for public transportation drivers with two-wheeled online applications guaranteed by the government and supported by various parties, especially the user community so that the social welfare of public transportation drivers with online applications will ultimately increase.

REFERENCES

- [1] R. L. Barker, *The Social Work Dictionary*, National Association of Social Workers, Silver Spring, MD, 1987.
- [2] A. Citradewi and J. P. Soebandono, Influence of totali bag and psychological capital to a working satisfaction of Go-Jek rider in South Jakarta, *TAZKIYA Journal of Psychology*, vol.22, no.2, 2017.
- [3] M. Hanafi, *Finance Management*, BPFE Publisher, Yogyakarta, 2004.

- [4] H. T. Kurniawan, *Viewing Sharing Economy Concept*, ikaprama.org, 2016.
- [5] Ministry of Manpower of the Republic of Indonesia, *The State Social Security System Program Manual or Workforce Social Security that is Interactive and Integrated*, 2018.
- [6] *The Results of Social Benefit Research on Demand Application: Go-Jek Indonesia Case Study*, Pusakakom UI, Depok, 2017.
- [7] B. Matofska, *What Is the Sharing Economy?*, <http://www.thepeoplewhoshare.com>, 2016.
- [8] SAP, *Dynamic Social Protection Within the Digital Economy with Solutions from SAP*, <http://www.sapevents.edgesuite.net>, 2016.
- [9] B. Setiyino, *Model & Design of Welfare State*, Nuansa Cendekia Publisher, Bandung, 2018.
- [10] E. Suharto, *Developing Society, Empowering Society: Strategic Study of Developing Social Welfare and Social Work*, Refika Aditama Publisher, Bandung, 2005.
- [11] S. E. Swasono, T. Hasbullah et al., *Failure of Labor Transformation, Dissimilar Social Protection*, Policy Initiative Review, 2013.
- [12] D. Bai and J. Yin, Game analysis of knowledge sharing in entrepreneurial team, *International Journal of Innovative Computing, Information and Control*, vol.15, no.1, pp.417-422, 2019.
- [13] I. R. Adi, *Social Welfare Studies and Problem Work*, FISIP UI Press, Jakarta, 2005.
- [14] W. R. Scott, *Financial Accounting Theory*, 6th Edition, Person Prentice Hall, Canada, 2011.
- [15] Bappenas, *National Medium Term Development Plan 2015-2019 (RPJMN 2015-2019)*, <https://www.bappenas.go.id/id/files/7714/1557/5291/RT-RPJMN.pdf>, 2014.
- [16] E. Suharto, *Developing Society, Empowering Society: Strategic Study of Developing Social Welfare-and Social Work*, Reka Aditama Publisher, Bandung, 2005.