The Behaviour and Welfare of Sharing-Based Transportation Workers

Case Study of Go-Jek and Grab Drivers in Jakarta

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Abstract— Although sharing economy is believed to lead to various impacts, few studies attempted to analyse the welfare impact of sharing-based services particularly in the context of emerging economies. This study, therefore, aims to investigate the impacts of sharing-based transportation services in Indonesia towards behaviour and welfare of the workers. The impacts are framed by using the *Maqasid Shariah* perspective, in which the welfare changes are analysed from religious (*din*), economic (*maal*), health (*nafs*), education (*'aql*), and family (*nasl*) dimensions. Further, to achieve the objective, the study collected relevant primary data from 103 drivers-partners of GO-JEK and Grab, which are the main providers of sharing-based transportation services in the country. The primary data are then analyzed by using descriptive and inferential statistics. The survey results suggest that the new economic platforms have enabled increase of welfare in every dimensions of the *Maqasid Shariah*. The highest impacts are felt in religious and economic dimensions, while the smallest impact is found in health dimension. Overall, the findings are expected to provide more insights regarding the nature and impacts of sharing-based economy, particularly in transportation services in Indonesia, and trigger more productive future discussions on sharing economy.

Keywords— *Sharing economy; online transportation; welfare economics; behavioural economics; Islamic microeconomics; maqasid shariah; Indonesian economy*

I. INTRODUCTION

Sharing economy is a relatively 'new' economic platform, which is believed to enable people across communities and link people to supply and gain from fundamental skills, optimize their idle asset and gain profit from the lease (Lee, 2016). The concepts and implementations of sharing economy, as can be seen from the operation of Uber and Airbnb, have attracted a great deal of attention in recent years. Uber is the pioneer of sharing-based transportation company based in the Netherlands, which has valuation of $41.2 million that make it one of the biggest companies in the world nowadays (Kasali, 2017). Meanwhile, Airbnb is a sharing-based accommodation provider based in the USA. Since its launching in 2008, the Airbnb online marketplace has experienced a very rapid growth, with more than four million guests and over ten million nights of cumulative bookings worldwide at the end of 2012 (Zervas et al, 2014).

Many believe that the sharing economy could lead to various positive impacts, including higher efficiency in resource allocation, welfare enhancement, and unemployment reduction (see, among others, Hall & Krueger, 2015; Bonciu, 2016; and Chia, 2016). Despite that, few studies attempted to analyze such impacts. Indeed, while the impacts of new economic platform on resource allocation could be clearly seen from the practices of sharing-based transportation services such as Uber, few studies analyzed the impacts of sharing-based transportation services towards the workers' welfare particularly in the context of emerging economies.

Based on this perspective, this study aims to investigate the impacts of sharing-based transportation services in Indonesia towards the behaviour and welfare of the workers. The impacts are framed by using the *Maqasid Shariah* perspective, in which the welfare changes are analyzed from multi dimensions including religious (*din*), economic (*maal*), health (*nafs*), education (*'aql*), and family (*nasl*) dimensions. Furthermore, to achieve the objective, the study collected primary data from 103 drivers-partners of GO-JEK and Grab, which are the main providers of sharing-based transportation services in the country. The primary data are then analyzed by using descriptive and inferential statistics.

Following this introduction, this paper is structured as follow. Section two reviews a number of relevant literatures, including the concepts and impacts of sharing economy. Section three explains the methodology employed; while section four discusses the findings and analyses of the study. The final section concludes the study.

II. LITERARURE REVIEW

Sharing economy is a term for an emerging set of business models, exchanges and platforms. The definition of sharing economy is evolutionary in nature; the concept is also taking shape with the level of inclusivity and variety in scope (Allen & Berg, 2014). The concept of sharing economy described by Belk (2007) actualizes the property distribution process to others for a limited amount of time without getting

legal rights for that property. Belk explained that sharing could be another resource for the private ownership that was emphasized in both marketplace exchange and gift giving. The benefits (or costs) that flow from possessing a thing in sharing might be enjoyed by more people.

The implementations of sharing economy can be seen from the operation of Uber and Airbnb. Uber is the pioneer of sharing-based transportation company based in the Netherlands, which has valuation of $41.2 million. It makes Uber as one of the biggest companies in the world nowadays (Kasali, 2017). Meanwhile, Airbnb is a sharing-based accommodation provider based in the USA. Since its inauguration in 2008, a very rapid growth has been experienced by Airbnb, more than four million guests and over ten million nights of cumulative bookings worldwide at the end of 2012 (Zervas et al, 2014).

Meanwhile, in Indonesia, GO-JEK could be considered as the pioneer of sharing-based transportation service providers. GO-JEK was found in 2010, yet gained popularity in 2014 when GrabTaxi and Uber came to operate in the country (Adhi, 2016). In addition, other providers such as BluJek, LadyJek, AdaJek, TeknoJek, TopJek, Jeger Taksi, Ojek Syar'I are also operating in the 4th most populous country in the world. However, overtime, only few providers survive, including GO-JEK and Grab who are now the market leader in the sharing-based transportation services in Indonesia (Angelia & Ngazis, 2016).

Given the concepts and practical implementation above, many believe that the sharing economy could lead to various positive impacts, including higher efficiency in resource allocation, welfare enhancement, and reduce the unemployment (see, among others, Hall & Krueger, 2015; and Bonciu, 2016). According to Hall & Krueger (2015), who analyzed data from 600 Uber drivers in the USA, most of the drivers joined the sharing-based transportation platform to get additional income as they mostly had main jobs elsewhere. The study also found that drivers who partnered with Uber were attracted to the platform because of the flexibility offered. Thus, it suggests that the platform has positively affected the driver-partners in terms of income/welfare enhancement and flexible working time.

The study also found that Uber has served as a bridge for many employment opportunities seekers (Hall & Krueger, 2015). In other words, the new economic mode has contributed positively in reducing unemployment in the USA. This result is in line with the finding of Bonciu (2016), who suggested a significant impact of the sharing economy to the labour market of North America in 2015. Bonciu (2016) also reported that around 120 million people in the region had participated in the sharing economy.

In Indonesia, few studies attempted to measure such impacts. This is not surprising, as the concept and business model are relatively new in the country. However, the Head of Indonesia Statistics Bureau (BPS) noted that the decrease on the level of open unemployment in Indonesia by around 530.000 in August 2016 could contribute to the online (sharing-based) transportation sector. Thus, there is an early indication that the implementation of sharing economy in Indonesia could potentially help in solving unemployment problem in the country (Supriyatna, 2016). The precise impacts, however, are yet to be explored.

III. METHODOLOGY

The study aims to investigate the impacts of sharing-based transportation services in Indonesia towards behaviour and welfare of the workers. To achieve the objective, the study collected relevant primary data from 103 drivers or partners of GO-JEK and Grab, which are the main providers of sharing-based transportation services in the country. The primary data are then analyzed by using descriptive and inferential statistics (quantitative approach). Whenever necessary, relevant qualitative findings collected during the field survey are also added to enrich the analysis.

In measuring the impacts, the study relies on the *Maqasid Shariah* framework developed by Kasri and Ahmed (2015). The research attempts to designs a framework to assess socio-economic development of Muslim societies based on the *Maqasid Shariah* principles, which sees human wellbeing/poverty from five dimensions: religious (*din*), economic (*maal*), health (*nafs*), education (*'aql*), and family (*nasl*).[1] Technically, the study also proposes a simple, linear and decomposable multidimensional *Maqasid Shari'ah* based welfare index which indicates the welfare changes.[2] Thus, the welfare changes can be seen from the changes of index/conditions in the aforementioned aspects. This framework is considered suitable to measure the impacts of working as drivers-partners of sharing based transportation services due to its multidimensional/comprehensive nature and relevance of sharing economics with Islamic economic principles.[3]

The study constructed a questionnaire containing personal information of respondents (age, gender, marital status, education, income, etc.) and their activities as the drivers-partners. The research instrument also asked about the conditions in five dimensions translated from the *Maqasid Shariah* framework – religious (*din*), economic (*maal*), health

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[1] *Maqasid Shari'ah* is generally defined as the objectives, purposes, intents, ends or principles behind the Islamic law (Kasri and Ahmed, 2015). Further, Al-Ghazali formulated that the goal of the Shari'ah is to achieve the wellbeing of all mankind, with fulfilment of their faith (din), their human self (nafs), their intellect ('aql), their posterity (nasl), and their wealth (mal) (in Chapra, 2000:118). The concept in increasingly used in analysing socio-economic changes in Muslim communities (Kasri and Ahmed, 2015)

[2] Although the index is originally applied to evaluate the welfare changes amongst the recipients of *zakah* in Indonesia, the authors note that the general framework could be used in assessing multidimensional impacts of other socio-economic policies and phenomenon in Muslim societies .

[3] It should also be noted that this research is actually a part of a bigger research that link Islamic economics with sharing based economy. Thus, even though this topic is beyond the scope of this paper, a number of relevant studies have been scrutinized and they essentially suggest that the sharing economy concept has some similarities with Islamic economic principles such as *adl, maslahah and falah*. *Adl* (justice), one of which is reflected in the profit-sharing system between provider and sharing-based transportation drivers, have been implemented by Grab (Goenawan, 2015), GO-JEK (Hardiat, 2015), and Uber (Liveolive, 2016).

(*nafs*), education (*'aql*), and family (*nasl*) dimensions. The changes of the welfare are measured in a six-point Likert scale, in which 1 indicates strongly disagree and 6 indicates strongly agree perception.[4] The questionnaire is then distributed to 103 drivers-partners of GO-JEK and Grab who meet certain criteria, including (i) riding motorcycle (i.e. ojek online), (ii) have been working for at least 3 months, and (iii) live in Jakarta. Prior to distributing the questionnaire, a pilot test had been conducted to ensure validity and reliability of the instrument.

In analyzing the results, the study mainly uses descriptive statistics. It also formulates a welfare index to measure the respondents' welfare changes in aggregate condition (equation 1) and in each dimension (equation 2). The index is essentially a simple linear model with equal weight among the dimensions.

$$AWI = \frac{1}{n}\sum_{i=1}^{n} S + Ec + H + Ed + F \quad (1)$$

$$Wi = \frac{1}{n}\sum_{i=1}^{n} Xi \quad (2)$$

Note that AWI is an aggregate welfare index for the respondents; n is the weight for each dimension, which is assumed to be equal for each dimension and indicator (i.e. n = 1/5)[5]; R, Ec, H, Ed, and F are the weighted average value/score of welfare in the dimensions of religious, economic, health, education, and family, respectively. Meanwhile, W_i is welfare index for the respondents in specific 'i' dimension (i.e. R, Ec, H, Ed, and F), which is derived from an equally weighted score of the indicators ($X_i = 1…n$) constructing the index.

IV. RESULTS AND DISCUSSIONS

Respondent characteristics in this research contain of respondent socio-demographic profiles, motivation to work and activities as a driver-partner. In general, with respect to the socio-demographic profiles, most of the respondents are male, aged between 35 – 44 years old, Islam, graduated from senior high school, making the online transportation driver as the main job, and earned income below Provincial Minimum Wage (UMP) in DKI Jakarta before becoming an online transportation driver.

Seeing from the motivation as a driver-partner, majority of the respondents confessed that their main reason in joining the online transportation is to get the main income (44,7%). However, 27.2% of them mentioned that they are partnering with the online transportation just to get additional income, to have control over the work schedule and enjoy flexibility in work-life and family balance. This result is slightly different with the findings of Hall and Krueger (2015),

in which additional income is the main reason for joining the sharing-based transportation services in the US. In Indonesia, the drivers – who are mostly poor, as indicated by the income below UMP prior joining the job – are working to earn the main income and pay their monthly bills. Consequently, their behaviors and welfare changes would be different with that of their collagues in the US. Flexibility, however, is said to be the other main motivation to work in both cases.

Further investigation on the activities revealed that most of the respondents worked as full-time workers and had been working for around 1–6 months. This confirms the previous finding about the job's position as a main job in an emerging country like Indonesia, which is different with the US case (Hall and Krueger, 2015).

Proceeds to the impact measurement, Table 1 shows that four categories, i.e. in all but health dimension, have a mean above 4 (in the scale of 6). This implies that the welfare changes have been positive in the economy, religion, education and family dimensions. Further, the calculated aggregate mean is equal to 4.5, suggesting that the overall change of welfare is also positive. Therefore, it can generally be concluded that in average the respondents felt positive welfare changes after partnering or joining as driver-partners with the sharing-based transportation sector in Indonesia.

Table 1 Aggregate Welfare Index

No	Category	Mean Index (Scale of 6)
1	Economy	4,808
2	Religion	4,893
3	Health	3,967
4	Education	4,416
5	Family	4,738
	AWI	**4,564**

The following tables report the respondents' perception regarding their welfare changes in economic, religious, health, education and family dimensions. From Table 2, it can be seen that all indicators have values more than 4 and above the median value of 3,5. Around 89.3% agreed with the increasing monthly income after joining as the driver-partners. Thus, it shows that the welfare improvement in economic dimension is indeed enjoyed by the respondents. This is in line with the previous literature stating that most of the Uber Drivers in America felt a welfare improvement after partnering with Uber (Benenson Strategy Group, 2014).

Table 2. Respondent Perception about Welfare Changes in Economic Dimension

No	Indicator	STS (%)	TS (%)	KS (%)	AS (%)	S (%)	SS (%)	Mean
1	Income match with effort	0	3,9	9,7	8,7	46,6	31,1	4,91
2	Comfortable with job condition	1,9	1,9	4,9	27,2	39,8	24,3	4,74
3	Higher income	1,0	2,9	6,8	22,3	39,8	27,2	4,79
4	Income meets daily needs	0	3,8	5,8	20,4	39,8	30,1	4,86

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[4] Note that the perception on the welfare changes is measured in a six-point Likert scale indicating strongly disagree (STS), disagree (TS), slightly disagree (KS), slightly agree (AS), agree (S) and strongly agree (SS).

[5] Since there is no strong justification to prioritize one variable above the others, equal weight was given to each indicator/dimension. This method has been adopted in many studies, resulting in the Human Development Index and other similar index in development studies (Sudhir Anand & Sen, 1997; Anto, 2009; Dar & Otiti, 2002)

Table 2, Cont.

5	Satisfaction with overall economic condition	1,9	4,9	7,8	14,6	44,7	26,2	4,74
Average								**4,808**

Next, based on the results presented in Table 3, it is evident that all indicators have values above the median. Thus, it can be inferred that the respondents feel welfare improvement in religious dimension. Further investigation during the field survey suggests that this improvement is related to the flexibility offered by the job. If they want to work, they could switch on the application and work. However, when they want to pray or do other religious obligations, they just simply switch off the applications. As such, they could better perform their rituals (religious obligations).

Table 3. Respondent Perception about Welfare Changes in Religious Dimension

No	Indicator	STS (%)	TS (%)	KS (%)	AS (%)	S (%)	SS (%)	Mean
1	More often doing religious obligation	1,9	2,9	4,9	9,7	37,9	42,7	5,07
2	More often doing religious recommendation	1,9	3,9	3,8	17,5	32,0	40,8	4,96
3	More frequent participation in religious activities	1,0	1,0	3,9	13,6	47,1	33,0	4,72
4	More often giving charity	2,9	4,9	5,8	16,5	43,7	26,2	5,05
5	Satisfaction with overall religious condition	3,9	2,9	7,8	16,7	45,1	23,5	4,67
Average								4,893

A slight different result is obtained in health dimension. Table 4 shows that most of the health indicators have values below four, albeit they are still above the median value. Thus, although welfare improvement is felt in this dimension, the magnitude is rather low compared to that in the other dimensions. Based on the field interview, this improvement could be explained by the flexible nature of the job as well as better health facilities provided by the government. If they fell unwell, they could stop working and have a rest. However, some of the drivers confessed that they have been susceptive to many diseases such as cough, flu, and colds.

Table 4. Respondent Perception about Welfare Changes in Health Dimension

No	Indicator	STS (%)	TS (%)	KS (%)	AS (%)	S (%)	SS (%)	Mean
1	More exercise to keep healthy	1,0	6,8	12,6	22,3	41,3	15,4	4,44
2	Less health complaints	5,8	11,7	26,2	23,3	20,2	12,6	3,79

Table 3, Cont.

3	Easier to access health facilities	2,9	11,7	28,2	27,2	21,4	8,7	3,79
4	Better health condition	3,9	10,7	28,2	22,3	24,3	10,7	3,84
5	Satisfaction with overall health condition	5,8	5,8	25,2	22,3	29,1	11,7	3,98
Average								3,967

Furthermore, based on the result in Table 5, it can be seen that all indicators in the education dimension have values above 4 and above the median of 3.5; suggesting that the respondents feel the welfare improvement in all aspects of the education dimension.

Table 5. Respondent Perception about Welfare Change in Education Dimension

No	Indicator	STS (%)	TS (%)	KS (%)	AS (%)	S (%)	SS (%)	Mean
1	Enough education background	1,0	3,9	11,8	22,5	42,2	18,3	4,57
2	Could continue formal education	1,9	10,7	17,5	21,4	32,0	16,5	4,20
3	Could follow informal education	1,0	7,8	16,5	22,3	36,9	15,5	4,33
4	More flexible to access information	1,0	4,9	11,7	11,7	41,7	30,1	4,80
5	Satisfaction with overall education condition	2,9	7,8	20,4	21,4	32,0	15,5	4,18
Average								4,416

Lastly, related to the family dimension, this study found that positive welfare changes are felt by majority of the respondents. The respondents reported that they have more time to meet/talk/communicate with their family members. They also felt more respect and have less frequent conflicts with the family members. The flexible working hours also contribute to higher harmony in family as the drivers enjoy more quality time with their family members.

Table 6 Respondent Perceptions about Welfare Changes in Family Dimension

No	Indicator	STS (%)	TS (%)	KS (%)	AS (%)	S (%)	SS (%)	Mean
1	More time to communicate with family	1,0	5,8	7,8	17,5	33,0	35,0	4,80
2	More often doing activities with family	1,0	6,8	9,7	17,5	37,9	27,2	4,66
3	Less often having conflict with family	3,9	1,9	8,7	16,5	46,6	22,3	4,67

Table 6, Cont.

4	Getting more respets from family	1,0	1,9	8,7	20,4	45,6	22,3	4,75
5	Satisfaction with overall family condition	1,9	1,9	7,8	17,5	43,7	27,2	4,80
Average								**4,738**

V. CONCLUSIONS

This study aims to investigate the impacts of sharing-based transportation services in Indonesia, an increasingly important yet under researched topic, towards the behaviour and welfare of the workers. To achieve the objective, the study collected relevant primary data from 103 drivers-partners of GO-JEK and Grab, which are the main providers of sharing-based transportation services in the country. The impacts are framed by utilizing the *Maqasid Shariah* perspective, while the primary data are analyzed by using descriptive and inferential statistics.

The survey results suggest that the main motivation to work as a partner-driver is to earn main income, something which is slightly different with the motivation of the colleagues in developed countries. Further, the new economic platforms have enabled the increase of welfare in every dimensions of the *Maqasid Shariah*. The highest impacts are felt in religious and economic dimensions, while the smallest impact is found in health dimension. It was revealed that the flexible nature of the job and higher income earned after working as drivers-partners have enabled them to perform their religious rituals better, including in terms of making donation, continue their formal and/or informal education and enhance harmony in their family. Despite that, some issues such as health problems and social conflict with the 'conventional' drivers are also found.

The findings shed some lights into the nature of working as driver-partners of sharing based transportation services as well as the impacts from such 'new' occupation. Overall, the findings and analyses are expected to provide more insights regarding the nature and impacts of sharing-based economy, particularly in the transportation services in Indonesia, and trigger more productive future discussions on sharing economy.

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