Worker Unrest and Contentious Labor Practice of Ride-Hailing Services in Indonesia¹

Aulia D. Nastiti²

Abstract

This paper examines the nature of worker unrest in the flexible labor of the digital economy. Using the case of Go-jek, a local ride-hailing service in Indonesia as an empirical lens, I inquire into why ride-hailing service is particularly contentious, to the extent that it prompts large-scale labor discontents. I contend that the roots of drivers' protests lie to much extent in the labor practice imposed by the middleman firms which are perceived as unfair and illegitimate by drivers. Investigating the labor-capital relation in ride-hailing service, I find that ride-hailing service constitutes a super-exploitative labor practice for its drivers. Super-exploitation is built on a void in labor laws and is facilitated by the use of technology and the rhetoric of freedom and entrepreneurship to control and mediate the entire working experience in ride-hailing service. While the exploitative conditions are pervasive, my findings suggest that the proximate cause of drivers' collective resistance is not the exploitation *per se*, but rather its violation of the sense of justice and threat to the subsistence incomes of drivers.

Keywords: ride-hailing service, flexible labor, super-exploitation, precarious workers, collective resistance

¹ This draft is presented in the Arryman Symposium at Jakarta, June 16 2017. This paper is a work in progress. The author is still revising the paper and may make some important changes, therefore please do not circulate without permission.

² Aulia D. Nastiti is the 2016 Arryman Fellow at EDGS, Buffett Institute and Department of Political Science, Northwestern University. This work was conducted under the auspices of an Arryman Fellowship from the Indonesian Scholarship and Research Support Foundation (ISRSF) through donations from PT Djarum, Bank BCA, PT Adaro, the William Soeryadjaya Foundation, the Rajawali Foundation, and the Ford Foundation. I am particularly grateful to my mentors, Wendy Pearlman and Jeffrey Winters, for their insightful suggestions and feedback. I also thank Carol Yoken for her kind assistance in editing this work, my Arryman colleagues for their various support, comments, and ideas. I thank Christa Kuntzelman and Iqra Anugrah for willing to be my discussant in the Arryman symposium in, respectively, Evanston and Jakarta.

1. INTRODUCTION

The emergence of ride-hailing services in Indonesia (Uber and other local-based apps i.e., Go-jek and Grab) has sparked incidents of transport worker unrest..³ Following the launch of these apps in early 2015, brawls frequently erupted between traditional and online *ojek* (motorbike taxi) drivers. Tensions escalated into a disruptive protest of ten thousand taxi drivers in Jakarta in March 2016, demanding authorities to "stop illegal transport."⁴ Conventional drivers seem to be frustrated as ride-hailing drivers oversaturate the street. While being a target, ride-hailing drivers are also aggrieved. They have engaged in enduring disputes with the middleman firms—especially Go-jek which has the largest workforce of drivers. From August 2015 to date (April 2017), Go-jek drivers in 15 cities have engaged in various struggles and sustained resistances against the middleman firm. Their collective efforts include creating informal unions, organizing protests and strikes, and seeking support from authorities and media. While specific strategies and agendas in different cities vary, all have contested the labor terms in these new businesses, including low fare and unfair policies.

The growing resistance of ride-hailing drivers is puzzling. Historically, precarious workers have rarely initiated and sustained direct collective confrontation against capital owners. Conceptually, most scholars on labor politics, particularly in Indonesian context, have accentuated that workers in precarious labor have had little capacity to organize collective bargaining efforts. Empirically, promises of productivity, flexibility, lower barrier to entry, similarity of skills, and other opportunities for utility maximization would lead us to expect a smooth transition of drivers to the new digital service of ride-hailing. Yet, ride-hailing drivers, who supposedly benefit from this business, are persistently struggling. Their prevalent discontents are also atypical, compared to those related to other types of digital

³ Such phenomena are not unique to Indonesia. Drivers' protests and legal disputes against Uber have occurred in at least 35 countries.

⁴ The protest culminated in riots against online drivers. See, for instance, <u>The New York Times</u>, March 22, 2016.

⁵ See, for instance, Allen 2016; Ford and Mizuno 2008; Hadiz 2002; Hewison and Kalleberg 2013; Tjandraningsih 2012; Tjandraningsih and Nugroho 2008

middleman firms.⁶ The widespread and enduring protests of ride-hailing drivers thus call for further explanations.

Why do these drivers protest against ride-hailing firms, which seemingly offer benefits for them? Addressing this question, this paper examines the nature of labor unrest in the flexible labor of the digital economy, particularly in ride-hailing service. I argue that labor unrest in ride-hailing service can be best understood as a reaction against new labor practices that are perceived as illegitimate and unfair. I propose an account that highlights the new labor process in ride-hailing and the way in which it restructures power and production in urban mobility.

My central argument articulates two points. The first point focuses on labor practices imposed by ride-hailing firms which, I contend, have largely constituted a super-exploitation⁷ of drivers. Super-exploitation refers to extraction of extra profit by creating power disparity and intensifying labor, while eliminating workers' rights as well as shifting costs and liabilities to workers. In ride-hailing service, super-exploitation is made possible through the use of technology and the rhetoric of freedom and entrepreneurship. Super-exploitation in ride-hailing service is predicated on and facilitated by flexible labor regulations under a neoliberal regime. These regulations aim to manage a volatile labor market easily through a cycle of hiring and firing.

One may assert ride-hailing as just another case of flexible labor regime. However, super-exploitation here is exaggerated and distinctive for two reasons: 1) The use of digital technology in ride-hailing service allows the entire work experiences of drivers to be mediated, surveilled, and manipulated. It makes it possible for the middleman firm to concentrate power and control access to the market; 2) The labor process imposed by ride-hailing companies is built on a void in existing labor laws which do not acknowledge "partners" and "independent contractors" as workers—and thus puts few constraints on the middleman.

⁶ Christensen, Raynor, and McDonald (2015) assert that the worldwide protests against Uber are "atypical outcomes." Take, for example, Airbnb. In spite of lawsuits in several cities, Airbnb is fought mostly by hotel chains and local officials who appeal for taxation, not by hotel workers and even less so by its homeowner partners.

⁷ This term is adopted from the concept "super-exploitation" established by Marini (1973, 2005). Here I offer a slightly different interpretation and develop a different contextual understanding from that of Marini, which I will describe more in a later section.

The second point concerns the underlying rationale of the response and resistance of drivers to such super-exploitative practices. I argue that the impetus for defiance is not the objective condition of exploitation *per se*, but rather, the violation of norms and preexisting practices to which workers have become accustomed. I think it is fitting to employ the moral economy⁸ as an analytic razor here—as opposed to Marxism and rational choice paradigms. Ride-hailing drivers express opposition when labor terms set by the middleman company deviate from what they expect from working agreements. On the other side, for incumbent drivers, the impetus for dissent is not only a sudden flood of labor but also, more importantly, the perception of illegal entrance to the market. More importantly, drivers' propensity to engage in collective resistance is likely to increase when the changing labor practices imposed by the middleman firms threaten their subsistence incomes.⁹

My claim is developed through the case of ride-hailing service in Indonesia, namely Go-jek.¹⁰ The Go-jek case serves as a rich empirical lens through which I can demonstrate labor struggles that span the continuum of formal to informal work. Ride-hailing firms in Indonesia have expanded into two kinds of market institutions: formal-regulated taxi, and informal-unregulated *ojek* (motorbike taxi).¹¹ Recent studies has increasingly addressed labor practice in ride-hailing taxi, especially Uber, in American and European context.¹² This study focuses on the semi-informal ride-hailing *ojek* in Indonesia.

This context, I contend, begs an account different from that of ride-hailing in the Western context because it produces more nuanced narratives of work in ride-hailing service. On the one hand, ride-hailing service, especially for *ojek*, implies a shift from an entirely self-employed informal market¹³ to a more formal, if not

⁸ This argument supports and draws on a "moral economy" paradigm of worker protest, and subaltern politics more general (Posusney 1993, 1997; Scott 1976; Thompson 1971). This paper also corresponds to more recent studies (Dogan, 2016; Edelman, 2005).

⁹ This finding supports Scott's notion of "subsistent ethic" (1976) as a moral underpinning of peasant society. The central rationale is not to maximize profits, but to minimize the risk. Violation of the rights to maintain subsistence will likely result in revolt.

¹⁰ Go-jek is selected because it is currently the most expansive (in 20 cities across Indonesia) and shows the most salient struggles.

¹¹ This difference has brought a regulatory implication. Government regulations on ride-hailing are bifurcated along a formal/ informal axis. Online taxis are subject to strict regulations set by transport authorities, while online *ojek* remain unregulated.

¹² See, for instance, Glöss et.al 2016; Rosenblat and Stark 2016; Scholz 2016.

¹³ Informal work accounts for 57.7% of employment in Indonesia (BPS 2015)

regular, organization. On the other hand, formal jobs often deliver underemployment and subpar incomes. Urban workers often find incentives to move to on-demand work, such as ride-hailing, for the possibility of gaining higher incomes through low-skill and flexible work. As a result, popular discourse often praises ride-hailing as opportunity, while storylines of resistance are subtler and shadowed—despite the salience and endurance of protests.

To present a story of labor struggles in ride-hailing service, I sought evidence from various narrative accounts. ¹⁴ In particular, I attend to individual narratives of discontent and how they coalesce into a collective one. In mid-2015, I joined the Gojek drivers' groups in Google+ and Facebook to observe their conversations and gain insights from posts, videos, pictures, and other relevant contents. I also conducted interviews with five drivers about the impact of middleman companies on their work. These first-hand testimonials are supported by press reports and other publicly available resources. Despite the exploration of protest narratives, due to a limitation in data collection, I do not aim to explain the mobilization aspects. ¹⁵ My focus is rather on the changing labor practice and how it affects grievance formation for ride-hailing *ojek* drivers.

While this paper is driven by an empirical inquiry, I consider it a first step in laying out theoretical foundations of the state-capital-labor nexus amid technology-driven changes. ¹⁶ It engages with the debate on the socio-political implications of the "sharing economy" ¹⁷ by filling two gaps in the literature. First, recent literatures on the subject rarely bring labor struggles to the fore of discussion. ¹⁸ A little

^{14 &}quot;Narratives are an appropriate source because they showcase agency and the temporal relations" (Pearlman 2013: 388)

¹⁵ As argued by social movement theories (e.g., political process, McAdam 1982; Tilly 1977; resource mobilization, McAdam, McCarthy, and Zald 1996) the emergence of a movement requires a combination of opportunities, resources, and cognitive cues (framing of grievances). My findings demonstrate the importance of these elements, but my emphasis is mostly on the subjective attribution of economic changes, as a constitutive part of grievance formation.

¹⁶ As Mokyr (1998) argues, "without understanding the political economy of technological change, the historical development of economic growth will remain a mystery. See Mokyr (2000) for a deeper discussion on the roots of resistance to innovation.

^{17 &}quot;Sharing economy" here refers to exchanges between individual asset owners and consumers using a digital platform controlled by the middleman company to minimize the cost and maximize the utility of otherwise idle assets—e.g., Airbnb, Zipcar, Blablacar. I also hope to add clarity in the conceptually muddled term of "sharing economy" (which becomes increasingly pertinent to our daily lives) by discerning its different labor process with on-demand economy, e.g. ride-hailing services.

¹⁸ Among the major themes studied are its economic model (Einav et al. 2016), market expansion and policy implication (J. B. Schor & Attwood-Charles, 2016; Sundararajan, 2016), and environmental impact (J. B. Schor & Fitzmaurice, 2015), Also, some scholars critically analyze it as the latest form of capitalism in the digital age (Ritzer 2015a, 2015b; Srnicek 2016) For a general debate, see Schor (2014).

research has looked at the new process of labor exploitation, but it has not elaborated the relation to workers' propensity to engage in resistance. ¹⁹ Second, popular and academic discourses in the Indonesian context revolve mostly around the promises and perils of ride-hailing apps. Yet, surprisingly, shifting productions and facets of labor have received scant attention.

2. CASES AND CONTEXTS: THE EMERGENCE OF RIDE-HAILING AND PROTESTS AGAINST IT

Today, amid the daily clogged traffic in Indonesian cities, motorbike drivers with green jackets and helmets that say "Go-jek" or "Grab" have become a new normal scene. They are among 350,000 drivers of ride-hailing services, or Uber-like apps, for *ojek* (motorbike taxi) that have been growing in Indonesia since 2015. The most popular one in Indonesia is Go-jek which in 2015 launched a digital app to hail a motorcycle taxi (in lieu of a car), or *ojek*. The ascent of Go-jek, and other ridehailing firms has been set in motion by technical, social, political, and financial structures.

Technological infrastructure includes the smartphone and internet penetration, as well as the low costs of mobile apps development. Social characteristics of urban society—i.e., high demand for mobility, large number of informal workers, and broad aptitude in using mobile phones—have contributed to the swift adoption of ridehailing services. Various policies under neoliberal economic regimes also play roles. Among the most conducive are the flexible labor market institution, the liberalization of FDI inflows, and the pursuit of a digital economy agenda.

But the real game changer is investments from venture capitalists. Let me illustrate the importance of investment through the Go-jek case. Since the launch of its digital app in 2015, Go-jek scaled up at "a speed of light, totally unexpected [by the founder]."²² Within a year, Go-jek saw 11 million downloads, recruited over 10,000 drivers, and expanded to 10 cities all over the country. Go-jek has actually

¹⁹ Researchers have termed the labor practice in Uber as "algorithmic management" (Lee, Kusbit, Metsky, & Dabbish, 2015; Rosenblat & Stark, 2016).

²⁰ Go-jek and Grab are two leading, and competing, ride-hailing apps in Indonesia, especially in *ojek* (motorbike taxi) market. The drivers of ride-hailing *ojek* in Indonesia are obliged by the company to wear uniformed jacket and helmet. Both Go-jek and Grab use bright green as the dominant color of their brand.

²¹ Ride-hailing services, currently present in 20 cities, have attracted at least 350,000 drivers and 15 million active users in Indonesia.

²² The founder said in an interview with the BBC that the firm "hit end-of year target in just two months" (BBC, May 24, 2016).

been around since 2010. It started as a call center for ordering a ride or courier service, with a small fleet of 20 *ojek* drivers—but the firm remained dormant for nearly five years. Its giant leap is attributed largely to venture capital investment for of three reasons.²³

First, investment has allowed the execution of Go-jek on a large scale, revolutionizing from a small call center into a digital middleman app that in turn has evolved into a multifaceted service platform. From offering transport (Go-ride), courier (Go-send), and grocery shopping (Go-mart), Go-jek has now expanded to various market niches and evolved order and delivery for food (Go-food), tickets (Go-tix), and prescribed medicine (Go-med)—all served and transported by *ojek* drivers.²⁴

Second, thanks to venture capital investments, Go-jek can vastly deploy resources, pursuing aggressive marketing to attract consumers. Go-jek engages in a fierce price wars with its competitors, Grab and Uber. These ride-hailing firms, all endowed through financial investments, are able to subsidize costs and offer a much lower price than traditional *ojek*. Besides financial incentives, Go-jek uses rhetoric of "the revolutionary creation of the nation's child" [revolusi karya anak bangsa]. The firm is also well-known for running ad campaigns with appeal to emotions. Ads narrate that Go-jek gives drivers the opportunity "for unemployed people to make a decent living" and "to pay tuition fees for [their] kids," or for "a single mother to be independent."²⁵

Third, connection with venture capital also gains the firm a political currency. Go-jek is widely praised by governors, ministers, and even the Indonesian President, as the innovative solution from young entrepreneurs. The emergence of Go-jek fits the government's vision to be the largest digital economy in Southeast Asia. Go-jek's founder was invited to escort the President on a visit to Silicon Valley in October 2015. This visit, and several follow-up meetings with the Minister of IT, brought an agenda of attracting giant tech investors to "the national movement of 1000 digital start-ups." ²⁶

²³ Following the rise of Uber, investors began to show interest in Go-jek in mid-2014 (BBC, May 24, 2016).

²⁴ Later developed to many services - daily life with an *ojek* for every need.

²⁵ Videos of campaigns with English subtitles are available on this Youtube link.

²⁶ Official website of the Ministry of Communication and IT (Kemenkominfo)

Go-jek's overnight transformation from a tiny firm to a giant corporation hasn't been smooth-- rather, it has been contentious. Immediately after green-jacketed drivers became visible everywhere, they were met with resistance by *ojek* drivers who sought to maintain territorial control in their *pangkalan* (base to wait for a fare). Brawls between traditional *ojek* and Go-jek drivers have increasingly broken out since early 2015. Clashes in various cities have become headlines in the press and heated controversies in social media. Here, Go-jek's social marketing campaign has proven effective. Netizens, largely comprising the urban middle class, fervently defend Go-jek. Popular views call *ojek* drivers barbaric, laggard, and backward, unable to adapt to change and resisting technology. Responding to increasing violence, the company issued a statement to "call *ojek* drivers in *pangkalan* to join and gain more income with Go-jek."

On March 2016, 10,000 traditional taxi drivers and transport workers expressed their outrage in a protest that paralyzed Jakarta and later turned into a violent mob against Go-jek drivers. Responding to heated contention, the Ministry of Transport issued a new decree to legalize and regulate ride-hailing taxis as public transportation. Following this issuance, the Go-jek firm launched Go-Car—for ride-hailing taxi. The regulation, however, is devoid of legalization for *ojek*. The Ministry of Transport said the absence is due to a "lack of legal foundation to regulate ride-hailing *ojek*," given that the Traffic Act does not consider motorcycles a public transport. Consequently, Go-jek continues to expand nationwide.

The rapid expansion of Go-jek is only half the story, one that seems like a rosy tale of how Go-jek thrives despite many challenges. In fact, Go-jek has been facing challenges from its own drivers. This less auspicious tale has been overshadowed by popular discourses. After horizontal clashes with traditional *ojek* drivers were relatively settled, in August 2015 Go-jek held a huge recruitment designated particularly toward traditional *ojek* drivers in which 30,000 traditional *ojek* converted to Go-jek. Some drivers shifted in hoping of better incomes and flexible work, as promised by the firm.

However, starting from September 2015, the honeymoon phase started to fade. The company began to make maneuvers to penetrate its business. On the one hand Go-jek keeps raising funds from venture capital to expand its business—both geographically to many more cities and economically to commercialize other

informal sectors. This growth means more marketing and more recruitments. On the other hand, Go-jek keeps pressing drivers by lowering minimum tariffs and rates for drivers. The firm also imposes various policies that aim to increase control over the supposedly loose labor. These policy changes enrage drivers to an extent that has stirred up enduring unrest in nearly every city where the firm is present. From September 2015 to the present (the last event I recorded was in February 2017), there have been at least 50 protests of Go-jek drivers in 15 cities, as I illustrate in Figure 1.

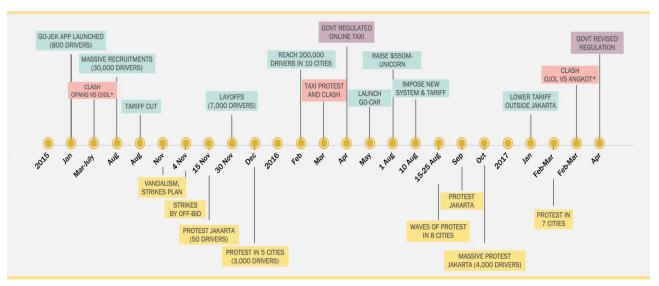


Figure 1. Various Locations of Go-jek's protests (Sep 2015- Feb 2017)

Source: Author's documentation from various news reports (2017)

Tracing the timeline and narratives of protests, I find that Go-jek drivers have been continuously involved in various forms of labor unrest from the time the app was launched until recently. Cycles of contention involving Go-jek drivers have encompassed both horizontal conflicts with traditional drivers and vertical disputes with the middleman firm. In the former case, Go-jek drivers were mostly a target; in the latter, Go-jek drivers were primarily the claimant who is aggrieved by the middleman firm. Until now, Go-jek drivers have organized at least six cycles of protest. I summarize the timeline in Figure 2 (see yellow boxes).

Figure 2. Timeline of Changing Policies and Contentions involving Gojek



Notes: *Ojol* stands for *ojek online, opang* stands for *ojek pangkalan* (traditional *ojek*). The green boxes refer to changes of company policy, the yellow boxes refer to Go-jek drivers' collective action, the red boxes refer to horizontal clash between *ojol* and *opang*, the purple boxes refer to the issuance of government's policy.

Source: author's summary from various resource (2017).

From the data on the timeline, it is safe to assume that sequences of protest were organized by drivers as a reaction against changes of policies by Go-jek. However, I want to draw attention to the difference between the early cycle of protest (around 50 drivers in November 2015) and subsequent protests (thousands of drivers in December 2015 and mid-2016). There is a quite a difference of scale between the first round and the latter protests, with the subsequent ones appearing to have gained much greater mass.

In the first cycle of protests, in November 2015, the drivers' confrontation was prompted by the new lowered rate for drivers, from \$0.25 to \$0.23 per kilometer. Drivers were not given a chance whether or not to agree to this cut in their commission. "We were notified on Sunday and [the change] immediately went into effect by Monday, we weren't given the chance to say our opinion," says the protest coordinator. The change triggered drivers to demand that the company "make clear drivers' status as employee, not just partners." But only a handful of drivers were on board with this demand, as the number of protestors did not reach even fifty people.

The number of participants and grievances a month later are strikingly different. In December 2015, thousands of Go-jek drivers in five different cities protested at local offices and sought government support. These protests are related, although

they were not coordinated. The common thread is the sudden lay-off of thousands of drivers by the Go-jek firm. These drivers were accused of making fictitious bookings, i.e., using a separate phone to make an order and collect the payment, but never actually performing the ride. Many of the protesters insisted, however that they had done nothing wrong. They were also outraged by the amount of the fines the firm imposed. Some of them were felt wronged because the company not only suspended them but also confiscated the remaining balance in their deposit account. "Now my contract was terminated [putus mitra] and I cannot get my own rights; how can I sustain my family?" asked a driver.

Similarly, a series of protests in 2016 also attracted hundreds to thousands of participants. Their sense of indignity centers on the implementation of a performance system that does not provide any justice for drivers. Kardun, a protestor in Jakarta in October 2016, illustrates this grievance: "[A]t first we received 4,000, then 3,000. It's okay, we can still work hard to cover it. But now, it's 2,000 per km, but with the performance assessment, Gojek has tried to eliminate our rights to get bonus. No matter how much we've worked, we never get a bonus."²⁷ Many of drivers also express their confusion about the way the company works as they feel that "our hard work seems to be not enough for PT GI." As one driver expresses it, hard work and exhaustion are "part of the job that [one] should accept," but changes that the firm makes "hardly make sense for drivers."²⁸

Go-jek began to apply the performance system outside the Greater Jakarta area at the beginning of 2017. Like their counterparts in the capital city, the participants in protests and strikes against the local branches were provoked by the new policy of regarding the performance system. In their protests, they questioned the firm's calculations. One driver complains that "Go-jek said the bonus was calculated by the system. How can a machine cheat us? It must be people who are cheating us." ²⁹ Protesters also say that the application of the performance system has made it impossible for them to earn a basic livelihood:, "What can we get with this amount, what can we eat? With the cooking oil now so expensive, chili is expensive, it's not enough for us to eat."

²⁷ Quoted from The Jakarta Post, October 3, 2016

^{28 (}NAD, casual interview in Depok, April 2016).

²⁹ Quoted from The Jakarta Post, October 3, 2016

In short, Go-jek—as well as other ride hailing firms—is able to expand and grow apace thanks to global financial investments (which are allowed by macroeconomic structures, such as a flexible labor market and economic liberalization). Financial capital allows the middleman firm to scale up its technological capacity and expand its market by forfeiting price; it does so to attract consumers on the one hand and controlling the workforce and lowering labor rates on the other hand. These maneuvers have apparently led to waves of protests by the Go-jek drivers in nearly every city to which the firm has expanded. In the next section, I build on relevant literatures to lay out my theoretical perspective to understand the relationship between labor practice in nonstandard work like Go-jek and how it affects the propensity of labor struggle. In the analytical section, I demonstrate in detail how the new practice of work shape drivers' discontents and, in turn, drivers' resistance.

3. THEORETICAL FRAMEWORKS

a. Creative Destruction and Nonstandard Labor Practice

A focus on the nexus of innovation and socio-economic process is rooted in creative destruction theory. According to Schumpeter (1942), creative destruction is the process of incessant revolution of economic structure *from within*, in which new production processes replace outdated ones (Schumpeter 2011 [1942]: 83). This theory holds that the creation of new industries will not advance without sweeping away the pre-existing order. Schumpeter argues that entrepreneurship and innovation are "the fundamental impulse that sets and keeps the capitalist engine in motion" (83). Innovation is understood as more than just new technology and machinery; it is more importantly "the setting up of a new production function" (Schumpeter 1939: 87). This paper addresses three intertwined innovations: 1) new technology, 2) new modes of work organization, and 3) new market.

Regarding the first dimension, it is frequently assumed that new technology is the core of creative destruction.³⁰ For instance, industrial capitalism is often associated with manufactures and the steam engine is often depicted as the driver of the Industrial Revolution. Over the last thirty years, that role has been correlated to the computer, the internet, and other information technologies (IT) (Freeman 1987). Wisman (2001) argues that IT is a source of "ever more robust creative destruction" since it "is radically transforming production within economies."

³⁰ For instance, see Archibugi 2017; Kivimaa and Kern 2016; Wisman 2001.

However, technology alone is insufficient to create economic change, and innovation does not have economic impact in a social vacuum. Rather, the creation of new tools is embedded in their usability and practicality for society. This condition requires us to attend to the second and third aspects: organization and market creation.

Second, digital technology enables the creation of a new mode of organization that allows for control across boundaries—a mode that is distinct from current systems of organization. Analyses of capitalist economy have long recognized two prevailing organizations: market and bureaucracy (Coase, 1937). In the market, economy is organized by the equilibrium between supply and demand. Examples include farmers markets and traditional *ojek* and passengers. The bureaucracy, in contrast, is structured within a hierarchy to control supply and demand. This mode of organization is a feature of manufacture economy. As opposed to *ojek*, the taxi company is a bureaucratic organization. Another type of work organization combines market and bureaucracy, but work is coordinated and controlled via a set of digital algorithms.³² I build on this mode of "algorithmic management"³³ to elucidate the labor practice used in ride-hailing service.

Accompanying these processes is the increasing transition to labor flexibility under the neoliberal economy,³⁴ also considered as casualization or informalization of work. Formal jobs organized through a bureaucratic company are increasingly outsourced, and stable tenure is shifted to temporary work. Although it is termed "nonstandard" labor, unstable work has become more standard in today's economy (Bernstein 2007).³⁵ At the firm level, this practice allows businesses to adapt more easily to market volatility and to attract investment—and so, presumably, to create jobs. At the worker level, however, flexibility erodes job security and social protection. This paper proposes that labor practice in ride-hailing service is a

³¹ This conceptualization is derived from the classical economic "invisible hand" of Adam Smith (year)

³² Aneesh (2009) introduces the concept of "algocracy" to articulate an automated and digitalized bureaucratic control. It is argued as an additional organizational mechanism in the absence of direct bureaucratic and market control across geographic boundaries.

³³ See, for instance, Rosenblat and Stark 2016; Lee et.al. 2015; Scheiber 2017.

³⁴ See, for instance Adams and Deakin 2014; Babb 2005; Harvey 2007; Kalleberg 2000, 2009; Kalleberg and Hewison 2013

³⁵ Buroway (2010) even asserts that wage labor and labor exploitation as "'working class" is increasingly a privilege rather than a curse.

product of a flexible labor regime facilitated by neoliberal policies, global investment flows, and digital technologies.³⁶

Finally, if new technology and new modes of organization are means, the creation of new markets—the third aspect—can be seen as an end. Fligstein (1996) identifies three phases in market formation—emergence, stability, and crisis—in which each stage constitutes different politics.³⁷ Emergence is the most fluid phase, as the market in crisis is susceptible to transformation. The politics of new markets "resemble social movements...actors in different firms are trying to convince other firms to go along with their conception of the market" (Fligstein 1996: 663). In this sense, market is the location of contention (King & Pearce, 2010). This paper speaks to this phase of market emergence in the digital age. I attend to the process of ridehailing market emergence, and to a lesser extent to the crisis phase of conventional transport. I consider interactions between states and firms in the way in which ridehailing apps can be established as a new market. While I recognize the web of power at the institution level, the emphasis is on the labor practice itself.

Social scientists have argued that the process of creative destruction has downside impacts for labor, and that these implications have been understudied. A few accounts of the labor response (e.g., Nelson 2004, Diamond 2010) have advanced the idea that the newly created market needs to have a sufficient number of jobs and a low barrier of entry to accommodate displaced workers. Schumpeter (1942) also introduced a time factor as necessary to avoid social friction, in which a longer time of transition is likely to result in a smoother process of business shift. This paper extends the scholarship by exploring the process of the creative destruction process at work at the micro level—in daily labor struggle—and how, in turn, it shapes the propensity for worker resistance.

b. Labor Unrest in Developing Countries

While creative destruction may shed light on innovations and the changing labor practice in ride-hailing service, the task of understanding how it shapes drivers' unrest remains. Existing literatures have identified three key analytical foci: the

³⁶ For more discussion on the flexible labor regime in the Indonesian context, see Allen 2016; Hewison and Kalleberg 2013; Tjandraningsih 2012; Tjandraningsih and Nugroho 2008);

³⁷ This process reflects Marx's view of market as politics, which emphasizes the dynamics of internal power struggles within and across firms, and places the state in a central role in constructing market institutions

nature,³⁸ the conditions,³⁹ and the forms or strategies⁴⁰ of worker resistance. This paper speaks to the first focus which relates to the formation of grievance.⁴¹ In the nature of resistance, the inquiry is primarily about "what makes workers angry." This question is pertinent to the debate on the rationale of labor struggles⁴² within three dominant views: 1) rational choice theory, 2) Marxism, and 3) moral economy (Posusney 1993, 1997).

Rational choice theory assumes that individuals are utility-maximizers and always make logical decisions based on a range of available information that they have. Downplaying a sense of collectivity, it assumes labor struggle as the outcome of the aggregating of individuals' cost-benefit calculus. Worker resistance, in this view, is likely to occur if the expected gains (i.e., higher pay and benefits) exceed the expected costs (i.e., possible job loss) (Posusney 1993: 86). In this sense, "strikes are precipitated by a perception of opportunity, not by an increase in discontent" (Posusney 1993: 86). On the contrary, Marxism views labor struggle as arising as a result of the consciousness of a working class vis-à-vis a capitalist class. Marxist theorists expect that as capitalism progresses, there should be a growing number of worker protests. The collective resistance occurs when workers recognize their common interests as a class and seek to end their exploitation (Posusney 1993: 84).

The moral economy approach is based on a premise of the *embeddedness* of economic institutions (Polanyi 2001) in which economic activities are always shaped by preexisting social relations. Conceptually, moral economy was introduced by Thompson (1971) to exemplify "a popular consensus about what distinguishes legitimate from illegitimate practices."⁴³ In this perspective, "collective action is a

³⁸ See, for instance, Dogan 2016; Elfstrom and Kuruvilla 2014; Posusney 1993, 1997; Scott 1976; Simmons 2016.

³⁹ See, for instance, Butollo and Ten Brink 2012; Cai 2002; Friedman 2014; Maher 2010; Roscigno and Hodson 2004

⁴⁰ See, for instance, Anner 2015; Edwards 1978; Lewchuck and Dassinger 2016; O'Brien 1996; Scott 1987.

⁴¹ The second and third aspects are closer to the emergence of mobilization, which is relevant but beyond the focus of this paper.

⁴² In this paper, labor struggle is defined as the power contestation at the workplace involving workers. My understanding is informed by the notion of class struggle (Marx and Engels 1977 [1848]), or the ongoing conflicts among socially stratified groups due to competing socio-economic interests.

⁴³ This is a summary cited from Arnold (2001: 86). In the original text, this line of interpretation of moral economy as socially ascribed understanding of legitimate polity can be found in Thompson (1971: 78-9, 102, 112, 131-6). In his analysis of the 18th century English food riot, Thompson argues that the riot stemmed not merely from an impulsive instinct of hunger, but more accurately was a legitimate reaction against a new polity that was perceived as unfair practices that violated the

response to violations of norms and standards to which the subaltern class has become accustomed and seeks to maintain" (Posusney 1993: 85). Yet, a cautious note must be made: moral economy is not necessarily about an opposition to the capitalist economy from the vantage point of traditional values.⁴⁴ Rather, it recognizes that defiance toward economic change is historically rooted in widely accepted social relations prior to the arrival of the new form.

To understand the nature of labor unrest in ride-hailing, I contend that moral economy is the most accurate frame, although I accept the rational choice and Marxist arguments to a certain extent. My assertion departs from the observation that the preexisting economic polity—bureaucracy in taxi company and market in *ojek*—is culturally constructed and deeply embedded in a set of social relations to maintain low-wage workers who live at the margin. The case demonstrates that worker resistance is not just an economic clash to maximize profit and minimize competition. Rather, the grounds for moral indignation lie "at the intersection of the nested sets of meaning and value called into question by equally specific changes" (Arnold 2001: 85). In that case, it is a political action where people are inclined to defend the basis of the social reproduction of their polities.

c. Subsistence Threat and Super-exploitation

This paper proposes that the moral economy frame is most fruitful for analyzing the relationship between economic changes and subsistence threat. Scott observes that peasant societies in Southeast Asia and elsewhere construct their productive relations on the subsistence ethic, to ensure rights to subsistence of every member of the community. The violation of this subsistence ethic creates an explosive condition; peasant revolt is explained as a natural consequence of the elimination of the peasants' narrow margin of survival. Scott's thesis departs from his observation that peasants are a risk-averse society. Their economic rationale is not utility-maximization but risk-minimization.

A subsistence ethic is thus central to understanding political organization and sense of economic justice for peasants. This ethic has two dimensions: norms of reciprocity and rights to subsistence. The former is the normative expectation of assistance from landlords at times of crop failure; the latter is the belief that the

preexisting social norms.

⁴⁴ This is derived from the discussion of the transferability of the moral economy across historical contexts in Dogan (2016: 4-7).

peasant has the right to the basic amount of food needed for survival from their harvest. When these norms and rights are not fulfilled in a changing system, insurgency likely arises. ⁴⁵ Following Scott's thesis, I interpret the drivers' unrest against ride-hailing as a reaction to the near elimination of a mode of subsistence. Threat to subsistence in this paper is understood as a condition in which production at a level sufficient only for a minimum livelihood is at risk.

In the case of traditional *ojek* drivers, for instance, their subsistence is threatened when their daily incomes are not enough to sustain basic expenses such as food, school for their children, and expenses for production. Although in this paper I mostly use material base as a point of reference, subsistence threat also is imbued with meaning.⁴⁶ For example, maintaining social ties with relatives can also be seen as an act of subsistence since people expect to rely on relatives, kin, and neighbors when they face hardship but fall short of resources.

While subsistence threat is a powerful grievance that generates tremendous anxiety for workers, it is in itself impotent for activating an impetus for resistance. For instance, sudden income loss due to robbery or a traffic accident may lead to a different reaction than loss as result of a subsidy cut.⁴⁷ One thus should take into account *how* the threat of subsistence appears. The fact that the patterns of resistance (i.e., target, repertoire, framing) of traditional drivers is distinctive from those of ride-hailing drivers indicates a diverging path of grievance formation. To account for this *process* of grievance formation, this paper looks at the impacts of changing labor practice.

It is my contention that while the labor practice in ride-hailing service may result in a menace for drivers' subsistence, it does so through super-exploitation of its drivers. Super-exploitation in this paper is understood as extraction of extra profit by maximizing labor forces beyond average productive capacity, minimizing cost, and reducing risk. It also involves a reduction and suppression of wages to the point where they fall below the amount necessary to produce the labor force (Marini 2005, in Latimer 2016). Marini (in Valencia 2015) introduces the concept of super-

⁴⁵ It should be noted that Scott does *not* suggest that violation of the subsistence ethic *per se* is sufficient to generate a peasants' rebellion: "Whether violence or rebellion occurs, of course, depends on a host of facilitating or inhibiting factors beyond the scope of this study, not the least of which is the power of elites to repress dissent" (1976: 187).

⁴⁶ See Simmons (2014, 2016) for a more sophisticated discussion of how grievance is both material and ideational.

⁴⁷ This illustration is inspired by Simmons (2014: 523).

exploitation to capture the intensification of the labor process under neoliberal regimes in developing countries.⁴⁸

Tsing (2009) demonstrates that the concept is particularly useful for depicting the labor process in supply chains economy—which has increasingly become a backbone of capitalism. In supply chains, Tsing argues, labor extraction depends on not merely a material base but also cultural niches, such as the social roles of gender, ethnicity, social status, religion, and nationality. She demonstrates that super-exploitation takes place even beyond the workplace when performance of "work is coded as entrepreneurship" (2009: 167). This paper furthers Tsing's argument by exposing the super-exploitation in ride-hailing service that is carried out through material and ideational foundations. Materially, the key aspect of super-exploitation is the use of technology to circulate capital and access to markets. The ideational base cannot be separated from the material; instead it follows accordingly. The middleman determines labor terms under an illusion of freedom and flexibility of entrepreneurship by placing drivers as "partners" or "independent contractors" in lieu of workers.

4. RIDE-HAILING SERVICE AND LABOR DISCONTENTS 49

a. Super-exploitative Labor Practices in Ride-Hailing Service

A majority of Go-jek drivers were previously *ojek pangkalan* (traditional *ojek* drivers; *opang*),⁵⁰ while others were unemployed prior to joining Go-jek. Some others were dissatisfied with their former jobs, whether in the informal or formal sector, such as factory work. Yet, most of them signed up for Go-jek for the appeal of better income and the promise of flexibility (Fanggidae et.al. 2016). Go-jek drivers are not considered employees, but partners. The founder has affirmed that "drivers are micro-entrepreneurs; they work for themselves...no-one coerces them to work."⁵¹ Discourse of entrepreneurship and freedom permit regulators and the public to have the image that drivers accept orders "by un-coerced choice" (Irani 2015, quoted in Rosenblat and Stark 2016: 3761). In fact, such an image is at best

⁴⁸ Marini (1973) extends Marxian theory by systematically explaining the labor exploitation and segmentation beyond average through global outsourcing. He argues that global trade has sharply restructured labor segmentation through a world hierarchy.

⁴⁹ Disclaimer: nearly all drivers' narratives that I cite here are originally in Bahasa Indonesia; translations to English are my own, unless otherwise noted. For confidentiality, I also change names of the drivers I quote, or use an initial.

⁵⁰ I refer to traditional *ojek* as *opang* (stands for *ojek pangkalan*). This is now the most commonly used term for conventional *ojek*.

⁵¹ Tech in Asia, November 15, 2015.

misleading and at worst deceptive. In addition to falling wages, Go-jek drivers do not have real freedom. Their labor is controlled and enforced through "algorithmic management" (Lee et al. 2015; Rosenblat and Stark 2016). My findings unveil four key mechanisms of how the algorithmic management is manifested in Go-jek's labor. I elaborate these mechanisms as follows.

> Volatile Tariffs vis-à-vis "Driver-Partner" Status

Although the partnership agreement is legally binding, the firm has the full power to unilaterally set the fare passengers pay, the rate drivers get, and the profit sharing percentage. The firm can alter the price and drivers' rate to remain competitive. The presence of Go-jek and its competitors is celebrated by consumers—the fiercer the price war, the lower the price is slashed. In such a system, customers are winners and drivers are losers. At first, the firm seems to keep both happy by giving promos to the former and subsidies to the latter—hence the gap between passenger's fare and driver's rate. Addressing the low price and huge subsidy, the founder stated that "the merry-go-round must stop at some point, but it will be a gradual transition." The transition is underway, as the firm is accumulating capital, recruiting drivers, expanding markets, and attracting consumers; and it has now begun to halt the subsidy for drivers. The result seems to be a perennial change involving rate cuts, promos, and tariffs, summarized in Table 1.53

Table 1. Changes of Tariff Policies within Go-jek

Time	Tariff Policy Changes	Description	Impacts on Drivers
Jan-Aug 2015	Passengers: everywhere \$0.75Drivers: \$0.30/km	 First promo after launch, with a fleet of around 3,000 drivers Drivers get 80% share of tariff Launch Go-Food in April 	Demands skyrocket, monthly incomes \$500-\$700
Aug 2015	Passengers: \$0.17/kmDrivers: \$0.25/km	 Tariff after mass recruitment of 30,000 drivers in Greater Jakarta Price war with competitors Launch Go-Mart (for shopping) 	Orders intensify, but income regularly decreases

⁵² Tech in Asia, November 15, 2015.

⁵³ I summarize only the tariff adjustment for drivers. For the passenger's price, Go-jek keeps changing the fare and give promo in nearly every month. To grasp a sense of the price volatility of Go-jek, see this report from <u>Tirto.id</u> (in Indonesian).

Nov 2015	Passengers: everywhere \$1.13Drivers: \$0.23/km	 Tariff after raising new investment; Launch Go-Glam, Go-Massage, Go-Clean 	Orders intensify further, income remains the same
Jan-Aug 2016	Greater Jakarta • Passengers: \$0.15/km • Drivers: \$0.15/km	 Tariff after layoffs of 7000 drivers due to allegation of fake orders Apply Go-Pay system (e- money) and promo 50% off for Go-Pay users 	Orders intensify, income decreases further, drivers rely on bonus
Aug 2016 - Mar 2017	Greater Jakarta: • Apply performance surveillance system	 Drivers can get daily bonus only if they achieve high performance Tighter rating system 	Orders intensify, income decreases, but bonus is harder to get
Jan 2017 - Mar 2017	15 additional citiesApply performance surveillance system	 Drivers can get daily bonus only if they achieve high performance Tighter rating system 	Orders intensify, income decreases, but bonus is harder to get

Source: Author's compilation from news report and drivers' online group. Note: US\$1 = Rp 13,319.00

The table reflects that Go-jek keeps expanding its service and recruiting more drivers. The company scales up swiftly by giving a promotional price to passengers and cutting the drivers' rate. The gap between passengers' fare and drivers' rate keeps diminishing, to the point where they are the same. Changes usually start in the Greater Jakarta, but areas outside the capital city always follow. Facing these changes, drivers have very little leeway in negotiating the fare and rate with the firm. A driver said that "[the firm] keeps announcing different rates and changing policies through SMS or the app...they don't ask if we agree or not." Most drivers are aware that "partner" is just a formality. "We are called partners, but we're not involved in decision-making," a driver said. "If we are truly partners, we should be involved." 54

Algorithmic Labor Control: Order Assignment, Performance System, Work Flow

In addition to constant changes in tariff policy, the firm produces a managed labor force. The firm imposes soft control over the drivers' routine through the app. As Rosenblat and Stark (2016) have identified in their study about Uber, once drivers log in, their work activities are heavily molded, surveilled, and evaluated by the firm via the app. The algorithmic labor control is effectuated through the three main techniques shown in Table 2.

⁵⁴ Tech in Asia, December 3, 2015.

Table 2. Description of Daily Labor Terms of Go-jek Drivers

Name	Description	Terms and Conditions	
Order Assignme nt	How drivers receive and do orders assigned through the app	 Drivers have to log in and push the active button to receive order One order is assigned to one driver, based on the closeness to the pick-up location in order to minimize passenger's waiting time Drivers have 10 seconds to decide to accept or decline the order. If they ignore or are not aware of the call, it is counted as declined 	
Performan ce System	Daily completion rate, or a ratio of orders completed per orders assigned	 Acceptance and rejection of orders affect performance percentage To get a daily bonus, a driver must achieve 50% completion rate (per April 2017) Drivers have until midnight to meet this minimum, as the performance is reset daily 	
Flow of Work	Control of time and location to receive orders	 Based on recorded data of demands, the firm directs drivers to roam around certain locations during certain peak hours.⁵⁵ Drivers are told they can get additional bonus for taking those orders The firm ensures control over balance of supply and demand 	

Source: Author's summary from Go-jek's official site and drivers' online group.

Initially, Go-jek used the bid system, in which an order is announced to several drivers nearby, and they can choose to take it or not. Drivers could remain stationary and wait for bookings to come in. But, following the US\$550 million investment that made Go-jek a "unicorn" (investment with more than US\$1 billion) in August 2016, the middleman firm started to apply the assignment system. Drivers are now compelled to keep mobile and search for passengers proactively. Otherwise, they risk deactivation from the app, ranging from temporary suspension for a few minutes to lay off.

Several drivers, resisting to comply, use a "Fake GPS" app to work around the workflow system. This app allows drivers to be at different locations virtually, so they can receive orders without having to exhaust themselves. A driver insists that "using Fake GPS isn't wrong, because the bookings taken via this app are real." ⁵⁶ However, in recent policies the use of additional apps to help drivers get orders outside of the official one from Go-jek is considered a fraudulent act.

⁵⁵ For a more detailed locations and peak hours, see the official policy of Go-jek in its site 56 Tech in Asia, December 3, 2015.

> Algorithmic Evaluation: Suspension, Bonus, Point, Rating System

In order to ensure that workers conform to the system, labor control is equipped with algorithmic evaluation. Once they activate their apps, drivers are constantly surveilled and evaluated. The firm applies four methods: point, bonus, rating system, and suspension. These methods constitute a carrot and stick: drivers get a bonus if they can collect many points, but they will get punished if they are caught not complying. However, the disincentives are disproportionately higher than the incentives.

For incentives, the firm applies a point system which determines the amount of daily bonus for the driver. The point depends on the distance, type of order, and time of the day.⁵⁷ Longer distance means more points, as do orders during the late night or at dawn. This point system resembles a strategy of gamification of work, where the ride-hailing firm offers "noncash rewards of little value that can prod drivers into working longer and harder—and sometimes at hours and locations that are less lucrative for them."⁵⁸ When rates keep falling, drivers rely on this bonus to make up for the lack of incomes. Yet, the bonus also decreases from time to time.⁵⁹ To cover for the cuts in bonus and rate, the firm instead increases the number of points per orders so that "partners can easily collect points as many as possible."⁶⁰ But, for drivers "raising points is pointless if the firm will just annul it by the performance."⁶¹ To cash-in points and get a bonus, a driver has to achieve a minimum 50% performance and have a minimum rating from passengers of 4.5 stars.

The rating system serves as another strategy to evaluate drivers. The rating system fosters a "highly individualized sense of responsibility for one's own job stability" (Neff 2012: 68, quoted in Rosenblat and Stark 2016: 3772). If their average rating is below 4 stars, drivers are automatically suspended. Go-jek gives a one-time basic training to tell drivers what a five-star service is. The firm also picks "five drivers of five stars" every week and announces who they are to all drivers to

⁵⁷ For instance, an order of ride worth 1 point, a food delivery worth 2 points, and a courier service of 15 miles worth 3 points. An order during midnight or dawn of the day gives an additional point.

⁵⁸ Scheiber in The New York Times, April 2, 2017.

⁵⁹ For instance, a maximum amount of bonus before was US\$8.50/day in the Greater Jakarta area, and \$7.50 in other ctities.

⁶⁰ Go-jek announcement, quoted from a post in drivers' online group.

⁶¹ Tech in Asia, December 3, 2015.

look up to as "our model drivers." ⁶² That a driver must deliver standardized practice further contradicts the entrepreneurship idea and the ambiguous status of partner (Rosenblat and Stark 2016: 3772).

Serving as a disincentive, suspension is one primary strategy to enforce drivers' compliance with labor terms set by the firm. On its official site, the firm informs drivers of two kinds of suspension: auto suspend (when the app detects non-compliance from driver) and manual suspend (when the firm receives complaints from passengers or other parties). A long list detailing various acts that will result in suspension is featured on the official website.⁶³

The list, however, is not exhaustive. Almost every week the firm sends an email or SMS to drivers, telling of new rules and prohibited actions. In mid-April 2017, the firm introduced a cancellation limit per hour and per minute. ⁶⁴ For instance, "if you refuse 3 orders back-to-back in 1 minute, your account will be suspended for 5 minutes" and "if you refuse 2 orders back-to-back in 1 hour, your account will be suspended for 30 minutes." As an excuse, Go-jek typically says that it is "because drivers too frequently cancel orders."

> Digital Finance: E-Cash and Withdrawal

Another key mechanism of algorithmic labor management is the implementation of an online payment system, called Go-pay, in lieu of cash. Go-pay works as a virtual wallet that allows both users and drivers to save some deposits by topping up balances using an ATM or through online banking. For the firm, Go-pay offers important troubleshooting for the cultural problems of doing online business in Indonesia, which still rely on cash or bank transfers.

On the one hand, the use of Go-pay gives assurance and security for drivers, especially when they receive orders of Go-food or Go-mart. Before Go-pay, drivers had to buy products with their own money and get reimbursed with cash by customers. But there are many stories of drivers who spent a lot of money to buy food but then found out the delivery address what false. In these case, drivers "lost money because Go-jek [the firm] said it was out of out of their responsibility." Putting more money in the account and less in cash also restrains drivers "from too

^{62 &}quot;Lima Driver Bintang 5" [Five of Five Stars Drivers] in Go-jek official website (in Indonesian)

⁶³ List of actions subject to suspension system can be found in the Go-jek official page (in Indonesian).

⁶⁴ This is based on my latest observation on the drivers' Facebook group.

much spending for cigarettes and eating out," and they instead "save more money." 65

On the other hand, Go-pay is a further means of control. For example, drivers cannot withdraw their money if their phones are rooted and additional apps that intervene with the Go-jek app are detacted. In certain cases, when drivers are suspended the firm can confiscate the balance remaining in their Go-pay account. With Go-pay, the firm can trace and maintain the financial flow by concentrating money. While they can save more money by using Go-pay, drivers often face difficulty in withdrawing their balances, as they have to wait around 3 days to one week for approval of withdrawal from the firm. Most drivers use cash for groceries and daily nourishment; the lack of liquid money poses challenges to sustaining their household. Another important issue is that when customers use Go-pay to get a discounted price, drivers have to bear the cuts and earn less.

b. Super-exploitation and Labor Struggles of Ride-hailing Drivers

Ride-hailing service yields enormous efficiency, allowing the expansion of the middleman firm at the expense of workers' livelihood. It has resulted in super exploitation of ride-haling drivers. Super-exploitation is experienced by these drivers through the everyday power struggle on the street. The struggle involves intricate relations among drivers, consumers, and the middleman. Based on my observation of drivers' groups, I identify key issues that render ride-hailing super-exploitative: hierarchical relationship, curtailed autonomy, intensified labor, higher expense, high risk work, and limited collective bargaining. A driver's status on Facebook captures some of the issues:

"Dear customers.

Have you noticed most drivers who did your Go-food order? Most of them are young drivers in their 20s or 30s, and not old drivers, right? Drivers of Go-jek are so various, from drivers who never went to school and used to be *opang*, to drivers who were fortunate to have a bachelor's degree [...] Many of us are reluctant to do Go-food because we don't have much money ...Sometime when we receive your orders, we wonder how much your salary is, because you can spend Rp 60,000 only for lunch. When we buy your food, we only get the smell; your lunch is equal to our household allowance for two days...

But now, Go-jek's performance system is so cruel. We have no choice but to receive any orders assigned if we want to get bonus and avoid suspension. Sometimes when the order is beyond our pocket money, we ought to cancel and risk getting suspended

⁶⁵ Based on drivers' testimonials in an online group

because our performance will fall. Yet, when we take Go-food, we have to pay at least Rp 2,000 for parking at the mall or restaurant, then Rp 2,000 more to park at the customer's office, then when you pay the delivery fee Rp 10,000, 20% is for the firm. Then we have to spend for gas ... So, can you see how small is the amount left for us?

I once received an order of 30 glasses of Chatime [tea drink], it's so heavy almost 14 kgs! I had to walk from the 4th floor of the mall to the basement, then I carefully packed it onto my motorbike and rode slowly, so that the order won't fall. Then I delivered it to an office in [a business district]. Some office buildings security is so complicated. We have to enter through basement, take off our jacket, fill out the guest book, leave our ID card, and when we have to wait in line for the logistic lift because we are not allowed to go through the common lift. We spend almost 30 minutes only to get into the lift ...then when we finally reach customers, they are so surly, because they wait too long and then they rate us only 4 stars, even less. More saddening is when they did not give any tip or parking fee, and even end up leaving a bad review. It means it is only about time until we are suspended" (AN, Facebook status, October 2016).

This status got more than 500 likes and 200 shares. Among 300+ comments, most echoed the sentiment and shared similar struggles of working as a ride-hailing driver. Such stories illustrate how ride-hailing apps facilitate the concentration of power in the hand of the middleman. Far from equal, labor in ride-hailing is grounded in power asymmetry restructured in a hierarchical organization, in which "customers act as managers" (Rosenblat and Stark 2016). The broader trend in the sharing economy shows that the role of managerial supervision is shifted from formalized bureaucracy (such as in a conventional company) to customers' judgement. A well-known marketing professor in Indonesia praises such practice as "distributing more access and power to customers" (Khasali 2016). What the professor misses is that customers' power is only the extension of the middleman's authority. Rating in ride-hailing service is designed to control drivers' work.

Rating in ride-hailing service epitomizes power imbalance. Drivers cannot rate passengers, and passengers cannot see the average rating of drivers. Drivers are told to meet a certain standard, and even go beyond, to get a five-star rating from customers. Meanwhile, customers are generally uninformed about how the rating system works and what the standard is. For instance, I have a friend who never rates a driver beyond four stars; "five is perfect, nobody's perfect," she says. She assumes that four is good enough. But, for drivers, four potentially downgrades their average rating. It may lose them a bonus and risk their getting suspended—either temporarily or permanently. The rating system combined with suspension directly constitute mechanisms of threat.

The power asymmetry gets sharper during a time of dispute. When drivers get suspended due to a customer's complaint, they can appeal to the firm to end the suspension if the claimant withdraws the case. But in many instances, things are not that simple, as conveyed in this driver's story:

"I was notified that I got permanently suspended [putus mitra]. I was not aware what I did wrong. Long story short, I found out that a customer who ordered Go-send [courier service] complained that she didn't get her stuff delivered. But, I delivered it to her office, but when I arrived, I was not allowed to go upstairs to her office. I called her like 20 times, but she didn't pick up. I texted her and I waited for 30 minutes, until my phone's battery was running out. So I gave it to the receptionist in the lobby.

I texted the customer. I apologized if I did wrong by leaving it at the receptionist's., I told her that I did not steal it and I was not a theft. She responded, 'no worries, I already found it, it was in the security room.' Then I told her that I was laid off because of her complaint. She said, 'well, it's not my fault. I could not contact you. So, I reported to Gojek.' ... I asked her to call the Go-jek office to revoke her complaint, so I can be allowed to work. Then she said, 'I am a busy person, I have no time to deal with your business! You're their employee, you should tell Go-jek yourself!' (YHR, on Facebook group, February 2017).

While the middleman firm claims to be a neutral adjudicator, many drivers perceive, and show, that "[the firm] only listens to customers and never gets on drivers' side." The middleman firm uses customers' complaints to discipline drivers. Customers, however, are often unaware that drivers are not employees, and that their complaints have vital consequences for drivers' eligibility to work. A mechanism to appeal becomes a futile battle that drivers are unlikely to win.

Disparity with customers, however, is not the most intense battleground for drivers. Rather, the real purgatory starts every time they activate their Go-jek's driver app, receive an order, and look at their performance rate. Various features of labor practices in Go-jek reveal how little control drivers have over critical aspects of their work and how much control the firm has over the labor of its users (drivers). Every morning, drivers get a notification of hot spots in their apps—Go-jek directs them to crowded demands. Once drivers get an order, they have only 10 seconds to decide between "accept" or "reject." When they ignore it—either purposefully or not (i.e., leaving for restroom break)—their performance drops. It also drops when an order gets canceled, whether by drivers themselves or by customers. More than giving a ride service, drivers must be ready to do all kinds of delivery service (e.g., Go-food, Go-send, Go-ride, Go-mart, Go-med, etc.) to validate the firm's brand

identity as "an ojek for every need." The firm tells drivers that they should not be picky if drivers want to boost their bonuses, points, and ratings.

The app has not only curtailed drivers' autonomy but also forced them to work longer hours. When Go-jek keeps lowering rates, drivers turn to incentive-based pay, or bonus, hoping for higher incomes--which means maintaining performance and rating. Every time drivers complete their order, the app sends them a next fare. The app also keeps drivers updated about their points and performance rates—telling them how close they are to getting a bonus. Work, for ride-hailing drivers, is not only giving a ride or making delivery; it is also a constant math game of calculating their performance.

The more intensified the labor of drivers, the higher their expenses. Drivers must provide their own motorbike and pay for all production expenses including gas, parking, maintenance, and vehicle insurance. The company provides two jackets and helmets—they must wear this uniform when they provide a ride—and an Android phone installed with the Go-jek app for drivers. But, they must pay off these amenities through a daily installment, deducted from their earnings. As illustrated by one of the drivers I quote above, drivers frequently must spend extra cash out of their own pocket for parking. This situation creates particular tension with customers. On the one hand, asking customers for a tip or parking money can lead to suspension by the firm. On the other hand, drivers think passengers should reimburse this expense as a courtesy.

Equally vital for drivers is the cost of communication, or the prepaid phone balance to contact customers. 66 Access to the internet is a must, so drivers always have to have enough data to be online and receive orders. 67 Then, drivers are compelled to contact customers to make sure they have the order right. The Go-jek firm always advertises that their drivers could earn at least Rp 200,000 per day, but, based on a driver's reckoning, the average take-home pay for drivers is just around half of that amount. A survey result confirms that the monthly wage of most Go-jek drivers is below Jakarta's regional minimum wage [UMR]. 68 That's why, for

⁶⁶ Unlike in developed countries, the bulk of users in Indonesia use prepaid phones

⁶⁷ Compared to average hourly wage, the price of internet data in Indonesia is expensive https://www.techinasia.com/cost-mobile-data-southeast-asia-infographic

⁶⁸ Based on survey results in Fanggidae et al. (2016)

drivers, "more orders are pointless if [the income] is only enough to buy gas, food, and cigarette." ⁶⁹

Besides higher expense, intensified labor has led to eroded health and safety for drivers. Riding a motorbike for long hours in relentless traffic jams and acute pollution plausibly causes health degradation for drivers. News about accidents involving ride-hailing drivers is increasing. Many drivers post about over-exhaustion as well. One post that went viral was a woman driver who fainted after going 64 km (34 miles) for courier service in the middle of a sunny day. "When she woke up, she said she was afraid if her performance would fall through," says the post. Other posts show that drivers even deliver refrigerators and other heavy electronics. The fact that drivers feel compelled to take any order also exposes them to higher risk of mental distress and accidents. Go-jek always promotes that its drivers are covered by accident insurance. Yet, apparently, the insurance applies only if the accident occurs during the process of order completion; otherwise they are not entitled. For health insurance, drivers pay the premiums out of their pockets, given their partner status. The content is a process of the process o

Working becomes a perilous experience for drivers because the street is a site of struggle and power contestation among various transport workers. Due to the hypervisibility of their identity (bright green jacket and helmet), ride-hailing drivers embody the threat that disrupts the daily order of territorial-based polity of traditional *ojek* drivers. Clashes between traditional drivers and ride-hailing drivers is then more than just a matter of economic competition. It is about control over territory and a struggle over maintaining the polity that is based on social relationship—with passengers, community, and transport owners, and their kin in pangkalan.

Lately, more *opang* have joined Go-jek, especially since the firm continues to aim specifically to them for recruitment. Clashes with *opang* are now significantly decreasing. But challenges remain from other traditional transport such as minibuses [*metromini*] and minivans [*angkot*]. The high mobility of big cities is a factor that renders ride-hailing extremely disruptive since short-distance transport and commuting are inherent parts of routine and daily production. As Go-jek

⁶⁹ Quoted from a driver's status (HT) on Facebook, January 2017.

⁷⁰ Based on a lot of testimonials on the drivers' online groups

⁷¹ Based on survey results in Fanggidae et al. (2016)

penetrates the low-end market, these other transports are threatened. Most clashes require mediation or intervention from authorities to get resolved. Usually peace is attained once territorial boundaries are agreed upon.

This paper demonstrates that the super-exploitation of labor in ride-hailing service is carried out through material and ideational foundations (Tsing 2009). Materially, the key aspect of super-exploitation is the use of technology to circulate capital and access to markets. Through algorithms, the middleman firm can increase, coordinate, and enforce the match of supply and demand. The firm also controls and intensifies labor production by imposing carrot and stick through performance expectations and ratings, bonuses, and a suspension system—all monitored by technology. The ideational base cannot be separated from the material. The middleman determines labor terms under an illusion of drivers being "partners" or "independent contractors." Ride-hailing also rests upon the idea of giving people freedom and flexibility at work, or "being your own boss."

While all labor practices imposed by the firm clearly contradict Go-jek's narrative of free partners, drivers' rights are unprotected given the void in labor law in Indonesia. Legislation has not addressed rights and entitlements of a new type of quasi-partnership like that imposed by the middleman firm. In an interview, the Ministry of Manpower said that he is "uncertain whether Go-jek drivers are workers." The Minister further said that:

Question: Why is it difficult to classify Go-jek drivers as workers?

Answer: "If they are workers, there are minimum wages, restrictions of working hours and also production forces are owned by the employer. But, in Go-jek, drivers provide their own motorbike, I think it's just similar to online business—you have the product, I promote it through my platform. So producers can get orders more easily" (Hanif Dhakiri, the Ministry of Manpower, in *Tempo.co*, November 11, 2015).

The fact that even the Ministry of Manpower shows ignorance, or confusion, of the labor relation in ride-hailing service indicates that ride-hailing drivers stand in legal ambiguity. Go-jek drivers are under vague employment relations and politically have little bargaining position against the firm. The combined use of technology and rhetoric of partnership make it possible for the middleman firm to gain economic, legal, and political leverage. Economically, the middleman can increase, coordinate, and enforce the match of supply and demand—hence being a price maker. Politically, by controlling the market, the middleman defines labor terms under a

vague employment relation—hence the use of terms driver-partners and partnership agreement--instead of having a work agreement. Legally, the middleman company can circumvent jurisdiction in the specific sector by positioning itself as a tech-firm whose primary commodity is a digital reservation platform (i.e., not the transport service *per se*). It thus can circumvent worker rights protection and move the burden of legal liabilities (license, taxation, insurance) in the sector to workers (producers) themselves.

c. Worker Resistance: Grievance, Moral Economy and Subsistence Threat

The super-exploitative labor process in ride-hailing has largely curbed workers' freedom and put them in a losing position. Yet, I contend that it would be inaccurate to characterize them as totally powerless groups with no agency. Widespread protests against the middleman firm in nearly every city where Go-jek is present is proof. In addition to direct confrontation, drivers also seek support from various local state authorities. In between the collective acts of defiance, during periods that appear quiescent, ride-hailing drivers engage in more individualized "everyday forms of resistance" (Scott 1985). Their arsenals vary, ranging from sharing through social media, addressing and asking customers, using technology to get around the firm, to voting with their feet.

In my attempt to make a fair assessment and do justice to drivers' response, it should be noted that not all drivers' posts show negative sentiment toward ridehailing service. Many drivers perceive the platform as an opportunity for them to make a living, especially those who are unable to be absorbed in the formal job market. A bulk of posts that I observe from online groups also display a sense of pride of being a Go-jek driver. Many drivers have a profile picture, wearing Go-jek jacket. "Now we can call ourselves a uniform man [pria berseragam]," says a driver. Perhaps that's because wearing a uniform symbolizes having a "real job." While Go-jek attracts many part-time drivers, a majority of drivers work full time and depend on Go-jek as a sole source of income. The latter group is more vulnerable and appears to be more defiant than the former regarding changes in Go-jek labor practices.

⁷² In the Go-jek fleet, following the conventional pattern of traditional *ojek*, male drivers far outnumber female drivers—although recent trends indicate an increasing number of female drivers. Therefore, conversations in the online group tend to be gendered toward the role of male as a breadwinner of working class families.

⁷³ Based on survey results in Fanggidae et al. (2016)

While ride-hailing apps severely push drivers to work longer hours, late at night and far away in unfamiliar areas to them, their posts usually tend to depict this exploitative practice in a frame of encouragement and information to one another. For example, drivers usually share locations of dense orders and provide information about security conditions on the street when they drive late at night. They sometime share photos of their family, especially kids, with a caption such as "my source of courage." Rather than labor exploitation *per se*, their seemingly endless grumbles usually center on the indications of injustice, including unclear measurement in the performance system and indications of wage theft. Drivers often find themselves dismayed by the seemingly illogical measurement of their performance by the app:

"Finish one more order to achieve 40% performance and claim your bonus!

At that time my performance was 38% and my points were 21.5. Then I completed my last order that day around 11:47 PM. But, after I checked my deposit, the bonus wasn't there and my performance was reset to 0%! ... Why was that? I did the last order! ... It's not only about the nominal amount of the bonus, but the way they took my rights was just so merciless. I left the house at 3 AM and went home at midnight only to get robbed by the firm..." (PF, Facebook status, March 2017).

Such a story of bonus theft is not only a whine by a few people. It appears to be everyday reality of drivers' work, considering how often their posts depict the middleman firm as "betrayer," "liar," or making the situation into a game that "today Go-jek won again, and I am game over."

Another issue of grievance is the relation with customers that makes their rating fall or gets them suspended. The relation with customer in Go-jek is a unique one because many drivers have a personal connection with passengers enabled by technology. One of the major online groups with the greatest number of members is designated not only for drivers but also for customers. Drivers are also aware that the stories they post often go viral on news sites or social media. Drivers sometime also take a more hardline strategy by posting customers' phone numbers publicly to their groups and asking other drivers to intimidate the customer.

Doing so is possible because passengers' data are stored in drivers' account in their Go-jek app so that drivers can directly contact passengers. Talk of intimidation usually arises when drivers feel deprived of their rights, such as getting a bad rating for a "mistake" they don't see as wrong. This problem is rooted in the fundamental loophole of Go-jek's technical feature: lack of data privacy. Customers who feel terrorized file complaints to the company, and the firm promises to settle the issue. Yet what the company means by settle appears to be creation of a longer list of to-be-suspended acts, instead of directly fixing the loophole.

Underlying drivers' resistance is a violation of their sense of justice, regardless of their strategy of how they address it. Most stories and narratives they present in the online realm point to a deep feeling of betrayal and deception, and to lesser extent disappointment, by the middleman firm. These sentiments are also salient in their protests, strikes, and other forms of collectively organized actions. Yet there is a crucial distinction that marks the boiling point from individual resistance to collective defiance. I argue that individual resentments are coalesced into a collective, potentially mobilizing, grievance at a point when labor practice of ridehailing service (as a shared experience) constitutes a threat to drivers' subsistence.

From those testimonials it appears that in the protests, grievances and claims center around the unjust practices of the Go-jek firm and the subsistence threat they cause. While the objective conditions of super-exploitation are prevalent, it seems that their resistance is not grounded on the labor exploitation in itself. Rather, opposition arises when such labor practice violates their expectation, i.e., bonus and a living wage. The case of protest in ride-hailing thus supports the moral economy interpretation of labor (Thompson 1971, Posusney 1997).

Other strong justifications for this perspective are: 1) worker protests arise more frequently when their economic condition is deteriorating (Posusney 1997); 2) evidence shows that workers believe there should be reciprocity of rights and responsibilities between the firm and themselves (that is, drivers comply with the company's rules and the company gives them their bonus). When such reciprocity is violated, drivers are prompted to resist (Dogan 2016, Scott 1976). The findings also indicate that drivers' resistance is driven largely by the anxiety of falling below a bare survival line, or a threat to their subsistence. Drivers relate more to a "restorative demand" (i.e., to go back to the old system without the performance factor) rather than an "aggressive demand" (i.e., demanding employment status and rights). The drivers are inclined to maintain the recognized patterns of production and seek stability, rather than demanding advancement.

In short, on the company (capital) side, my findings reveal that the ride-hailing firm is endowed with material, political, and informational power through, respectively, influx of investments, government allies, and digital data. These resources enable the middleman to structure an unequal relationship with drivers and maintain the power asymmetry by exploiting technology (software and algorithms), rhetoric, and a legal void. This inequality results in "super-exploitation" of ride-hailing drivers and disruption of traditional drivers. Ride-hailing enforces supply and demand, in which a driver *must* fulfill the order. Failure to do so will result in deactivation from the apps, and either temporary or permanent suspension by the company. Such labor terms facilitate the middleman to control and mediate their "freelance-based workers." Various technical and rhetorical mechanisms are employed by the middleman firm to achieve a primary aim of managing labor easily through a cycle of hiring and firing (i.e., carrot and stick, recruitment and suspension), and a quest for perfect balance between supply and demand (i.e., assignment system, performance, gamification of work).

On the driver (labor) side, I find that while the objective condition of exploitation is pervasive, these drivers mostly endure relative deprivations (i.e., lower income, stretched working hours, higher costs). But opposition comes to the surface when the middleman company issues or changes policies and practices (i.e., volatile price, performance system, e-cash, suspension, contract termination) that deviate from the initial agreement. A striking number of drivers say that ride-hailing is "a false hope" [harapan palsu] and that "Go-jek [the company] is cheating us." The findings also indicate that drivers' resistance is driven largely by the anxiety of falling below a bare survival line. Claims tend to be defensive rather than progressive—such as protesting over elimination of rights. The drivers are inclined to maintain the recognized patterns of production and seek stability, rather than demanding advancement. In Scott's terms (1976: 11), "it was the smallness of what was left rather than the amount taken" that makes drivers struggle.

5. Implication and Conclusion

⁷⁴ However, it should be stressed that *not* all digital middleman firms effectuate super-exploitation. As opposed to peer-to-peer platforms (e.g., Airbnb, ZipCar), on-demand service, such as ride-hailing, is not merely a platform to advertise an underutilized asset or skill. The peer-to-peer platforms (such as Airbnb, ZipCar) in contrast, adopt a sort of bid system in which both producers and consumers have a say in making the transaction. Producers decide the price of their products, and consumers can choose at their will.

In previous sections, I have discussed why and how labor unrest has magnified following the expansion of ride-hailing service. I have traced the root of labor discontent to the changing labor-capital relation in this business that constitutes a super-exploitative labor practice. Throughout my analysis, I have demonstrated the way in which super-exploitation is manifested through the use of technology (algorithmic management) and rhetoric of entrepreneurship to control market, enforce labor, and circumvent risk and obligations. Labor practice in ride-hailing is established on, and facilitated by, labor flexibility that has increasingly become prevalent under neoliberal economy. One thus may argue that ride-hailing service is just another case of a flexible labor regime.

However, I contend that the novel aspects of ride-hailing service lie in two aspects. First, the use of digital technology in ride-hailing service allows the entire work experiences of drivers to be mediated, controlled, and manipulated. Drivers' pattern of work is continuously surveyed, and the resulting data in turn are used to optimize work, perhaps using a new (more exploitative) mechanism. Not less important is the collection of an enormous data, including customers' data of mobility activity and vendors' transactions, that cooperate with the app. These data are submitted voluntarily by every user of the app. But, in turn, all of these data are also vital commodities for the owner of the technology—the middleman firm, i.e., Go-jek, which has the ambition to be the biggest provider of a platform that connects various parts of the informal economy.

Second, and perhaps what should be addressed more immediately, the labor practice in ride-hailing service becomes severely exploitative without limit because it is built on a void of existing labor laws and regulations. It is accurate to characterize ride-hailing drivers are no different from other precarious and freelance workers. Yet, even under a flexible labor regime, rights of freelance workers [pekerja lepas] are regulated in existing legislation, including minimum wages, maximum working hours, health insurance, and other social nets. The way ride-hailing defines itself as a neutral intermediary and defines drivers as entrepreneurs or partners obscures its legal liabilities—although various kinds of rights violations and labor control the firm has committed clearly contradict the deceptive rhetoric of entrepreneurship or empowerment. This legal void erodes drivers' opportunity to

⁷⁵ For Indonesian context, see the Manpower Act [UU Tenaga Kerja] No. 13 / 2003 Article 56 to 59.

get leverage in collective bargaining efforts with the firm. As a corollary, the middleman firm has enormous power (even to some extent using consumers to extend and exercise its power) and hardly any restraints on its ability to exploit the power asymmetry.

While I expose the Go-jek case in Indonesia, by no means do I suggest super-exploitation is exclusive to this case. In fact, a recent investigative report and academic research (Scheiber in *New York Times* 2017; Rosenblat and Stark 2016) point to very similar findings. Grounded in the United States (US) context, these studies reveal how Uber uses its technological capacity combined with psychological research to subtly manipulate an independent work force to and maximize Uber's efficiency. Scheiber (2017) suggests that "Uber exists in a kind of legal and ethical purgatory...by mastering their workers' mental circuitry." A comment in the article insinuates the "horrible twist...that Uber is going to use all this data they are collecting to create the perfect, frictionless system for when driverless cars finally arrive." Rosenblat and Stark (2016) discuss more the impact of Uber's sophisticated technique on drivers: loss of income and erosion of worker autonomy.

Missing from the discussion of ride-hailing labor practice are the workers themselves and how they respond to and resist the super-exploitation they experience. This story is what I have tried to deliver here. Ride-hailing case actually poses an interesting case with potential new insights about resistance of precarious workers—which is characterized by scholars as precarious resistance (Lewchuck & Dassinger, 2016). With the Uber case, we see how Uber drivers are starting to fight against the firm persistently, through, most notably, the courts. In the US, several class action suits center on the employment status of Uber drivers. Drivers' collective action in the US more often involves third party arbitration and makes use of state authority fragmentation to organize "rightful resistance" that centers on legal rights (O'Brien 1996).

Indonesia shows a different pattern of resistance. A majority of the workers' arsenal is delivered through "everyday forms of resistance" (Scott 1985). Their defiance underlies the resistance against violations of preexisting practice and a sense of injustice; that is why I argue that the moral economy approach best captures the logic of such labor politics. These workers are also capable of

organizing collective bargaining efforts, although their leverage is still minuscule compared to the power held by the middleman. Nonetheless, I argue that the distinctiveness of labor practice in ride-hailing service calls for further analysis on the new aspect of informal labor politics that it yields. To my knowledge, scholarship on the contentious politics of informal labor is relatively scant.

In the political economy field, I suggest that future research may take a look at the role of the state and the nexus of the state-capital relation in the changing landscape of informal labor politics. It is especially interesting to note that capital increasingly moves to the digital business landscape, and that the state officially endorses various investments in digital business to capitalize labor in the informal economy. Another potential takeaway from this study is to explore to the direction of the research of collective action. This case shows that, contrary to conventional wisdom that workers in nonstandard labor have little capacity to organize wide-scale resistance, precarious workers such as Go-jek drivers have notably engaged in sustained and large-scale mobilization against the firm. It may be fruitful to explain how dispersed and scattered workers without a routine and standard working environment establish and maintain solidarity and how they organize collective resistance.

Bibliography

Adams, Z., & Deakin, S. (2014). Institutional Solutions to Precariousness and Inequality in Labour Markets. *British Journal of Industrial Relations*, *52*(4), 779–809.

- Allen, E. R. (2016). Analysis of Trends and Challenges in the Indonesian Labor Market (ADB Papers on Indonesia No. 16). Manila, Philippines.
- Aneesh, A. (2009). Global Labor: Algocratic Modes of Organization. *Sociological Theory*, 27(4), 347–70.
- Anner, M. (2015). Worker resistance in global supply chains. *International Journal of Labour Research*, 7(7), 292–307.
- Archibugi, D. (2017). Blade Runner economics: Will innovation lead the economic recovery? *Research Policy*, 46, 535–543.
- Arnold, T. C. (2001). Rethinking Moral Economy. *American Political Science Review*, 95(1), 85–95.
- Babb, S. (2005). The Social Consequences of Structural Adjustment: Recent Evidence and Current Debates. *Annual Review of Sociology*, *31*(1), 199–222.
- Butollo, F., & Ten Brink, T. (2012). CHALLENGING THE ATOMIZATION OF DISCONTENT: Patterns of Migrant-Worker Protest in China during the Series of Strikes in 2010. *Critical Asian Studies*, 44(3), 419–440.
- Cai, Y. (2002). The Resistance of Chinese Laid-off Workers in the Reform Period. *The China Quarterly*, (170), 327–344.
- Calo, R., & Rosenblat, A. (n.d.). THE TAKING ECONOMY: UBER, INFORMATION, AND POWER.
- Christensen, C. M., Raynor, M. E., & McDonald, R. (2015). What Is Disruptive Innovation? *Harvard Business Review*, *93*(12), 44–53.
- Coase, R. H. (1937). The Nature of the Firm. *Economica*, 4(16), 386-405.
- Dogan, M. G. (2016). When Neoliberalism Confronts the Moral Economy of Workers: The Final Spring of Turkish Unions. *European Journal of Turkish Studies*, 11(October 2010).
- Edelman, M. (2005). Bringing the Moral Economy back in ... to the Study of 21st-Century Transnational Peasant Movements. *American Anthropologist*, 107(3), 331–345.
- Edwards, R. C. (1978). The Social Relations of Production at the Point of Production. Insurgent Sociologists.
- Einav, L., Farronato, C., & Levin, J. (2016). Peer-to-Peer Markets. *Annual Review of Economics*, 8, 615–35.
- Elfstrom, M., & Kuruvilla, S. (2014). The changing nature of labor unrest in China. *Industrial and Labor Relations Review*, 67(2), 453–480.
- Fanggidae, V., Sagala, M. P., & Ningrum, D. R. (2016). On-Demand transport workers in Indonesia Toward understanding the sharing economy in emerging markets. In *Transformations in Technology, Transformations in Work* (pp. 15–47). Berlin: JustJobs Network.
- Ford, M., & Mizuno, K. (2008). INDONESIAN LABOUR SINCE SUHARTO: PERSPECTIVES FROM THE REGION. Labour and Management in Development, 9, 1-5.
- Friedman, E. D. (2014). *Insurgency Trap: Labor Politics in Postsocialist China*. Ithaca, NY: Cornell University Press.

- Glöss, M., Mcgregor, M., & Brown, B. (2016). Designing for Labour: Uber and the On-Demand Mobile Workforce. *Chi'16*, 1–12.
- Guy Standing. (2011). *The Precariat: The New Dangerous Class*. New York: Bloomsbury Academic.
- Hadiz, V. R. (2002). THE INDONESIAN LABOUR MOVEMENT Resurgent or Constrained? *Southeast Asian Affairs*, 130–142.
- Harvey, D. (2007). Neoliberalism as Creative Destruction. The ANNALS of the American Academy of Political and Social Science, 610(21).
- Hewison, K., & Kalleberg, A. L. (2013). Precarious Work and Flexibilization in South and Southeast Asia. *American Behavioral Scientist*, *57*(4), 395–402.
- Irani, L. (2015). Difference and Dependence among Digital Workers: The Case of Amazon Mechanical Turk. *South Atlantic Quarterly*, 114(1), 225–234.
- Kalleberg, A. L. (2000). Nonstandard Employment Relations: Part-time, Temporary and Contract Work. *Annual Review of Sociology*, 26, 341–65.
- Kalleberg, A. L. (2009). Precarious Work , Insecure Workers : Employment Relations in Transition. *American Sociological Review*, 74, 1–22.
- Kalleberg, A. L., & Hewison, K. (2013). Precarious Work and the Challenge for Asia. *merican Behavioral Scientist*, *57*(4), 271-288.
- King, B. G., & Pearce, N. A. (2010). The Contentiousness of Markets: Politics, Social Movements, and Institutional Change in Markets. *Annual Review of Sociology*, 36, 249–67.
- Kivimaa, P., & Kern, F. (2016). Creative destruction or mere niche support? Innovation policy mixes for sustainability transitions. *Research Policy*, 45, 205–217.
- Latimer, A. (2016). Superexploitation, the Race to the Bottom, and the Missing International Forthcoming. In I. Ness & Z. Hope (Eds.), *The Palgrave Encyclopedia of Imperialism and Anti-Imperialism* (pp. 1–30). New York: Palgrave Macmillan.
- Lee, M. K., Kusbit, D., Metsky, E., & Dabbish, L. (2015). Working with Machines: The Impact of Algorithmic and Data-Driven Management on Human Workers. In *Proceedings of the 33rd Annual ACM SIGCHI Conference* (pp. 1603–1612). Seoul: ACM Press.
- Lewchuck, W., & Dassinger, J. (2016). Precarious employment and precarious resistance: "we are people still." *Studies in Political Economy*, 97(2), 143–158.
- Maher, T. V. (2010). Threat, Resistance, and Collective Action: The Cases of Sobibór, Treblinka, and Auschwitz. *American Sociological Review*, 75(2), 252–272.
- McAdam, D. (1982). *Political Process and the Development of Black Insurgency,* 1930–1970. Chicago: University of Chicago Press.
- McAdam, D., McCarthy, J. D., & Zald, M. (1996). Comparative Perspectives on Social Movements: Political Opportunities, Mobilizing Structures, and Cultural Framings. New York: Cambridge University Press.
- Mokyr, J. (1998). The Political Economy of Technological Change: Resistance and

- Innovation in Economic History. In M. Berg & K. Bruland (Eds.), *Technological Revolutions in Europe* (pp. 39-64). Cheltenham: Edward Elgar Publishers.
- Mokyr, J. (2000). Innovation and Its Enemies: The Economic and Political Roots of Technological Inertia. In M. Olson & S. Kahkohnen (Eds.), *A Not-so-dismal Science* (pp. 61–91). Oxford University Press.
- Neff, G. (2012). Venture labor: Work and the burden of risk in innovative industries. Cambridge, MA: MIT Press.
- O'Brien, K. J. (1996). Rightful Resistance. World Politics, 49(1), 31-55.
- Pearlman, W. (2013). Emotions and the Microfoundations of the Arab Uprisings. *Perspectives on Politics*, 11(2), 387–409.
- Polanyi, K. (2001). The Great Transformation: The Political and Economic Origins of Our Time FOREWORD BY (3rd Editio). Boston, MA: Beacon Press.
- Posusney, M. P. (1993). Irrational Workers: The Moral Economy of Labor Protest in Egypt. *World Politics*, 46(1), 83–120.
- Posusney, M. P. (1997). Labor and the State in Egypt: Workers, Unions, and Economic Restructuring. New York: Columbia University Press.
- Ritzer, G. (2015a). Prosumer Capitalism. *The Sociological Quarterly*, 56, 413-445.
- Ritzer, G. (2015b). The "New" World of Prosumption: Evolution, "Return of the Same," or Revolution? *Sociological Forum*, 30(1), 1–17.
- Roscigno, V. J., & Hodson, R. (2004). The Organizational and Social Foundations of Worker Resistance. *American Sociological Review*, 69(1), 14–39.
- Rosenblat, A., & Stark, L. (2016). Algorithmic Labor and Information Asymmetries: A Case Study of Uber's Drivers, *International Journal of Communication* 10, 3758–3784.
- Scheiber, N. (2017, April 2). How Uber Uses Psychological Tricks to Push Its Drivers' Buttons. The New York Times. https://www.nytimes.com/interactive/2017/04/02/technology/uber-drivers-psychological-tricks.html?_r=1
- Scholz, T. (2016). *Uberworked and underpaid: how workers are disrupting the digital economy*. London: Polity Press.
- Schor, J. B., & Attwood-Charles, W. (2016). The Sharing Economy: labor, inequality and sociability on for-profit platforms. *Sociology Compass*.
- Schor, J. B., & Fitzmaurice, C. J. (2015). Collaborating and Connecting: The emergence of the sharing economy. In Lucia Reisch & John Thogersen (Eds.), Handbook on Research on Sustainable Consumption. Cheltenham, UK: Edward Elgar.
- Schumpeter, J. A. (2011 [1942]). *Capitalism, Socialism, and Democracy.* Mansfielf Centre, CT: Martino Publishing.
- Schumpeter, J. A. (1939). Business Cycles: A Theoretical and Statistical Analysis of the Capitalist Process. Volume I. New York: McGraw Hill.
- Scott, J. C. (1976). The Moral Economy of the Peasant: Rebellion and Subsistence in Southeast Asia. New Haven: Yale University Press.

- Scott, J. C. (1987). Weapons of the Weak: Everyday Forms of Peasant Resistance. New Haven: Yale University Press.
- Simmons, E. S. (2014). Grievances do matter in mobilization. *Theory and Society*, 43, 513–546.
- Simmons, E. S. (2016). *Meaningful Resistance: Market Reforms and the Roots of Social Protest in Latin America*. New York: Cambridge University Press.
- Srnicek, N. (2016). Platform Capitalism. London: Polity.
- Sundararajan, A. (2016). The Sharing Economy: The end of employment and the rise of crowd-based capitalism. Cambridge and London: MIT Press.
- Thompson, E. P. (1971). The Moral Economy of the Enghlish Crowd in the Eighteenth Century. *Past and Present*, *50*, 76–136.
- Tilly, C. (1977). From Mobilization to Revolution. Contemporary Sociology, 9, 133.
- Tjandraningsih, I., & Nugroho, H. (2008). The Flexibility Regime and Organised Labour in Indonesia. *Labour and Management in Development*, 9.
- Tjandraningsih, I. (2012). State-Sponsored Precarious Work in Indonesia. *American Behavioral Scientist*, *57*(4), 403–419.
- Tsing, A. (2009). Supply Chains and the Human Condition. *Rethinking Marxism*, 21(2), 37–41.
- Valencia, A. S. (2015). The future of work: Super-exploitation and Social Precariousness in the 21st Century. Leiden and Boston: Brill.
- Wisman, J. D. (2001). Creative Destruction and Labor's Options. Forum for Social Economics, 30(2), 51–76.