Indonesia Law Review

Volume 11 | Number 3 Article 4

12-31-2021

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Indonesia Law Review (2021) 3: 285 - 302
ISSN: 2088-8430 | e-ISSN: 2356-2129

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Article Info

Received : 28 August 2021 | Received in revised form : 4 October 2021 | Accepted : 11 December 2021

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Abstract

The digital ride-hailing service platforms have advanced significantly due to technological development. It resulted in lower consumer costs and better-quality service. Thus, consumers opted for such platforms more than the conventional transportation, resulting in their exponential growth over the years such as Gojek and Grab in Indonesia. Their strong market position was achieved quickly, facilitated by innovation advantages such as indirect network effects and algorithm-based analysis of users' past data. Ultimately, data has become a barrier for potential competitors to entering the market. Simultaneously, the incumbents or the dominant market holders likely to use a technology-based strategy by keeping access to such data closed and inaccessible, maintaining their market position. Its strategy might fall under exclusionary abuse, a behavior that intends to protect and increase platforms' dominant position. Thus, such action can be harmful to healthy competition and impede inclusive growth in ride-hailing services' market competition. In this paper, the author will argue that refusal to grant data access should be regulated as a part of Indonesia Competition Law's exclusionary conduct and remedied using mandated data portability.

Keywords: *Exclusionary abuse, Digital ride-hailing, Data exclusivity, Competition law*

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Abstrak

Platform layanan sewa angkutan digital telah maju secara signifikan karena perkembangan teknologi. Hal menghasilkan biaya konsumen yang lebih rendah dan layanan berkualitas lebih baik. Dengan demikian, konsumen lebih memilih platform tersebut daripada transportasi konvensional, sehingga pertumbuhan eksponensial mereka selama bertahun-tahun seperti Gojek dan Grab di Indonesia. Posisi pasar mereka yang kuat dicapai dengan cepat, difasilitasi oleh keunggulan inovasi seperti efek jaringan tidak langsung dan analisis data masa lalu pengguna berbasis algoritma. Pada akhirnya, data telah menjadi penghalang bagi pesaing potensial untuk memasuki pasar. Secara bersamaan, petahana atau pemegang pasar dominan cenderung menggunakan strategi berbasis teknologi dengan menjaga akses ke data tersebut tertutup dan tidak dapat diakses, mempertahankan posisi pasar mereka. Strateginya mungkin termasuk dalam penyalahgunaan eksklusif, perilaku yang bertujuan untuk melindungi dan meningkatkan posisi dominan platform. Dengan demikian, tindakan tersebut dapat membahayakan persaingan yang sehat dan menghambat pertumbuhan inklusif dalam persaingan pasar layanan perjalanan. Dalam tulisan ini, penulis berargumen bahwa penolakan untuk memberikan akses data harus diatur sebagai bagian dari perilaku ekslusif UU Persaingan Indonesia dan diperbaiki dengan menggunakan portabilitas data yang diamanatkan.

Kata kunci: *penyalahgunaan bersifat penyingkiran, sewa angkutan digital, eksklusifitas data, persaingan usaha*

DOI : https://doi.org/10.15742/ilrev.v11n3.4

I. INTRODUCTION

Sharing economy provides sets of practices to enable reliable transactions between persons[1]. It is easier and inexpensive for a person to connect with others and make better use[2] of their resources[3]. The firm that provides a digital platform is known to generate income outside the conventional workforce[4]. Moreover, it gives the traditional service a competitive pressure due to its service quality and lower consumer costs[5].

In Indonesia, digital ride-hailing service platforms have rapidly grown through sharing economy. It improved the traditional economic model into a sharing model[6], transforming the conventional cab and taxi bike model[7]. It provides numerous transportation services through an application with a low price[8]. Some of the digital ride-hailing service platforms are *Gojek* and *Grab*, launched in 2011. They have grown by 2.5 million drivers in several years[9].

The digital ride-hailing service platform consists of three groups of crucial actors. One is a person who provides a vehicle, the second one is a user who needs to ride a vehicle and the third is the firm that acts as a platform[10]. It works by requesting an individual-owned vehicle through an application[11]. In a practical sense, digital ride-hailing service platforms involve two indirect networks between a driver who owns a vehicle and a user who needs a ride[12]. It means that the digital ride-hailing service platform depends on the corresponding fact that many users who need a ride are attracted by the vast number of drivers and *vice versa*[13]. Thus, constitute a multisided platform business model.

The demand-dependence between the groups in the ride-hailing service platform is linked through indirect network effects[14] where users' quantity on the platform's

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[1] Orly Lobel, "The Law of the Platform," *Minnesota Law Review* 101, no. 1 (2016): 87.

[2] Yochai Benkler, "Sharing Nicely: On Shareable Goods and the Emergence of Sharing as a Modality of Economic Production," *Yale Law Journal* 114, no. 2 (2004): 273, 297.

[3] Ryan Calo and Alex Rosenblat, "The Taking Economy: Uber, Information, and Power," *Columbia Law Review* 117, no. 6 (2017): 1629.

[4] *Ibid.*

[5] *Ibid.*

[6] Rizaldy Anggriawan, "E-Hailing Transportation and the Issue of Competition Law in Indonesia," *Indonesian Comparative Law Review* 2, no.1 (2019): 56, 58.

[7] Natadjaja I. and Setyawan P.B., "Creating Community through Design: The Case of Go-Jek Online," *International Journal of Cultural and Creative Industries* 4, no.1 (2016): 1, 19.

[8] Michael L. Katz. "Exclusionary Conduct in Multi-Sided Markets," *Discussion Paper No DAF/COMP/WD(2017)28/FINAL, Directorate for Financial and Enterprise Affairs Competition Committee, Organisation for Economic Co-operation and Development*, 15 November 2017, 14.

[9] Rinaldi Mohammad Azka, "Berapa Sih Jumlah Pengemudi Ojek Online? [How Many Online Ride-Hailing Riders?]" *Bisnis*, accessed 11 December 2019, https://ekonomi.bisnis.com/read/20191112/98/1169620/berapa-sih-jumlah-pengemudi-ojek-online-simak-penelusuran-bisnis.com.

[10] Bram Devolder, *The Platform Economy: Unravelling the Legal Status of Online Intermediaries*, 1st ed. (Antwerp: Intersentia, 2019), 143.

[11] Jonathon Matthew Vivoda, Annie C Harmon and Ganesh Babulal, "E-Hail (Rideshare) Knowledge, Use, Reliance, and Future Expectations among Older Adults," *Transportation Research Part F: Traffic Psychology and Behaviour* 55 (May 2018): 426, 430.

[12] *Ibid.*

[13] David S. Evans and Michael Noel, "Defining Antitrust Markets When Firms Operate Two-Sided Platforms," *Columbia Business Law Review* 2005, no. 3 (2005): 102, 109.

[14] Lapo Filistrucchi, et al., "Market Definition in Two-Sided Markets: Theory and Practice," *Journal of Competition Law and Economics* 10, no.2 (2013): 293, 296.

side will positively increase the user's value on the other side[15]. Consequently, the multisided business model brings a positive effect, such as expanding supply and changing input prices[16]. As in any case, platforms have significantly lowered transaction costs[17].

The digital market characteristic cannot be ignored because it plays a pivotal role in determining market power[18]. In the traditional market, a firm mainly competes based on price because technological innovation is slow[19]. The digital market is notably unlike traditional market characteristics because it is directed by a constant and fast technological innovation movement[20]. It has a dynamic competition that is characterized based on innovation rather than price[21]. Such as indirect network effects make a lock-in effect based on user preferences that benefit the first entrance firms and have a sufficient technology development strategy to grab a significant market share over other firms[22]. In this consideration, innovation is a crucial part of the competition in the digital platform markets[23].

As an apparent innovation, it may accelerate potential users' movement to the platform resulting in a high market share quickly[24]. Market share in competition law becomes essential because it identifies how much control a particular firm has over a specific service. Many discourses said that the size of the total users' number on each side is inconsequential compared to the match between users in the multisided platform[25]. However, it is not happening in the digital ride-hailing service platforms because the characteristic of a good match depends on the nearby drivers[26]. It is because waiting time is an essential feature of digital ride-hailing service platforms[27]. Therefore, the more drivers in a particular territory, the more possibility for nearby drivers to offer a ride to the user[28]. Additionally, the market share evaluation is more relevant in the market with a homogeneous service[29] like a digital ride-hailing service platform that does not have differentiation.

Innovation becomes the leading role because it heavily influenced a digital market,

[15] Bruno Carballa Smichowski, "Is Ride-Hailing Doomed to Monopoly? Theory and Evidence from the Main US Markets," *Revue D'Economie Industrielle* 2 (2018): 43, 45.

[16] Benjamin Edelman and Damien Geradin, "Efficiencies and Regulatory Shortcuts: How Should We Regulate Companies like Airbnb and Uber?" *Stanford Technology Law Review* 19, no. 2 (2016): 293, 296.

[17] Devolder, *The* Platform Economy, 144.

[18] Ken Dai and Jet Dang, "Big Data and Antitrust Risks in Close-Up: From the Perspective of Real Cases," *Mondaq*, 27 November 2020, https://www.mondaq.com/china/antitrust-eu-competition-/1010918/big-data-and-antitrust-risks-in-close-up-from-the-perspective-of-real-cases.

[19] Gönenç Gürkaynak, *The Second Academic Gift Book of ELIG Gürkaynak Attorneys-at-Law on Selected Contemporary Competition Law Matters* (Turkey: Legal Yayıncılık, 2019), 257.

[20] *Ibid.*

[21] *Ibid.*

[22] Dai and Dang, "Big Data and Antitrust Risks in Close-Up."

[23] Gönenç Gürkaynak, *The Second Academic Gift Book of ELIG*, 257.

[24] Dai and Dang, "Big Data and Antitrust Risks in Close-Up."

[25] David S Evans and Richard Schmalensee, "Network Effects: March to the Evidence, Not to the Slogans," *Competition Policy International – Antitrust Chronicle* (2017), 1, 3.

[26] Ignacio Herrera Anchustegui and Julian Nowag, *How the Uber and Lyft Case Provides an Impetus to Re-Examine Buyer Power in the World of Big Data and Algorithms* (Working Paper No 01/2017, Lund University, 7 July 2017), 8.

[27] *Ibid.*

[28] Smichowski, "Is Ride-Hailing Doomed to Monopoly?," 43-45.

[29] Competition Policy and Law Group APEC Economic Committee, *Competition Policy for Regulating Online Platforms in the APEC Region* (Research Report No APEC#2019-EC-01.3, Asia-Pacific Economic Cooperation, August 2019), 30.

such as decreasing the average cost because of economies of scale and network effects. It makes a cost structure in the digital market consisting of low marginal costs of production and high fixed costs[30]. Moreover, the more value users acquire from the service if the network effects arise. The link between an increasing number of users and the network's value happens because the user dan communicates and interacts with another user on the same platforms[31].

II. THE INFLUENCE OF NETWORK EFFECTS AND DATA ON DIGITAL RIDE-HAILING SERVICE PLATFORMS

A. Indirect Network Effects and Market Power

Network effects terminology describes contexts where a service offers an increasing benefit if more users use it[32] at the same time, increasing the firm's size[33]. Network effects can also happen indirectly, such as in the digital ride-hailing service platform[34], because the users would not use the application if no drivers were using the application, while correspondingly, the drivers will not use the application if there were no riders who use it. If reinforced positively, these indirect network effects will incentivize drivers and users[35] to keep using the application and increase the number of people who use the platforms. Thus, it is shown that indirect network effects can significantly increase the digital ride-hailing service firm's market share.

As indirect network effects significantly increase its market share, it can lead to market tipping for the digital ride-hailing service platform[36] and tends to facilitate market concentration[37]. Moreover, indirect network effects may create an initial market power due to the increased size of users and market concentration, and it will help strengthen incumbents' position and make it expensive for potential firms to challenge them[38]. Incumbents with an absolute market power tend to have an ability to consistently increase the price of their service but maintain to make a profit above the competitive price market[39]. Thus, the firm can act independently from its competitor firms and its customer[40].

For giant digital ride-hailing service platforms such as Gojek and Grab in Indonesia, the price is generally low, but they can charge a higher fare during the peak

[30] Evelin Hlina, "Dominant Undertakings in the Digital Era: A Call for Evolution of the Competition Policy Towards Article 102 TFEU?" *ICC Global Antitrust Review*, (2016): 121.

[31] *Ibid*., 121, 123.

[32] *Ibid.*

[33] *Ibid.*

[34] *Ibid.*

[35] Nasarudin Abdul Rahman, et. al., "E-Hailing Services: Antitrust Implications of Uber and Grab's Merger in Southeast Asia," *IIUM Law Journal* 28, no. S1 (2020): 373, 391.

[36] Kate Collyer, Hugh Mullan, and Natalie Timan. *Measuring Market Power in Multi-Sided Markets* (Research Discussion Paper No DAF/COMP/WD(2017)35/FINAL, Directorate for Financial and Enterprise Affairs Competition Committee, Organisation for Economic Co-operation and Development, 15 November 2017), 4.

[37] Competition Policy and Law Group APEC Economic Committee, 38.

[38] Catherine E Tucker, "Network Effects and Market Power: What Have We Learned in the Last Decade?" *Spring Antitrust*, Spring 2018, 72 &74.

[39] Ayu Rachmawati, *Relevant Market on Online Traffic Transportation* (LLB Thesis, Universitas Islam Indonesia, 2017), 50.

[40] Francesco Russo and Maria Luisa Stasi, "Defining the Relevant Market in the Sharing Economy," *Internet Policy Review* 5, no.2 (2016):1, 5.

demand periods[41]. Additionally, it is more convenient for users to arrange a pickup using a mobile application rather than hail a vehicle on the street with technological innovation[42]. Gojek and Grab applications allow their users to submit a trip request transmitted to the nearby drivers and charge a fee solely based on the current demand and supply level[43]. Therefore, a giant digital ride-hailing uses its current market power to strengthen its market position, both in size and capacity.

B. Data Snowball Effect

The non-price factor that strengthens the digital ride-hailing service platforms reduces waiting time and transportation costs to pick a ride. The drivers' supply does meet the users' demand[44] that enhanced by a matching algorithm[45]. The digital ride-hailing service platforms use past data of interaction between users and drivers in the platforms to predict demand correctly and then nudge the drivers to go there, thereby increasing the fare in that area[46]. Thus, the amount and quality of data that the firms hold become a competitive advantage[47] in digital ride-hailing service platforms.

It is shown that the quality of functionalities and the relevance that digital ride-hailing service platforms offered to their users and drivers is increased using the past collected data[48]. The algorithm's technical properties explain the link between users' activity data and the quality of service[49]. Once an algorithm model is correctly tailored to fit the data, the more data the algorithm model can work on; and then, it is more likely that the service improves over time[50]. Additionally, the indirect network effects create a concentrated user and their data in a few firms[51] and forming a user feedback loop. It means the more people who use the platform; then the more platform can collect the data to gain a better insight into its users' preferences and improve the quality, thus attracting even more users[52]. Therefore, the indirect network effects in the digital ride-hailing service platforms are strengthened by the data snowball effect.

The algorithm race in the digital ride-hailing service platforms becomes a matter of who has more data[53]. The match's quality, functionality, and relevance depend upon the data an algorithm must work with. It makes the data concentration as market power[54]. Thus, the digital ride-hailing service platforms become data-driven firms

[41] David Gabel, "Uber and the Persistence of Market Power," *Journal of Economic Issue* 50, no. 2 (2016): 529.

[42] *Ibid.*

[43] Gabel, "Uber and the Persistence of Market Power," 529.

[44] Boon-Chui Teo, Muhammad Azimulfadli Mustaffa and Amir Iqbal Mohd Rozi, "To Grab or Not to Grab? Passenger Ride Intention towards E-Hailing Services," *Malaysian Journal of Consumer and Family Economics* 21, no.1 (2018): 153.

[45] Smichowski, "Is Ride-Hailing Doomed to Monopoly?" 43, 45.

[46] *Ibid.*, 43, 49.

[47] Inge Graef, "Market Definition and Market Power in Data: The Case of Online Platforms," *World Competition: Law and Economics Review* 38, no.4 (2015): 473.

[48] *Ibid*., 479.

[49] Smichowski, "Is Ride-Hailing Doomed to Monopoly?" 43, 47.

[50] *Ibid.*, 43, 49.

[51] Ariadne Plaitakis, *Digital Data and Competition Issue* (Working Papers BFA Globals No 03, BFA Global, April 2019), 6.

[52] Roger D Blair and D Daniel Sokol eds., *The Cambridge Handbook of Antitrust, Intellectual Property, and High Tech* (Cambridge: Cambridge University Press, 2017), 1145.

[53] Smichowski, "Is Ride-Hailing Doomed to Monopoly?" 43, 47.

[54] Oxera, *Market Power in Digital Platforms* (Discussion Paper for European Commission, Oxera, 30

due to their crucial uses of data for their market position. Additionally, the digital ride-hailing service platforms market's inherent features[55] hinge on the firms' access to essential data and the ability to develop the scale[56]. It creates a high economy of scale and scope due to cost savings for producing high-quality service, which supports market concentration[57]. As a result, the digital ride-hailing service platforms market tends towards a small number of firms[58].

It is hard for potential firms to compete in the digital ride-hailing service platforms market equally because the essential data is not available from an alternative source (Kimmel and Kestenbaum, 2014, pp. 48, 52). Competing against incumbents in the digital ride-hailing service seems challenging because there are no incentives for users to use an alternative firm that offers a lower quality service due to a lack of essential data[59]. Data accumulation and its limited access enable incumbents' market power[60] and parallelly become an entry barrier for potential firms[61]. Therefore, the market power of the digital ride-hailing service platforms strongly exists because of entry barriers[62].

C. Data As a Barrier to Enter the Digital Ride-Hailing Service Platform Market

In the digital ride-hailing service platform, data is crucial[63]. An innovation based on data is a crucial component in the sharing economy like Gojek and Grab[64]. They collect users' data to analyze their habits to offer more reliable and accurate services[65]. Thus, algorithms' development and data analytics are added as essential elements that rivals cannot replicate[66]. Furthermore, even though many said that data is easy to collect,[67] it is not the case when it comes to data that potential firms would need to compete with incumbent digital ride-hailing service platforms[68].

Since the quality of the service depends mainly on the nature and amount of the data collected. In this sense, the data's value depends on its quality, like accuracy and timeliness[69]. Therefore, data is rising a barrier to entry for potential firms that want to compete in the market[70]. Barriers to entry give incumbents advantages over potential

September 2018), 8.

[55] Damien Geradin, *What Should EU Competition Policy Do to Address the Concerns Raised by The Digital Platforms Market Power?* (Discussion Paper No 2018-041, Tilburg Law and Economics Center, 12 December 2018), 4.

[56] *Ibid.*

[57] Plaitakis, *Digital Data and Competition Issue*, 6.

[58] Geradin, *What Should EU Competition Policy Do*, 4.

[59] *Ibid.*

[60] Cédric Argenton and Jens Prüfer, "Search Engine Competition with Network Externalities," *Journal of Competition Law and Economics* 8, no.1 (2012): 73-105.

[61] Marc Jarsulic, *Using Antitrust Law to Address the Market Power of Platform Monopolies* (Research Report, Center for American Progress, 28 July 2020), 2.

[62] *Ibid.*

[63] Calo and Rosenblat, "The Taking Economy: Uber, Information, and Power," 1629.

[64] Dai and Dang, "Big Data and Antitrust Risks in Close-Up."

[65] *Ibid.*

[66] Competition Policy and Law Group APEC Economic Committee, 45.

[67] Smichowski, "Is Ride-Hailing Doomed to Monopoly?" 43, 50.

[68] *Ibid*.

[69] Inge Graef, Thomas Tombal and Alexandre de Streel, *Limits and Enablers of Data Sharing: An Analytical Framework for EU Competition, Data Protection and Consumer Law* (Discussion Paper No DP 2019-024, Tilburg Law and Economics Center, 27 November 2019), 13.

[70] Inge Graef, Yuli Wahyuningtyas and Peggy Valcke, "Assessing Data Access Issues in Online Plat-

competitors[71]. It is sustained and arises from behaviors that are created to maintain market power[72]. Among several entry barriers, structural and strategic barriers are the most likely to be difficult and may take longer to overcome, making it hard for potential firms to enter the market.[73]

The structural barrier means that the barrier may be driven by technology and production methods, or other factors needed to establish an effective market presence[74]. Technology method, such as data analytics, is likely to form a high fixed cost with a low marginal cost[75]. Combined with network effects, these elements would raise a potential entry barrier[76]. Therefore, structural barriers are likely to arise in markets characterized by network effects[77] and focused more on technological innovation.

With a rapid technological innovation movement in digital markets, it cannot be denied that it is hard to challenge big firms' market positions due to data as an entry barrier and the indirect network effects[78]. Moreover, a high data cost structure gives the incumbents an advantage over potential firms[79]. It could create mechanisms by which a firm can weaken other firms through conduct that denies potential firms' scale[80]. The combined effects of data dominance and network effects make a massive barrier to entry.[81]

Secondly, strategic barriers can be known through incumbents' excess capacity to be placed against potential firms[82]. It is known that the digital ride-hailing services platforms' quality depends on access to data of user activity[83]. Choosing a particular digital ride-hailing service platform depends mainly on short waiting times and low prices for users, income opportunities, and flexible working hours for drivers[84], which can be obtained through analyzing users' behavior and habits on their platform[85]. Making data that shows how users interact within competing incumbent platforms is the most relevant data for potential digital ride-hailing service platforms[86].

Due to their user data dependence, the digital ride-hailing service platforms are

forms," *Telecommunications Policy* 39, no.5 (2015): 375, 383.

[71] Romeo Kariga and Lindiwe Khumalo, *Barriers to Entry, Exclusionary Strategies, and Inclusive Growth* (Conference Paper, 2nd Annual Competition, and Economic Regulation Week Southern Africa Conference Programme, 11-12 March 2016), 11.

[72] Jarsulic, *Using Antitrust Law to Address the Market Power of Platform Monopolies*, 2.

[73] Kariga and Khumalo, *Barriers to Entry, Exclusionary Strategies, and Inclusive Growth*, 1.

[74] *Ibid.*, 11.

[75] Hlina, "Dominant Undertakings in the Digital Era," 121, 123.

[76] Competition Policy and Law Group APEC Economic Committee, 35.

[77] Kariga and Khumalo, *Barriers to Entry, Exclusionary Strategies, and Inclusive Growth*, 11.

[78] Wolfgang Kerber, *Digital Markets, Data, and Privacy: Competition Law, Consumer Law, and Data Protection* (Joint Discussion Paper Series in Economics by MAGKS No 14-2016, Philipps-University Marburg, February 2016), 8.

[79] Competition Policy and Law Group APEC Economic Committee, 35.

[80] Katz, "Exclusionary Conduct in Multi-Sided Markets," 4.

[81] Raju Parakkal, *Antitrust in the Digital Era: Rethinking Dominance and Its Abuse* (Conference Paper, 6th CUTS-CIRC Biennial Conference on Competition, Regulation, and Development, 1-2 December 2019), 14.

[82] Kariga and Khumalo, *Barriers to Entry, Exclusionary Strategies, and Inclusive Growth*, 11.

[83] Smichowski, "Is Ride-Hailing Doomed to Monopoly?" 43, 49.

[84] Kai Chen and Edison T Tse, *Dynamic Platform Competition in Two-Sided Markets* (Working Paper, Standford University 19 February 2008), 11.

[85] Graef, Wahyuningtyas and Valcke, "Assessing Data Access Issues in Online Platforms," 375, 385.

[86] Smichowski, "Is Ride-Hailing Doomed to Monopoly?" 43, 50.

interested in keeping their systems closed[87]. New entrants may overcome the lack of data barrier by offering exceptional service, but that does not mean the barrier does not exist[88]. Without the help of past data, it is hard and expensive to acquire many users. It makes survival hard for a potential firm. Inevitably, most potential firms leave the market in the early stages[89].

III. ABUSE OF DOMINANCE IN THE DIGITAL RIDE-HAILING SERVICE PLATFORMS

A. Exclusionary Strategic and Data Indispensability

In the above discussion, it is already established that network effects and data dominance can give rise to strong market power[90]. The multisided nature of digital ride-hailing service platforms, indirect network effects, and data dominance can promote market concentration[91], making competition is harder to achieve[92]. Therefore, only a few digital ride-hailing service platforms able to survive[93].When the incumbents reach scale, they may be so influential that it is hard for any potential firms to enter, creating a potential for market tipping[94] and turn the incumbent into a dominant position.

Abuse of dominant position consists of leveraging market power in the form of exclusionary abuse[95]. Specifically, network effects as a market power raise exclusionary behavior issues[96] such as data access refusal[97]. It must be noted that the model of competition between an undifferentiated platform like digital ride-hailing services is eliminating competitors by deliberately limiting other firms to access data[98]. An incumbent can weaken competitors' ability to provide user benefits[99] by preventing potential firms from replicating the same size data[100]. A weakened competitor would lose users, thus provoking the drop of more users due to the loss of indirect network effects and leading to the drop of more users. It is shown that the indirect network effects reinforce the exclusionary behavior[101].

The digital ride-hailing service platforms should tread a fine line between meritorious and exclusionary[102] . Conduct falls on exclusionary if it harms competition by incapacitating competitors' ability to compete, which does not embody a merit-

[87] Graef, Wahyuningtyas and Valcke, "Assessing Data Access Issues in Online Platforms," 375, 385.
[88] Smichowski, "Is Ride-Hailing Doomed to Monopoly?" 43, 51.
[89] Competition Policy and Law Group APEC Economic Committee, 30.
[90] Katz, "Exclusionary Conduct in Multi-Sided Markets," 26.
[91] Katz, "Exclusionary Conduct in Multi-Sided Markets," 2.
[92] Graef, Wahyuningtyas and Valcke, "Assessing Data Access Issues in Online Platforms," 375, 385.
[93] *Ibid.*
[94] Plaitakis, *Digital Data and Competition Issue*, 6.
[95] Devolder, *The Platform Economy*, 148.
[96] Katz, "Exclusionary Conduct in Multi-Sided Markets," 4.
[97] Martin Moore and Damian Tambini, *Digital Dominance: The Power of Google, Amazon, Facebook, and Apple* (Oxford University Press, 2018), p. 71.
[98] Katz, "Exclusionary Conduct in Multi-Sided Markets," 26.
[99] *Ibid*., 21.
[100] Dai and Dang, "Big Data and Antitrust Risks in Close-Up."
[101] Katz, "Exclusionary Conduct in Multi-Sided Markets," 4.
[102] Devolder, *The Platform Economy*, 159.

based competition[103]. Access to data is an example that may cross such a line[104]. Theoretically, the possession of user data might give an undertaking the possibility of exclusionary behavior[105]. Such behavior includes limiting other firms' access to data and prohibiting users' data-sharing activity[106]. Making potential firms lack the necessary information to sustain in the market[107]. Moreover, the refusal to share and access the data may eliminate potential firms in the future market[108].

In digital ride-hailing platforms, user data is an essential input to compete[109]. It enables an offered service and sustains platforms' position in the market[110]. Moreover, data is not readily available on the market, neither it is replicable by a new entrant[111]. Data can only acquire through direct communication with the user on the platform, and other data available from third parties will not form an adequate substitute for the incumbent's past data[112]. Thus, it is likely that data in the digital ride-hailing service platforms are indispensable. Indispensability requires a hurdle in technical or economic that made duplication is impossible or difficult[113]. As already elaborated above, potential firms cannot equally compete with incumbents in the digital ride-hailing service platforms due to massive indirect network effects, data dominance, and incumbents' exclusionary conduct to lock up data access.

B. How the Law Respond to the Abuse of Data Dominance

In Indonesia, a business sector's dominant position is regulated under the Indonesian Competition Law (Ban of Monopolistic Practices and Unfair Business Competition Act 1999) defined in the two situations. First, there are no considerable competitors in the market. Second, the firm is regarded in the highest position among its competitors due to its financial capacity, the ability to access a supply, and the ability to adjust the supply and demand[114]. A dominant firm is prohibited from using its dominant position either directly or indirectly to limit a market and technology development and inhibits potential firms to become competitors from entering the market[115].

Indonesia Competition Supervisory Body ('KPPU') provides a guideline to interpret article 25 that regulates a dominant position. Under KPPU Guidelines on Art 25 Concerning Dominance Position, it elaborates on the abuse of dominance elements such as limiting market and technology development. Limiting markets and technological development means a form of behavior that hinders trade transactions, innovation, and services development[116]. Those elements are considered a broad

[103] Katz, "Exclusionary Conduct in Multi-Sided Markets," 3.

[104] Devolder, *The Platform Economy*, 159.

[105] Klaus Mathis and Avishalom Tor, *New Developments in Competition Law and Economics*, 7th ed. (Springer, 2019), 231.

[106] Plaitakis, *Digital Data and Competition Issue*, 11.

[107] Katz, "Exclusionary Conduct in Multi-Sided Markets," 6.

[108] Graef, Wahyuningtyas and Valcke, "Assessing Data Access Issues in Online Platforms," 375, 396.

[109] *Ibid*., 396.

[110] *Ibid.*

[111] Inge Graef and Jens Prufer, "Mandated Data Sharing is a Necessity in Specific Sectors," *Economisch Statistische Berichten* 103, no. 4763 (2018): 298, 299.

[112] *Ibid.*

[113] *Ibid.*

[114] Indonesia, Ban of Monopolistic Practices and Unfair Business Competition Act 1999, s. 1(4).

[115] Indonesia, Ban of Monopolistic Practices and Unfair Business Competition Act 1999, s. 25(1)

[116] Indonesia, KPPU Regulation No. 6 2010, cl. 7.

concept[117] and prone to vague interpretation. Thus, KPPU defined that limiting technology development means a dominant firm that has a technology unfairly refuses to license other firms[118]. Moreover, another element is the domination of inputs by the dominant firm. Such behavior occurs when a dominant firm has control over a significant input and refuses to supply the input to a competing firm so that competitors will have difficulty obtaining inputs, which will impact increasing production costs[119].

In Indonesia's Competition Law, several gaps need to be fulfilled to create healthy digital market competition, especially in the digital ride-hailing service platforms. First, there is no clear explanation in Indonesia Competition Law of what real forms can be categorized as abuse of dominant position regarding the digital market system. It needs to be explored more because technology is no longer merely a supporting factor but a significant factor. Second, the technology-based strategy mentioned in KPPU guidelines is rather traditional because it has not included data as competitive advantages and algorithm-based technology strategies in processing data for firms in the digital market sector, mostly ride-hailing service platforms. Third, KPPU held that abuse of dominance could usually be seen from a non-cooperative technology strategic behavior[120], such as refusal to grant access. However, KPPU has not yet regulated that data as an input and algorithm-based technology to develop the technology. Thus, impeding enforcement on the abuse of dominance of data-driven firms.

On the other hand, the European Union ('the EU') has successfully tackled the gap that Indonesia needs in the digital market. European competition law is known as the law in a substantial part of the world[121]. Under Article 102 Treaty on The Functioning of the European Union ('Art 102'), companies with market power may not engage in anti-competitive unilateral behavior[122]. The EU report notes that competitive parameters, such as innovation and service quality, are more essential than price-based effects in digital markets[123]. EU will probably agree on a dominant firm's liability of refusing to give user data access[124] than in Indonesia. When a dominant firm denies access to user data, it is constituted as a refusal to deal and may in the circumstances be considered as an abuse of dominance under Art 102[125]. Moreover, in Germany, the dominant firm's conduct is qualified as abusive if it refused to supply data where other firms need to engage in the market[126].

Several EU cases impose access to data. In the non-digital national EU cases, two cases are very similar to abuse of dominant position regarding data. First is an abuse

[117] Indonesia, KPPU Regulation No. 6 2010, s. 28.

[118] Indonesia, KPPU Regulation No. 6 2010, s. 29.

[119] *Ibid.*

[120] KPPU Regulation No. 6 2010, s. 14

[121] Eleanor M Fox, "Platforms, Power, and the Antitrust Challenge: A Modest Proposal to Narrow the US – Europe Divide" *Nebraska Law Review* 98, no.2 (2019): 297, 315.

[122] Viktoria Robertson. *Antitrust Law and Digital Markets: A Guide to the European Competition Law Experience in the Digital Economy* (Research Paper, University of Graz, Vienna University of Economics and Business, 28 February 2020), 13.

[123] Jacques Crémer, Yves-Alexandre de Montjoye and Heike Schweitzer, *Competition Policy for The Digital Era* (Research Report European Commission, Directorate-Generale for Competition, European Commission, 2019), 41.

[124] Graef, Wahyuningtyas and Valcke, "Assessing Data Access Issues in Online Platforms," 394.

[125] *Ibid*., 112.

[126] Heike Schweitzer, et al, *Modernising the Law on Abuse of Market Power* (Research Report, Germany Federal Ministry for Economic Affairs and Energy, 17 September 2018), 4.

of dominance case of a gas monopolist, *Gaz de France* (now Engie), who used its customers' data for its marketing service. Due to such data not being easily reproduced and developed under a legal monopoly, The French Competition authority mandated *Gaz de France* to open access to such data with its competitor[127]. Second, in Belgian, the National Lottery uses its customers' data to send a private marketing product advertisement[128]. The Belgian competition authority concluded that other firms could not reproduce the data, given its nature and size obtained by a legal monopolist[129]. In both cases, firms use their legal monopoly condition to compete unfairly with other firms using the data. Such action means a deliberately rugged playing field between incumbents and potential firms[130].

In the digital market, the IMS case judge considered data structure as a *de facto* industry standard[131]. The General Court follows such conditions in *Microsoft v Commission* [2007] ECR II-3601 validated mandatory access to data interoperability close to the digital market's *de facto* industry standard[132]. Moreover, the Court in *Microsoft v Commission* [2007] ECR II-3601 instructed Microsoft to provide access to its data interoperability because the competitor should be on the same playing field as Microsoft. The Court held that data interoperability is a part of technical development and regarded it as indispensable. In those cases, Indonesia should learn more about how the Court approach data as indispensable, especially in the digital ride-hailing service platforms that need past data to enter the market.

IV. SOLUTION: INCLUSIVE GROWTH THROUGH MANDATED DATA ACCESS AND DATA PORTABILITY

The main aims of competition policy are to promote healthy competition and enhance competitiveness[133]. Therefore, a competition policy may be a useful tool in promoting inclusive growth[134]. It means an equal opportunity to grow in the market[135], including equal access[136]. In the highly concentrated industries like the digital ride-hailing service platforms, it tends to have high barriers to entry, which may be structural or strategic, and this on its own may be used as an exclusionary strategy in the market that has the effect of limiting inclusive growth[137]. Thus, promoting inclusive growth requires public intervention through a competition policy that levels the playing field between the incumbent and potential firms[138]

Competition policy has numerous tools that may be used to achieve inclusive

[127] The Autorité de la Concurrence [Competition Authority], 14-MC-02, 9 September 2014
[128] Belgian Competition Authority, 2015-P/K-27, 22 September 2015
[129] *Ibid.,* 69-70.
[130] Graef, Wahyuningtyas and Valcke, "Assessing Data Access Issues in Online Platforms," 13.
[131] *Ibid.*
[132] Graef, Wahyuningtyas and Valcke, "Assessing Data Access Issues in Online Platforms," 13.
[133] Kariga and Khumalo, *Barriers to Entry, Exclusionary Strategies, and Inclusive Growth*, 3-4.
[134] *Ibid.*
[135] Ifzal Ali and Juzhong Zhuang, *Inclusive Growth toward a Prosperous Asia: Policy Implication* (Working Paper Asian Development Bank Series No 97, Economics and Research Department Asian Development Bank, July 2007), 10
[136] Kariga and Khumalo, *Barriers to Entry, Exclusionary Strategies, and Inclusive Growth*, 2.
[137] Kariga and Khumalo, *Barriers to Entry, Exclusionary Strategies, and Inclusive Growth*, 1.
[138] *Ibid.*, 2.

growth[139] by reducing entry barriers and lowering the cost of doing business[140]. A potential firm would be introduced into the market, which may effectively compete with the incumbents[141]. However, it is crucial to note that there is still no definitive applicable competition rules solution to solve a digital platform markets issue[142]. One potential remedy is mandated data access[143] to ensure inclusive growth and counter the effect of incumbents' high barriers[144].

Data has a characteristic that fosters competition[145] as it is regarded as a non-rival good, which means using data does not prevent other firms from using similar data[146]. Thus, it is convenient and easy to provide data to competitors. It often means using API (application programming interface) for data interoperability mechanisms, especially with current technical conditions[147].

Data portability is recommended where the market is undifferentiated, and there is a potential anti-competitive behavior due to high market concentration[148], such as the digital ride-hailing service platforms. Moreover, it is also applicable in the platform that relies on network effects[149] because if incumbents have a dominant position due to indirect network effects, it is likely to impede interoperability[150] and data access. Through mandatory data portability, potential firms would grab the benefit of incumbents' indirect network effect[151] and level the playing field.

An example of data interoperability is the financial sector regulated under Payment Service Directive 2 ('PSD2')[152] an EU regulation that aims to level the financial service's playing field[153]. In general, it enables interoperability of several technological communication[154] between banks as incumbent and financial technology firms as new entrants in financial service. Through PSD2 and its Guidelines and Regulatory Technical Standards of API standard[155], it gives other firms access to a payment account with the account holder's consent so the firms can launch a payment transaction

[139] *Ibid.,* 4.

[140] *Ibid.,* 1.

[141] *Ibid.*

[142] Geradin, *What Should EU Competition Policy Do*, 2.

[143] Peter Alexiadis and Alexandre de Streel, *Designing an EU Intervention Standard for Digital Platform* (Working Paper European University Insitute No RSCAS 2020/14, Robert Schuman Centre for Advanced Studies, Florence School of Regulation, February 2020), 31.

[144] Kariga and Khumalo, *Barriers to Entry, Exclusionary Strategies, and Inclusive Growth*, 1.

[145] Competition Policy and Law Group APEC Economic Committee, *Competition Policy for Regulating Online Platforms in the APEC Region* (Research Report No APEC#2019-EC-01.3, Asia-Pacific Economic Co-operation, August 2019), p. 35.

[146] Inge Graef and Jens Prufer, "Mandated Data Sharing is a Necessity in Specific Sectors," 298.

[147] Dai and Dang, "Big Data and Antitrust Risks in Close-Up."

[148] Barbara Engels, "Data Portability Among Online Platforms" *Internet Policy Review* 5, no.2, *(*2016): 1, 13.

[149] Peter Swire, *The Portability and Other Required Transfers Impact Assessment: Assessing Competition, Privacy, Cybersecurity, and Other Consideration* (Research Paper No 3689171, Georgia Tech Scheller College of Business, 8 September 2020), 1.

[150] Ian Brown, *Interoperability as a Tool for Competition Regulation* (Research Paper, OpenForum Europe Academy, November 2020), 23.

[151] *Ibid,* 24.

[152] Parliament and Council Directive 2015/2366/EU of 25 November 2015 on Payment Services in the Internal Market (PSD2) [2015] OJ L 337/35

[153] Inge Graef and Jens Prufer, "Mandated Data Sharing is a Necessity in Specific Sectors," 298, 300.

[154] Parliament and Council Directive 2015/2366/EU of 25 November 2015 on Payment Services in the Internal Market (PSD2) [2015] OJ L 337/35

[155] *Ibid.*

application or combine several account data into one application[156].

In Indonesia, the Ministry of Communication and Information Technology ('MCIT') has begun drafting a data interoperability rule that will be implemented in June 2020. However, the draft regulation is limited to government agencies, as its purpose is to serve as the foundation for government agencies in implementing mechanisms and processes of interoperability and interconnection between networks and electronic systems, as well as to support the more effective implementation of electronic-based government systems. Nonetheless, the draft law will include standards for data exchange between electronic systems, data interoperability criteria, and data interoperability monitoring and evaluation methods, among other things. As a result, it will be a solid starting point for MCIT to govern data interoperability in the private sector in the future.[157]

Before the government, especially MCIT introduces a draft regulation regarding data interoperability in the private sector, several issues need to be acknowledged considering the asymmetrical relationship between big companies and the consumer or individual. Personal data's fundamental right needs to be weighed up because the data operability mechanism heavily involves personal data[158], both identified and identifiable information. However, consent is not necessarily an issue in the digital ride-hailing service platforms because the collected data cannot be obtained without consent from users first[159]. A possible solution is to anonymize the data[160]. Nevertheless, it is hard to make entirely anonymous data[161] due to technological possibilities to re-identify individuals. Thus, the mandated data access through data portability must be user-centric.

User-centric means that data control is mainly on the user itself, while the firms provide a data portability mechanism to ensure inclusive growth. Therefore, there are three components to balance healthy competition and data protection. First, users have a right to receive data in an interoperable format. Second, users should have a right to transfer their data to other firms, which act as data controllers, without any technical and regulatory obstacles. Third, users must have a right to acquire direct transfer of their data between other firms[162].

Mandated data access through data interoperability is the key to healthy competition[163]. It will reduce the switching cost, minimize a high barrier to entry for potential firms, and prevent users from lock-in situations[164], diminish abuse of dominant firms' dominance, and promote innovation-based competition in the digital ride-hailing service platforms. Access to user data and benefitting from incumbents' indirect network effect does not mean that the potential firms do not work. Potential firms must develop algorithm-based data analytical tools to obtain valuable

[156] *Ibid.*

[157] Ministry of Communication and Information Technology, "Public Consultation on Draft Regulation of the Minister of Communication and Informatics Regarding Data Interoperability" https://www.kominfo.go.id/content/detail/27030/siaran-pers-no-74hmkominfo062020-tentang-konsultasi-publik-rancangan-peraturan-menteri-kominfo-mengenai-interoperabilitas-data/0/siaran_pers.

[158] Dai and Dang, "Big Data and Antitrust Risks in Close-Up."

[159] Smichowski, "Is Ride-Hailing Doomed to Monopoly?" 43, 50.

[160] Graef and Prufer, "Mandated Data Sharing is a Necessity in Specific Sectors," 298, 300.

[161] *Ibid.*

[162] Maurizio Borghi, *Data Portability and Regulation of Digital Markets* (Working Paper, Center for Intellectual Property Policy and Management, Bournemouth University, 1 September 2019), 48.

[163] Brown, *Interoperability as a Tool for Competition Regulation*, 48.

[164] Borghi, *Data Portability and Regulation of Digital Markets*, 20.

information from that data[165]. Therefore, both incumbents and potential firms will get a strong incentive to innovate their services because the competition is based on innovation rather than access to supply.

V. CONCLUSION

As part of the sharing economy system and digital market, the digital ride-hailing service platforms enable a person to utilize their asset through a platform network directly. Due to indirect network effects, the initial firms that offered a digital ride-hailing service platform thus become massive in a short period. Additionally, it is enhanced with innovations such as algorithm-based data analytic tools to offer more convenient service for users and riders, resulting in a lock-in effect and high market share and concentration.

User past data become an essential input to providing a reliable ride-hailing service, making it a distinct barrier to entry for potential firms. While at the same time, Indonesia has no clear competition regulation that obligates data access makes the incumbents reluctant to open such access to competitors. The incumbents' market position is getting strong due to indirect network effects and data dominance, leading to market tipping and might be harmful to healthy competition in the digital market. Therefore, a competition tool such as mandating data access and data portability might reduce entry barriers and provide inclusive growth and equal innovation-based competition.

[165] Graef and Prufer, "Mandated Data Sharing is a Necessity in Specific Sectors," 298, 300.

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