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The rise of multi-homing in Asia's ride-hailing industry

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THE RISE OF MULTI-HOMING IN ASIA'S RIDE-HAILING INDUSTRY

Getting it right secures environmental and economic wins for the present and future.

by Wang Hai

Grab, Gojek, Ola, and Didi, as well as many homegrown companies, are leading the charge in growing the ride-hailing market in Asia Pacific. In fact, the region is poised to become the world's largest ride-hailing market as it is projected to be worth US$240 billion by 2028.[1] For example, Singapore-based Grab has fought head-on with the global transportation giant, Uber, and ultimately emerged the winner. In 2018, it went on to acquire Uber's Southeast Asian operations, steadily expanding its reach into domains such as food delivery and digital payments. Its primary regional rival is its Indonesian peer, Gojek. As of January 2023, the Indonesian ride-hailing market is split evenly between these two companies.[2] It is no surprise that many drivers in Indonesia use both Gojek and Grab to ensure a steady stream of passengers and optimise their earnings. In research, we call this behaviour 'multi-homing'. For sure, this is not limited to Indonesia; drivers in other parts of the region also work simultaneously for multiple ride-hailing companies. What are the costs and benefits of multi-homing, and why is it important to get the multi-homing mix right in Asia Pacific's promising ride-hailing sector?

NAY: THE HIDDEN COSTS INVOLVED WHEN MULTI-HOMING

It is never cost-free for ride-hailing drivers to work on multiple platforms. They invariably incur two types of costs when doing so: switching and multi-homing costs. Drivers encounter switching costs when they migrate from one platform to another, say from Grab to Gojek. When they choose to *concurrently* drive for both, this behaviour produces additional costs (or what economists call 'disutility'). In fact, multi-homing across more than two companies may not be as improbable as it sounds; for example, in the Philippines, there are several ride-hailing providers across the country, such as Grab, Toktokgo, and Hirna, with a few more dominant in some cities (e.g., Manila, Davao, and Cebu). Not to mention that many taxi companies also have their own native ride-hailing apps such as MyBluebird by Bluebird Group, the largest taxi operator in Indonesia.

Drivers also incur switching costs when they need to install new apps on their smartphones, and undergo background checks, often forgoing income while waiting for approval to access the apps. Sometimes, upon obtaining approval, they may need to pay to upgrade or rent vehicles that meet the new platform's requirements. Such transaction costs vary across countries. For example, in Singapore, while a driver only needs one licence–the Private Hire Car Driver's Vocational Licence (PDVL)–to be a driver for any ride-hailing provider, Grab separately requires mandatory checks for older vehicles.

Apart from switching costs, there are multi-homing costs, which are additional costs incurred due to the very act of multi-homing. For instance, at a practical level, drivers may have to buy a second smartphone in order to monitor the apps at the same time effectively. They may therefore need to fork out more money as they consume more mobile data in the process.

YAY: MULTI-HOMING FOR MORE INCOME

Multi-homing may not necessarily entail losses. It can benefit drivers too. In Indonesia, drivers working on multiple platforms earn more than those who practise single-homing (i.e., they use one platform only). This has something to do with the pricing structure: while Grab enables drivers who commit to working more hours on its platform to earn more, Gojek pays more for the first three hours worked. In fact, the modelling that my co-researchers and I did tells us that to chalk up optimal earnings in a typical day, a multi-homer in Indonesia should spend 2.5 hours on Gojek and devote 13.5 hours to Grab.[3]

Our statistical analysis based on the Indonesian survey data also shows that the total supply of multi-homing drivers grows when multi-homing costs are reduced. Specifically, more Grab single-homers will also become Gojek drivers. This is intuitive. With lower multi-homing costs, more drivers will switch from Grab-only gigs to multi-homing during their first few hours for the sake of earning a higher income from Gojek.

YAY, NAY, AND WHAT'S NEXT

Getting the multi-homing mix in the ride-hailing sector right is important not only because of the sheer promise of the Asia Pacific market, but also because of its impact on the environment. Ride-hailing trips produce a greater carbon footprint than the trips they replace. On average, one ride-hailing trip is estimated to produce 69 percent more carbon emissions than the trips it replaces (or rather, displaces), including ones that could have been made using modes with a lower carbon footprint, such as biking.[4]

Of course, we cannot wish away ride-hailing. Therefore, we need to consider it as part of a broader design of the urban transport system. For example, we need to do more to encourage pooled ride-hailing trips, which have become a permanent feature of many ride-hailing services. Upgrading ride-hailing vehicle fleets to electric vehicles (EVs) is another option, given that EV models are likely to become more affordable over time. Change is already afoot. For example, in Vietnam, Vingroup and ride-hailing company Be jointly launched the country's first EV taxi service in April this year.[5]

We must also remember that, to some extent, the rise of ride-hailing is an outcome, not the cause, of a public transport system that is unable to deliver sufficient convenience to commuters. By itself, it is not a perfect solution, especially in the context of the climate crisis that confronts us today. Unsurprisingly, some ride-hailing companies have been more innovative than others. For example, in addition to carpooling, Didi in China enables users to plan a multi-modal journey, including mass transit, on its app. Policymakers and business leaders, as well as commuters, thus need to consider ride-hailing as part of a broader choice of existing urban transport modes, ranging from walking and biking to public transport (buses, trams, and subways), as well as emerging ones. For example, a trackless and driverless electric tram service (aptly named Autonomous Rail Rapid Transit or ART) has been running in multiple cities in China since 2018.[6] The rubber-tyred, battery-powered, multi-carriage vehicle has in fact gained palpable interest from other countries. For instance, a hydrogen-powered ART variant is scheduled to start its trial run in Malaysia in September 2023.[7]

Rapid advancements in urban infrastructure and technology are creating numerous opportunities, inspiring a variety of emerging transportation and mobility solutions. These attempts at innovation in turn reshape the everyday life of urban residents. I believe that these innovative solutions have the potential to substantively contribute to the transition to a more sustainable, efficient, and adaptable future urban mobility landscape in smart cities. AMI

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Endnotes

1 Statista, "Global Shared Mobility Market Size Forecast from 2021 to 2028, by Region (in Billion U.S. Dollars)", August 30, 2023.

2 Statista, "Market Share of the Ride-Hailing Transportation Industry in Indonesia from January 2022 to January 2023, by Order Volume", June 1, 2023.

3 From the 2021 survey, 12 percent of ride-hailing drivers worked for both platforms, and almost twice as many worked exclusively for Gojek (59 percent), as compared to that for Grab only (29 percent). See also Xiaotong Guo, Andreas Haupt, Hai Wang et al., "Understanding Multi-Homing and Switching by Platform Drivers", Transportation Research Part C: Emerging Technologies, 154, 2023.

4 Union of Concerned Scientists, "Ride-Hailing is a Problem for the Climate. Here's Why", 2020.

5 Tuoi Tre News, "In Vietnam, Food Delivery, Ride-Hailing Apps Embrace EVs", April 27, 2023.

6 Erik Buch, "ART: Another Rail-Less Tramway in China", Urban Transport Magazine, April 6, 2023.

7 Malay Mail, "ART: World's First Hydrogen-Powered Smart Tram Begins Journey to Sarawak (VIDEO)", July 20, 2023.