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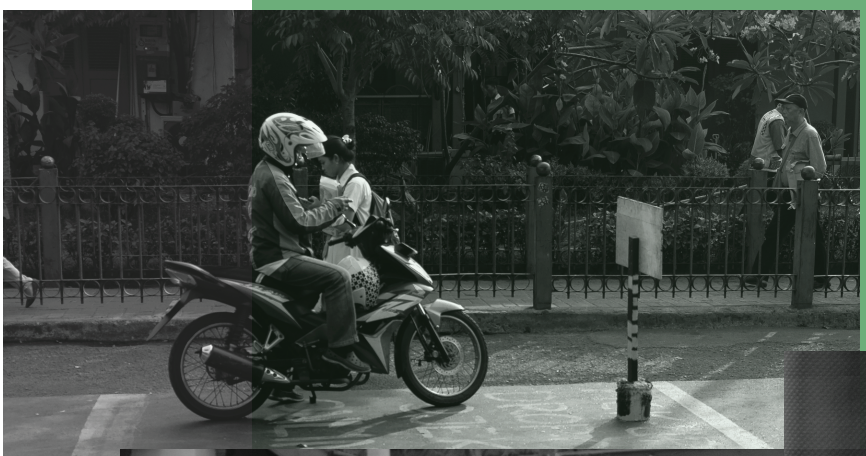






GARAI

REPORT 1

Online Ojek, the Informal Economy and Transport Orientated Development for Jakarta

Metropolitan Jakarta is in the process of a transportation transformation. Dealing with the chronic traffic crisis, associated economic losses and worsening air pollution has become a priority for the various institutions of local government. In particular there is a focus on integrating the many different transport networks of road and rail though station renovation and Transport-orientated development (TOD) projects.

Despite the massive effort to develop connections between a range of different services, one of Jakarta's most visible transport actors is typically not included in future development plans: the online ojek. Following the smartphone revolution, the transition from traditional local ojek to the app-based drivers has produced a green-jacketed army on the streets, forever changing the way people travel.

For many of Jakarta's citizens the online ojek has already become an invaluable component of their personal transportation network. More fuel efficient than a car, and able to move much more quickly through heavy traffic, a motorbike offers a range of critical advantages for passengers in a city of rising incomes and worsening congestion. Yet, perhaps because of a cultural association with lower income they are rarely included in the city's ambitious future plans.

While standard theories and TOD models are usually based on the development of networks similar to Western Cities, particularly Europe and Japan, specific solutions are required to the unique challenges and opportunities of transport management in metropolitan Jakarta. The motorbike is key to tens of millions of journeys every day in this sprawling city, perhaps more than any other global capital, filling the spaces left by a public transport network which remains inadequate.

While the quality and availability of public transport has improved dramatically in recent years, the extent to which it can keep up with Jakarta's rapid expansion and population growth is questionable. The incredible success and very visible presence of online ojeks at major transportation nodes is evidence of how far their business model is perfectly suited to the demands of the city in the 21st century. Indeed, according to a report by ITDP (Institute for Transportation and Development Policy), half of the city's online ojek users already combine online ojek services with public transportation, suggesting that online-public integration should be a focus of TOD planning in Jakarta.



Manggarai Area Map

This report is a preliminary investigation of the particular challenges associated with online ojek integration at key transportation nodes, using Jakarta's central Manggarai Station as a case study. The intention is to begin to imagine how a model of TOD specific to Jakarta might be developed which incorporates the role of the online ojek.

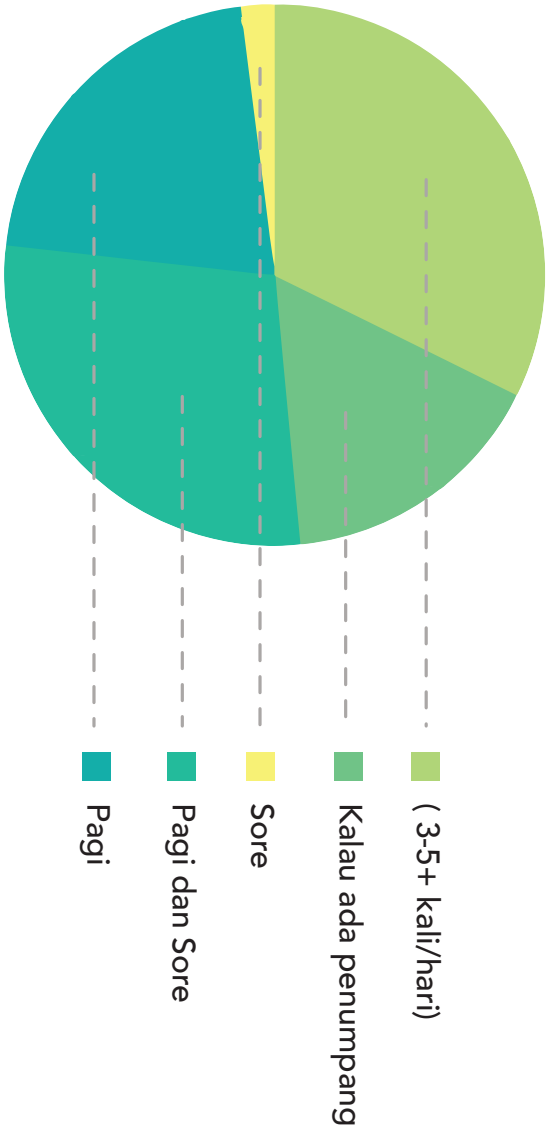
With a 1:1 driver to passenger ratio, motorcycle taxis are a relatively labour-intensive transport sector, and will likely require a different range of supporting services and infrastructure to mass-transit systems. Based on observations conducted around the station over several weeks and a number of initial interviews, an online survey was produced using google forms and distributed to 103 online ojek drivers, the results of which are examined in detail below.

1. Frekuensi



The issue of how often drivers congregate at the station was considered an important subject for investigation because it reflects their considerations and priorities as independent transport actors.

1. Seberapa sering Bapak/Ibu mangkal di kawasan Stasiun Manggarai?



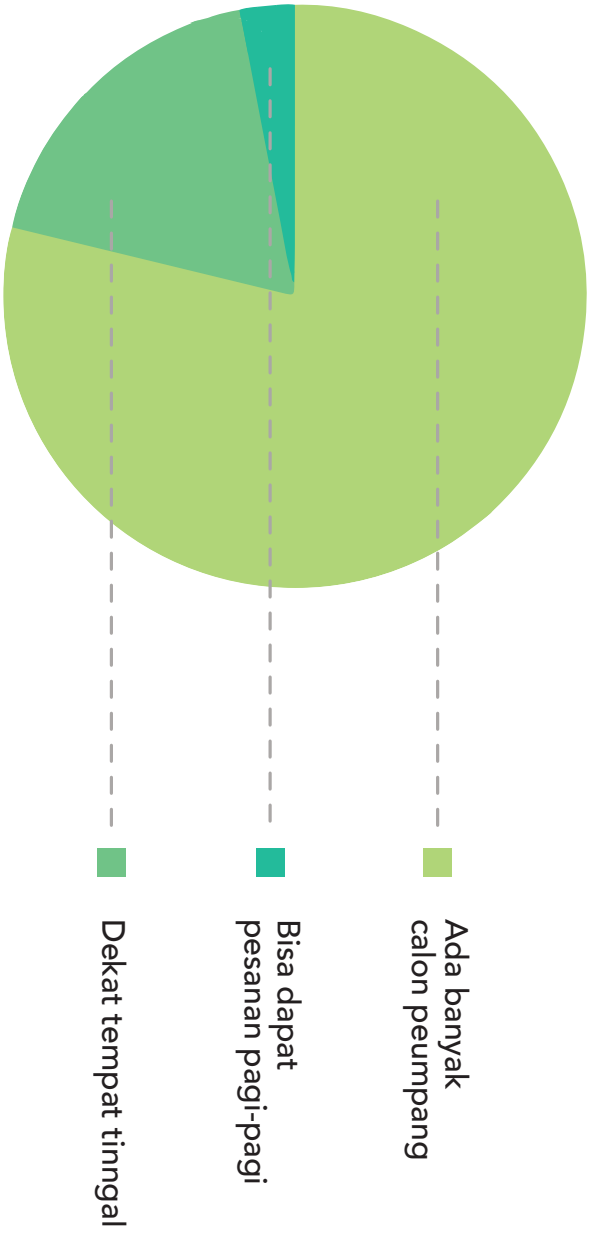
Perhaps surprisingly, despite no formal restrictions or limitations on service area, more than 80% of respondents reported gathering at Manggarai station on at least a daily basis, with morning reported as the busiest time.
This is likely a direct response to the large numbers of daily commuters disembarking at the station on their way to work. A majority of survey respondents can therefore be considered "Manggarai Ojek Online," regular service operators with a direct connection to the established transport network.



2. Motivation

As mentioned, there are no geographic restrictions on the ojek drivers' service area, despite which many choose to wait for passengers regularly at Manggarai station, some returning several times every day. Therefore it is important to try and establish a basic understanding of why the station appears such an attractive choice.

2. Kenapa bapak/Ibu memilih Manggarai sebagai salah satu tempat untuk mencari penumpang?



Clearly indicated by the large area on the chart above, an overwhelming majority of drivers who completed the survey identified the sheer number of potential customers which could be found at the station as their primary reason for choosing to operate there. By contrast, proximity of housing or accommodation to the station area would appear not to be the primary factor influencing an individual driver's choice, with a majority not living locally to the case study site. Other reasons can be considered relatively insignificant to the choice-calculus of the general population.

Even these two relatively simple datasets provide some valuable insight into a potential TOD model for Jakarta. Firstly, they indicate that a significant number of passengers regularly disembark from at Manggarai station, the city's main rail transport hub, in order to continue their journeys using the online ojek platform.
The majority of drivers congregating on a daily basis is also strong evidence that this is a structural rather than temporary choice by consumers to integrate public transport and online motorcycle taxis.

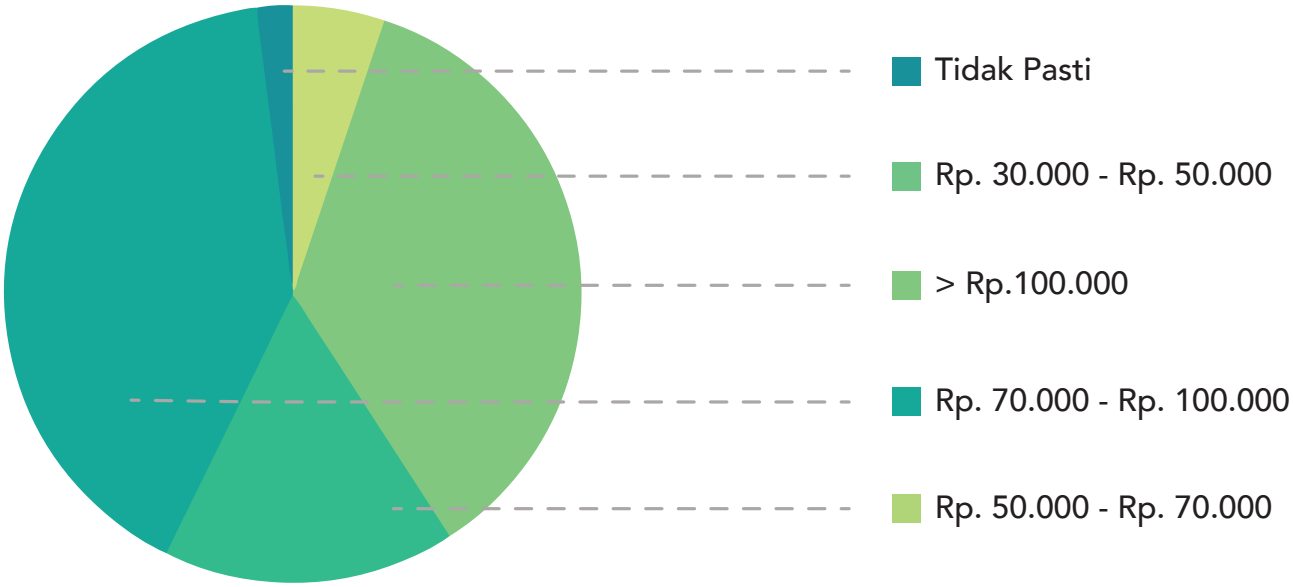
Given the potential for delays and disruption in bus and train services, particularly from other cities in the Jakarta Metropolitan region, the attractiveness of online ojek as a secondary transit option may not be surprising. If the focus of TOD policy in Jakarta is the integration of different transport options then the extent of significant existing online ojek and bus/rail service integration around Manggarai station should be considered.

Since few survey respondents consider station proximity a primary reason for congregating around Manggarai, it might be assumed that drivers regularly spending long periods of time in the station area rely to some extent on the range of available goods and services. The following survey questions explore these topic in more detail.

3. Income



3. Berapa rata-rata keuntungan kotor yang dapat Bapak/Ibu hasilkan setiap harinya?

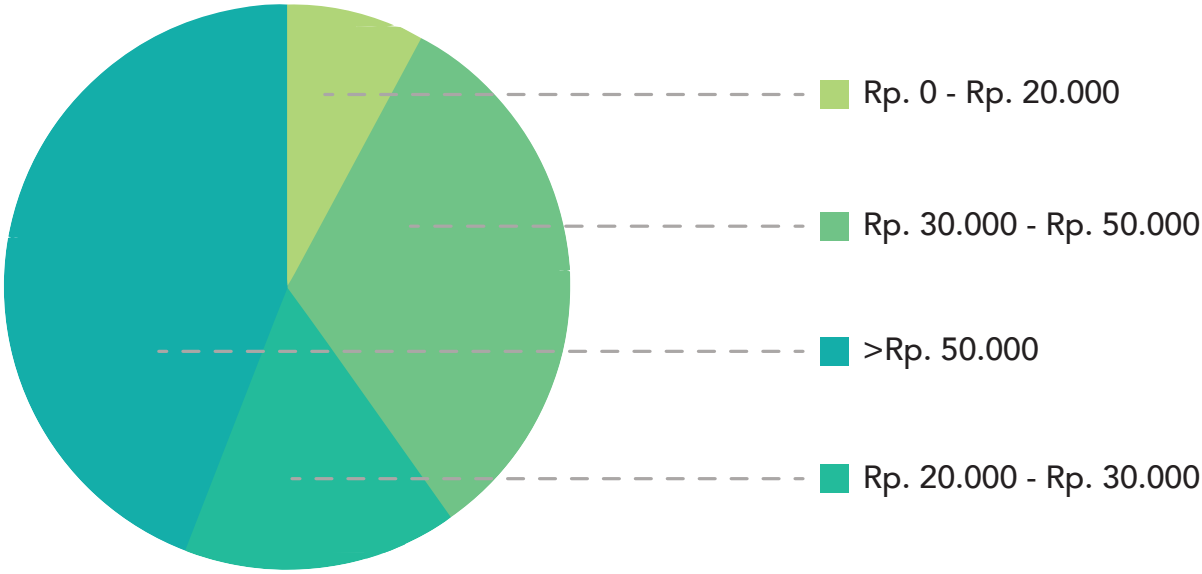


Despite some significant outliers, a majority (~61%) of online ojek drivers reported a daily average income of IDR100.000 or less before expenses were deducted. Further investigation will be required to distinguish between higher income brackets, but given the similar lifestyle of drivers who regularly congregate around the station area it can be assumed that the distribution of income for this higher-earning minority would still tend more towards the IDR100.000 mark than any more extreme divergence.

4. Daily Expenses

The relationship between average income and typical spending patterns will be an important factor in understanding the economic choice considerations of drivers around the manggarai station area, and the kind of goods and services which support their activities.

4. Berapa rata rata biaya untuk makan dan minum yang Bapak/Ibu keluarkan perhari saat ngojek?



In line with the relatively low gross daily incomes reported, a small majority of respondents (55%) reported an average daily expenditure of less than IDR50.000 for basic needs. This question focused on items not directly related to their work as motorcycle taxi drivers, such as food and drink, and other luxury items including cigarettes, for example.

This information highlights an extreme price sensitivity for a large portion of Manggarai drivers, with a profit margin of ~IDR50.000 per day. As such, what might be considered a relatively small change in income, for example IDR10.000, could represent a significant change in economic circumstances. For example, a typical meal at a low-end fast food chain would average between IDR25-40.000 despite questionable nutritional value.

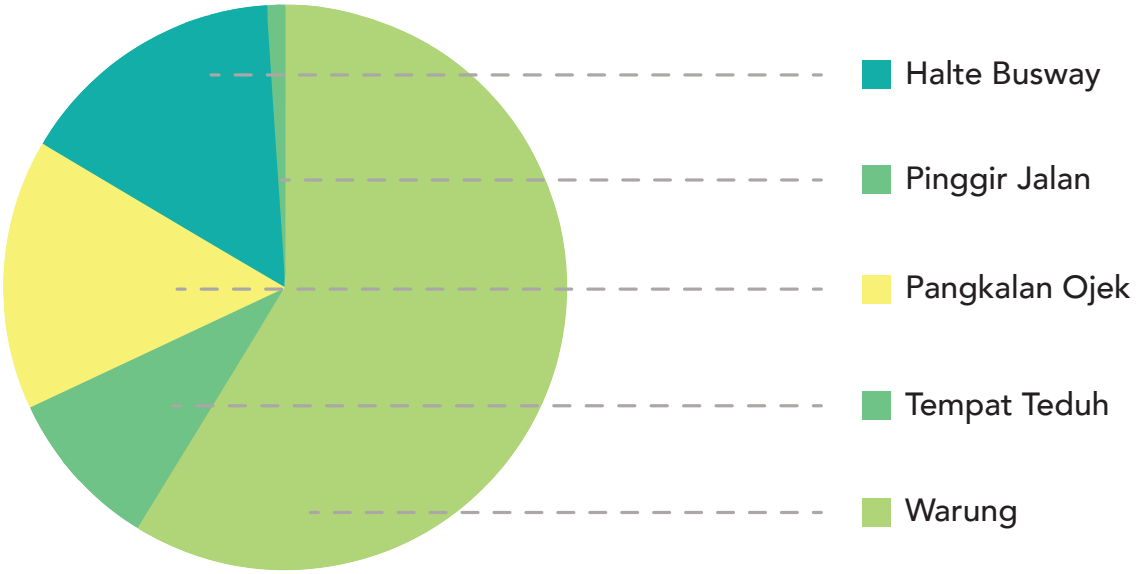
It follows, then, that the range of low-cost goods and services available around the station, typically provided by informal actors, are an important part of the online transport service network. Food and drink are of course among the most fundamental needs, with a variety of options available at prices which the formal sector appears unable to match.

The extent to which any individual driver will be affected by changes in the price of such goods and services will depend on their individual situation, and this topic requires further study to create a more complete picture of a typical driver's income-expense behaviour. Nevertheless, the importance given by drivers to a range of identified informal sector industries can reveal basic information about their relationship to the online transport sector. The following survey questions and responses explore these ideas.

5. Waiting Time

The nature of the online ojek business model inevitably involves a considerable amount of waiting time, particularly during the less busy hours between major commuter times. For the drivers it is an opportunity to eat, drink, and fulfil a range of other necessary tasks, as well as socialise. The potential for traffic disruption and the Jakarta climate, at times punishly hot and at others prone to heavy rains, will likely influence their choice of waiting area.

5. Dimanakah Bapak/Ibu biasa menghabiskan waktu (nongkrong) untuk menunggu orderan dari para penumpang?



Clearly shown in the chart above, by far the most popular option for drivers to wait between customers is a warung [small-scale kiosk typically selling food and a range of other products], with ~58% of drivers spending most of their time there. A highly visible phenomenon around the station area, this result was anticipated at the outset of the study, and reinforces the idea that informal sector actors are an important supporting network for online ojek services. Other popular responses included self-declared 'gathering points' (pangkalan), or simply by the side of the road.

It is important to note that in most cases these alternative waiting areas are also serviced by informal actors in some form or another, with mobile vendors of various kinds known to frequent any popular spots.

As an establishment, a typical *warung* will provide for almost all a driver's daily needs; a range food and drink options, shelter from the midday heat or heavy rains, and an opportunity for recharging a phone battery. Importantly they also provide social spaces for the drivers, where they are able to congregate with minimal obstruction to the road network.

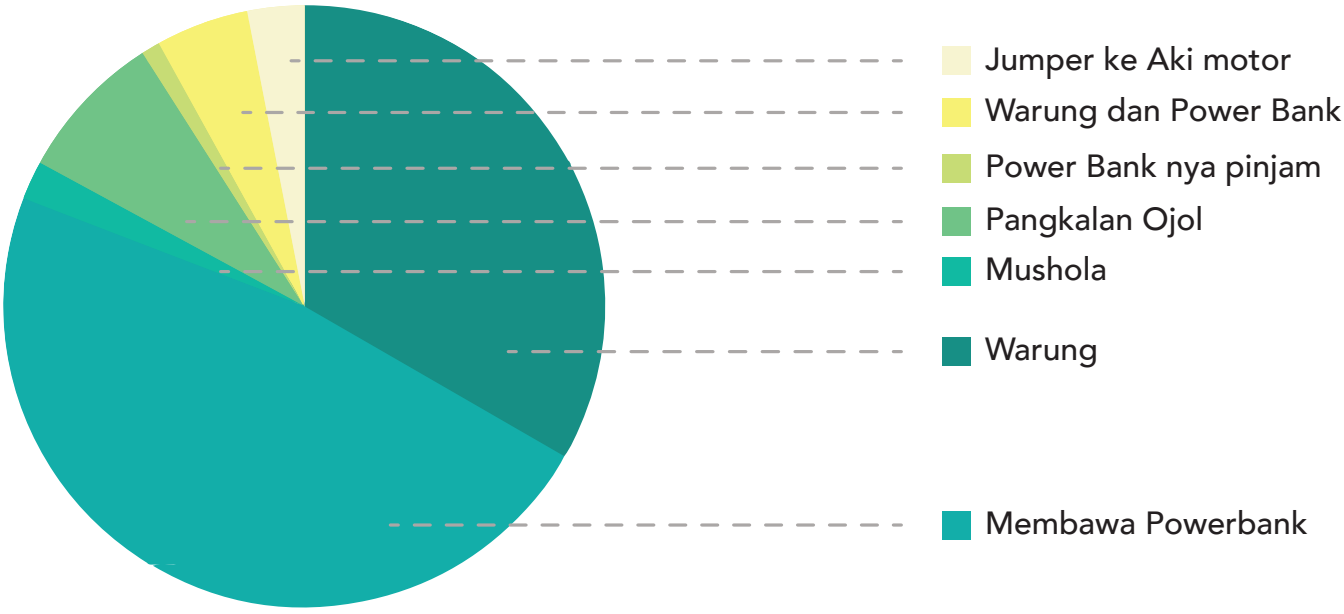
Despite the option given to include 'other' answers, no drivers reported spending a significant amount of time in restaurants, cafes or formal establishments of any kind (the only respondent to offer an alternative answer would most often wait in a bus shelter). As previously indicated this is likely because such business are beyond their realistic spending capacity.

6. Phone Charging

Crucial to the operation of online ojek is, of course, the ability to maintain an active cell phone. Access to electricity is therefore a key concern for drivers, particularly since many will continue using their phones while waiting for customers, watching videos or playing games, further draining the battery.



6. Dimanakah Bapak/Ibu biasa men-charge handphone ketika baterai habis?



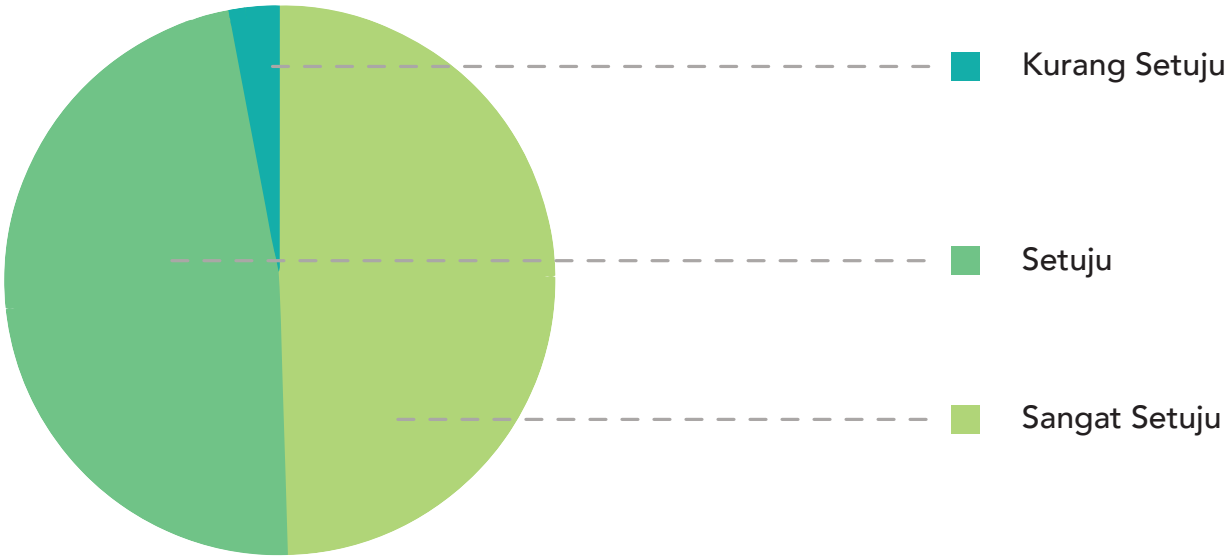
While a majority of drivers carried their own powerbanks as a primary method of battery charging, around a third of respondents, a significant minority, reported that they would typically charge their phone at a warung. Anecdotally, some of the former claimed that they would often charge their powerbanks at the warung, particularly those who regularly spent more than 10 hours congregating around the station. A number of local warung have already established facilities and pricing policies for this purpose.

7. Warung

A common sight around Manggarai station, as in the rest of Jakarta, warung represent a highly versatile typology of small business providing a wide range of goods, typically food, drinks, cigarettes, phone credit, and other daily use items. The relationship between the Manggarai drivers and the local warung was noted during preliminary observations of the station area.



7. Apakah Bapak/Ibu setuju apabila keberadaan warung di Manggarai tetap dipertahankan?



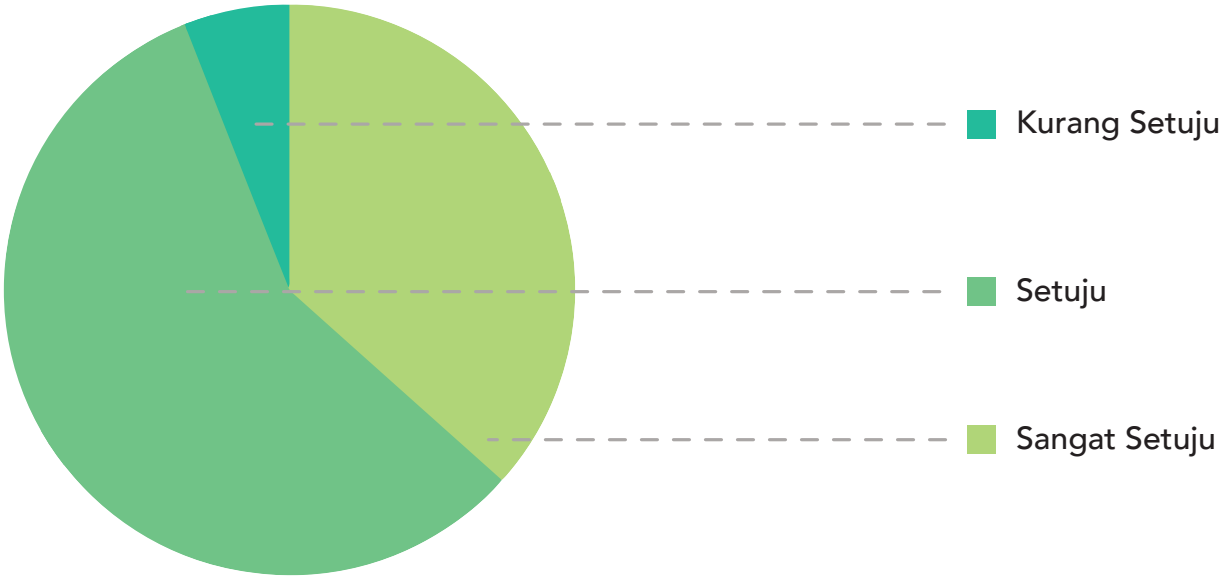
Unsurprisingly, given their central role in the daily lives of drivers identified in previous survey responses, almost all drivers (97%) agreed that the presence of warung around the station area should be maintained in the future. Around half (49.5%) strongly agreed with that sentiment.

8. Maintanence Services

A number of small-scale or home businesses operate in the station area specialising motorbike maintenance and repair. Limited space prevents working on cars or larger vehicles, and motorbikes are typically serviced by the roadside directly.



8. Menurut Bapak/Ibu selain warung, apakah perlu ada fasilitas pendukung seperti bengkel tambal ban dan/atau montir disekitar Manggarai?



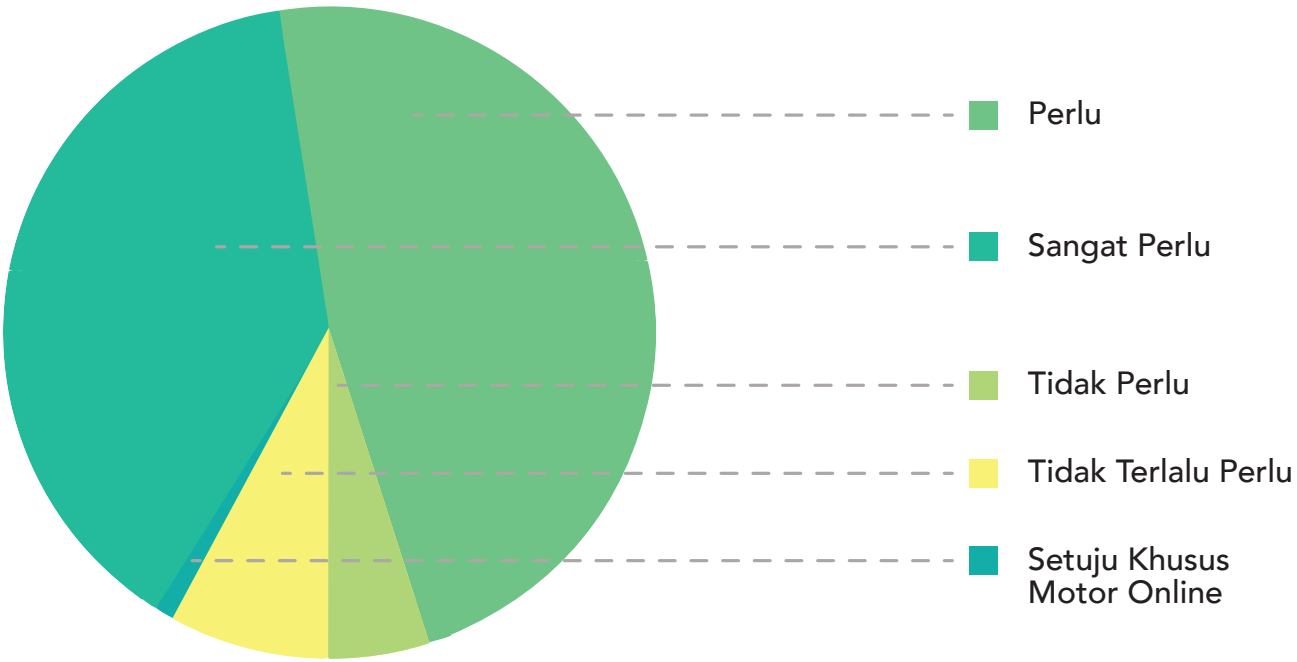
As would be expected for those who spend a significant amount of time around the station, and rely on their motorbikes for a primary income, there was a widespread dependence on maintenance services such as mechanics and tyre repairs reported in the survey (94% either need strongly need).
Local access to these services helps drivers to avoid costly, time consuming and potentially obstructive journeys to other locations without a functioning vehicle.

9. Fuel

Similarly, a large majority (86%) of respondents reported needing a fuel pump in the vicinity to some degree or another. At present this role is largely filled by informal petrol vendors or more permanently established 'pertamini.' Other drivers reported typically seeking a place to refill their petrol while on the road, or before returning to the station.



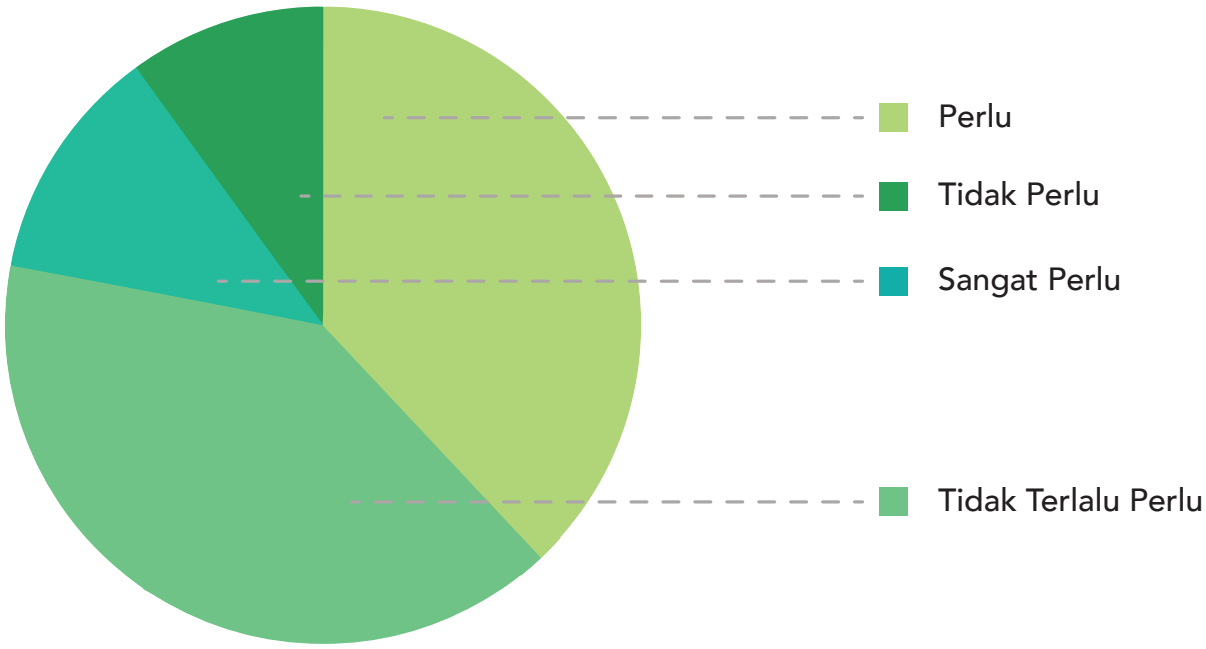
9. Apakah perlu ada fasilitas pendukung seperti pom bensin disekitar Manggarai?



10. Helmet Cleaning



10. Apakah perlu ada fasilitas cuci helm di sekitar Manggarai ?

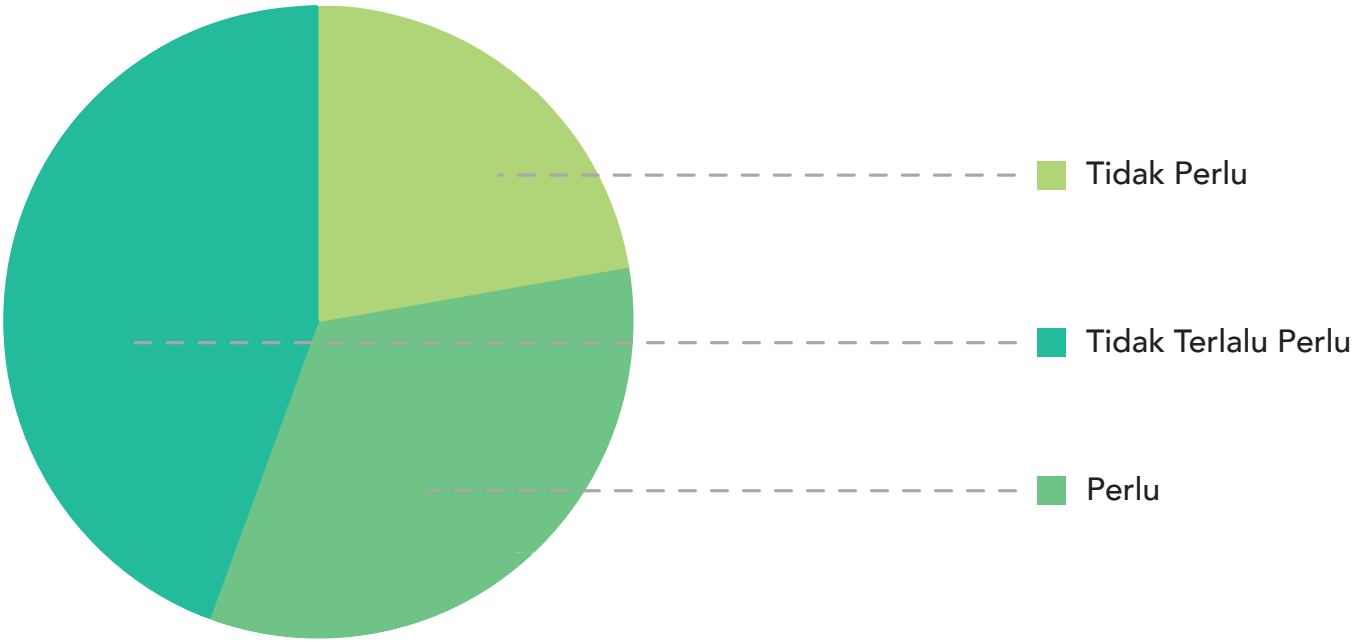


By contrast, a majority of drivers reported that they could largely do without specific helmet cleaning services at the station, despite anecdotal reports of customers unsatisfied with unclean helmets. Most provided hair covers for their passengers as an alternative, or took care of the helmet cleaning independently when at home.

11.Seat and Saddle Repair



11. Apakah perlu ada fasilitas pendukung seperti Tukang jok disekitar Manggarai ?

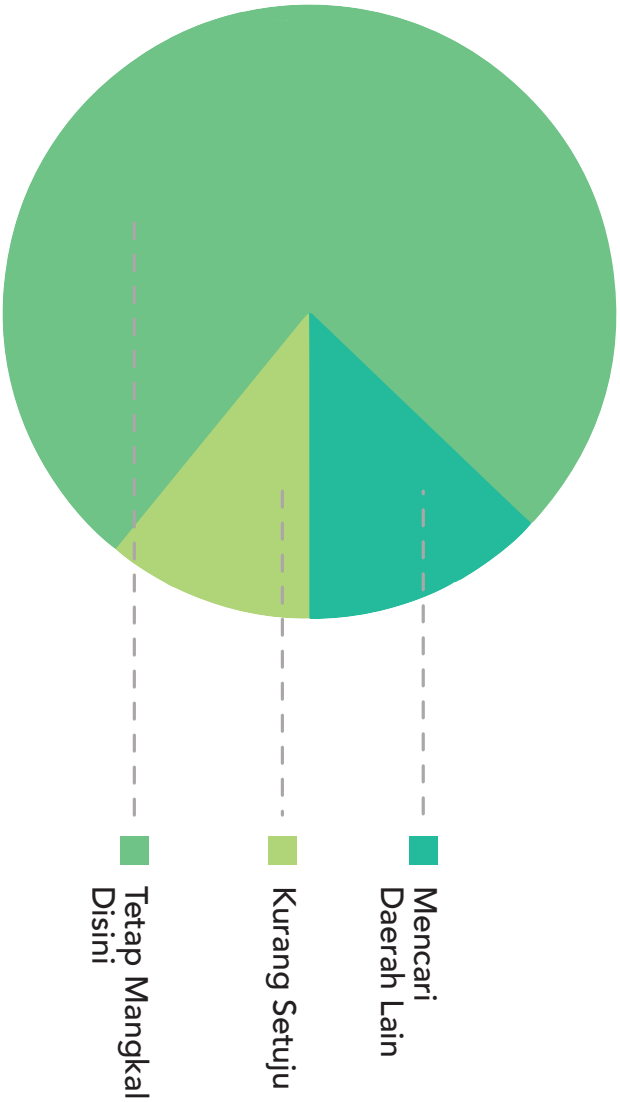


Similarly, when it came to the issue of repairing the motorbike seat or saddle, a majority of drivers were confident that they could find someone to take care of the job in their local neighbourhood, without using time otherwise spent searching for customers around the station. Only 50% of drivers reported needing such services around the station.

12. The Future

New station developments are already underway around Manggarai station, with plans for dramatic changes to existing facilities, road infrastructure and land use. The extent to which these changes will impact drivers, and therefore the online-public transportation network, should be an important consideration for the future. The question focused on the potential changes to driver behaviour should the aforementioned facilities not be included in the new design.

12. Bagaimana jika semua warung dan penyedia fasilitas saat ini (seperti warung, tukang tambal ban) menghilang?



Despite reporting varying degrees of dependence on the range of informal goods and services mentioned in the survey, a majority of drivers stated that they would continue to congregate around Manggarai station regardless of what services were available, citing the high number of potential customers as the most important decision making factor. More than a fifth of respondnts reported they would either search for a new location (12.9%) or were considering it (10.9%). Both sets of results are potentially significant for future station planning, traffic management and infrastructure development.

For those drivers intending to continue congregating around Manggarai station, the provision of key facilities is a critical issue. Without adequate space to wait for a pickup, the potential for road obstruction is clear. Large groups of drivers waiting by the roadside could cause problems for road-based transport, including integration with rail services, and other vehicle users. Such issues would surely only be exacerbated by those drivers moving on foot, in need of repair, maintenance or fuel.

An alternative would be to restrict motorcycle access to the station area, suggested by some analysts. Such a policy would have clear negative implications for metropolitan commuters in terms of waiting times, and potentially expense, depending on the extent of such restrictions. Typical prices for online motorcycle taxis are generated based on a range of factors including supply and demand, and a long or difficult pickup process may dissuade many individuals drivers from station pick-ups.

Similar effects could be anticipated following the decision of other drivers to seek passengers elsewhere. The supply and demand relationship between public transport (rail) and online transport (ojek online) is poorly researched, but a potential 10% reduction in driver supply will likely increase both waiting times and journey cost for online passengers.

A combination of these factors may increase the attractiveness of private transport options over a typical public-online journey, leading commuters to avoid Manggarai station because of the potential for disruption and delay. This is particularly true for the 80%+ of metropolitan Jakarta's population living more than 1km from the nearest public transport option (ITDP, 2016), and for whom private cars remain a viable alternative.

It is also vital to consider that the extent to which such a phenomenon might occur could well be a matter beyond the driver's choice. Despite a determination to continue servicing the station area, it is entirely possible a lack of available food, drink and other options nearby could challenge the economic viability of such activities. In such circumstances, even greater reductions in driver numbers could be expected.

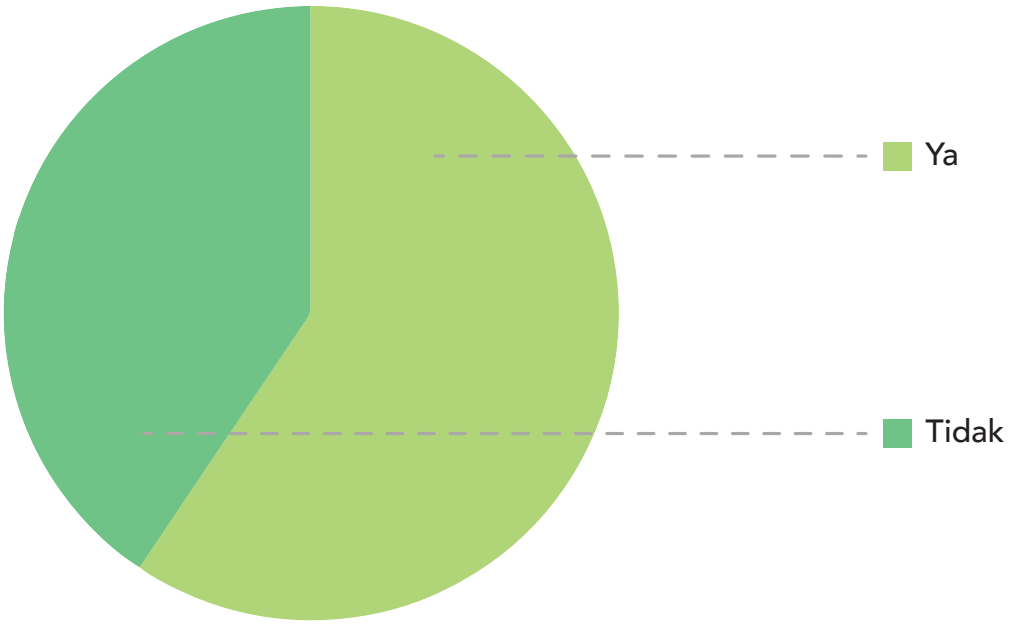


13. Organisation

The presence of motorcycle taxi drivers' associations, (persatuan) is a growing phenomena in Jakarta, a subject which deserves further study as a component of the transport system. A majority of manggarai drivers reported membership of such an organisation, although the function and benefits are not clear.



13. Apakah Bapak/Ibu tergabung sebagai anggota persatuan sopir online? (Ya/Tidak)



Kesimpulan dan Rekomendasi (Conclusions and Recommendations)

A emerging narrative in urban planning and transport policy positions stations and terminals as not only transportation hubs, but also as economic nodes within the urban landscape. It is also important to consider the extent to which these vital infrastructures are also sites of intense social activity. While general design considerations for TOD can be helpful in concept design and preliminary assessment of key outcomes, it is clear that these principles must be modified in line with the real-life circumstances of the cities in which they hope to be implemented.

Despite its lack of recognition by either local or national government, the rise of the online motorcycle taxi has been an organic process, a natural progression from the decades-old motorcycle taxi culture of the city. In recent years online ojek have become a central feature of the urban transport network in Jakarta, a city plagued by shortfalls in public transportation and an ever-expanding urban sprawl. The reasons for their popularity are extremely diverse, but likely include convenience, availability and cost (ITDP, 2017)

The attractiveness of public transport options, at least in the short-term, could be greatly improved through partnership with and integration of online motorcycle taxis around key stations and terminals. For manggarai in particular, undoubtedly the metropolitan region's most important transit hub, station redevelopment should align with the reality of daily life and passenger behaviour. With no spatial limitation imposed by the ride-hailing companies, nor the drivers themselves, the presence of such large, regular numbers of motorcycle taxis around the station is clear evidence of their attractiveness to consumers.

The connection between online motorcycle taxi drivers and the informal economic networks around manggarai station require further investigation, but data collected in this survey allows several preliminary conclusions to be drawn:

– A majority of drivers operate with a relatively low profit margin, far less than would be required to fulfil their daily needs exclusively by using formal enterprises which are typically more expensive.

– Local Warung, a typically informal business model, provide many of the services drivers rely on for their daily needs. The flexibility of informal enterprises allows them to adapt more easily to changing conditions and take advantage of new opportunities, such as the provision of charging stations for drivers regularly congregating around the station.

– Lacking such options, a majority of drivers who intend to continue congregating around the station could potentially cause a range of traffic congestion issues, depending on the extent to which spaces are provided for them.

In the survey's final question, drivers were asked to share their ideas, hopes and recommendations for the future development of Manggarai station. Most agreed that the current situation in the area was unsustainable, and caused significant issues for all transport actors moving through the area. Rather than a multiple choice question, this was left open for drivers to complete as they saw fit, despite which an overwhelming majority included a similar response: the provision of a 'shelter' or small terminal exclusively for online ojek.

Such ideas have been trialled in the past, with small covered areas provided here and there across the vast urban sprawl of Jakarta, but meaningful integration of online motorcycle taxis with the wider public transport network will require a more invested approach.

An ideal shelter would provide sufficient capacity for a large number of drivers and their vehicles, keeping them clear of the roadway while waiting for customers and providing an easily accessible and identifiable pick-up point for those transiting to continue their journey with an online ojek. It would also need to provide for the basic needs of drivers, who may spend several hours at the shelter during bad weather or when few customers are available. This would necessarily include food, drink, toilets and access to electricity, but also a small fuel station, mechanic, and potentially other useful services. The intention would be to reduce the negative impacts associated with large numbers of motorbikes congregating around the station, while improving access to a vital transport option in a city where station proximity is a major issue.

The eventual design of such a shelter would require consultation with a range of actors, including architects, engineers, traffic management experts, and of course the drivers themselves. The potential to find employment in such a facility, particularly for those who had previously operated in the station area and are experienced in dealing with motorcycles, would be one way for the potentially disruptive redevelopment of the station area to manage relations with the local community.

The issue of economic sustainability would also need to be assessed, including the potential for a membership or access fee through which the drivers themselves could support the maintenance of their new shelter. Innovative pricing strategies have long been implemented by the traders and small business owners around the station to take advantage of this new market of online ojek drivers. Their foresight and flexibility may well hold the key to developing a model of TOD tailor-made for this unique metropolis.

Areas of Further Study

A number of issues were raised while conducting this study which point to other areas of interest and potential further investigation.

– The income-expense relationship of online ojek drivers needs to be more thoroughly examined. This would include case studies of spending patterns to differentiate potential lifestyle difference (for instance between locals and transmigrants, those with families, age brackets etc), and a wider survey to map a greater range of daily incomes and living costs. Questions surrounding an individual driver's daily targets and how they are set would also be an important area of research. Such a study would be an important part of developing a reasonable pricing strategy for any potential shelter or other online ojek infrastructure around the station.

– Absent from this study but mentioned in a majority of responses was the lack of public toilet facilities available at the station. This would, again, be a critical design consideration for any new developments which do not envision an absolute ban on motorcycle taxis operating around the station area. The potential implications of such a policy have been outlined above.

– Finally, the emerging instituation of the 'driver's club,' 'brotherhood,' or 'community association' (persatuan/komunitas) remains poorly understood. Present across the city, the function, benefits and obligations associated with these informal organisations is unclear. At face value they appear to suggest a return to the traditional model of local ojek or 'ojek pangkalan,' but this is a purely superficial observation.

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