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GLEAMING INSIGHTS ON DELIVERY PARTNERS THROUGH ADMINISTRATIVE DATA

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Topic: Gleaming insights on Delivery Partners through administrative data

Introduction

Delivery services have been a pivotal in all sectors as people seek convenience and access to global products. It has transformed the way business works, especially in the food & beverage and retail sector. The first food delivery service is believed to have taken place in Korea for cold noodles in 1768 (Seouland, 2016).

With technological advancements like the World Wide Web (WWW) and Global Positioning System (GPS), delivery work can now be calibrated quickly and efficiently. Consumer demand is also spurred by easy access to personal computers, mobile phones and internet access.

In today's fast paced environment, delivery services provide consumers with convenience as the items or meals can be delivered to their doorstep by placing a simple order on their smartphone or computer. This would eliminate the need to travel to a physical location to queue and acquire the desired service or products. Delivery services also solve the accessibility issue for people living in areas with limited transport options or persons with mobility issues or disabilities. People prioritize work-life balance more and are willing to spend on services that will ease their life and reduce stress.

COVID-19 has further accelerated the growth of the delivery business as there is a need to ensure access to goods and services while considering public health and safety. The global food delivery market has tripled since 2017 to a market worth of more than \$150 billion (Kabir Ahuja, 2021). To prevent further spread of the virus, safety measures such as lockdowns, social distancing and restriction on business operations were implemented by governments around the world. As such, individuals can only rely on delivery services for their meals, groceries, and other essentials. Several brick-and-mortar businesses such as restaurants, supermarkets and retail stores were forced to limit their operations. In order to keep their operations afloat, businesses transformed their operations to be online and delivery focus to continue serving their customers.

The increase in demand for delivery services has created a vacuum for delivery workers. This was almost filled by workers whose job were disrupted due to COVID-19. This includes workers working in sectors such as retail, aviation, and arts.

The pandemic has led to a fundamental shift in consumer behavior as people are more accustomed to the convenience of delivery services and businesses have invested in assets and training to provide online services. This behavior shift is likely to persist, driving continual demand for delivery services in the long run.

This report looks at delivery partners who in Singapore's context are own account workers which partners with companies (e.g Grab, Deliveroo, FoodPanda) to use their platform to get jobs. Some equivalent global platforms are Uber Eats, DoorDash and Postmates.

Singapore's delivery work landscape

Singapore has 221,800 residents¹ who are own account workers. There was a decline in regular primary own account workers (from 202,700 in 2022 to 187,800 in 2023). Out of which, an average of 39,800 workers (full-time and part-time) are delivery partners.

As the economy shifts back to norm from the pandemic, there is a decline in regular own account workers as people opt for regular employment. For the primary own account workers, most of them preferred this work arrangement because of greater flexibility (46%) and freedom in choice of work (25.4%)². The delivery work available covers food and parcel delivery. Buying goods and services online is quite common in Singapore due to the busy lifestyle.

Delivery work is accessible as it has low barriers of entry. This would mean that minimal education or specialized training is required, thus allowing entry for workers of diverse backgrounds. An interested party will just need to register their interest with one of the platform providers and go through simple training. Personal transport options are quite diverse ranging from bicycles, e-scooters, e-bikes, motorcycles, cars or by foot.

Individuals find the work more engaging and dynamic as compared to more repetitive and mundane jobs such as data entry clerks or cashiers. The workers find it engaging since the work involves several skillsets such as navigation, time management, customer services and simple problem solving.

Due to Singapore's small and compact landmass (734.3km²/283.5 sq mi), delivery partners can have good income potential as they are able to plan and stack multiple jobs from similar or different platform to maximize the earnings from each trip. For example, taking multiple delivery orders from McDonalds which are bound for delivery to the same district. The small proximity has also given rise to delivery walkers who are workers who deliver food or parcels on foot. This is a common sight in Singapore's central business district which covers an approximate radius of 5km/ 3.1mi.

Singapore's efficient infrastructure in terms of transportation and logistics, including modern roads, efficient public transport networks and advanced GPS coverage allows for businesses to provide smooth and efficient delivery services. This is enabled by Singapore high connectivity in terms of digital technology and internet access.

Based on the reasons above, this has also attracted part-time workers such as housewives who are looking to supplement their household income, students who are looking for vacation jobs and semi-retirees who are looking for flexible work arrangement. However, it is important to note that delivery work still requires hard work and dedication.

Given the size and importance of this workforce, it is imperative to provide adequate assistance and support in the interest of the workers and companies.

¹ Manpower Research and Statistics Department (Singapore). (2023). Comprehensive Labour Force Survey.

² Manpower Research and Statistics Department (Singapore). (2023). Survey on Own Account Workers.

Corporate negotiations and partnership

In Singapore, there are multitude of delivery platforms such as international giants like Amazon and Deliveroo, as well as local players like FoodPanda and Grab. The engagement and negotiation process proved challenging, given the diverse corporate policies and data legislation that necessitated careful consideration.

During the initial negotiation, companies have expressed valid concerns regarding data privacy and security, particularly as we are requesting for personal and transactional data. In Singapore, the Personal Data Protection Act (PDPA) governs the use of personal data where companies can face legal repercussions for any mismanagement or breach of personal data.

Furthermore, some companies have emphasized that their data is a strategic asset that contributes to their competitive advantage. Sharing this data with external parties, including government agencies, could potentially compromise their competitive position. Additionally, they have highlighted resource constraints, citing the need for additional manpower and system efforts to facilitate regular data provision.

Discussions reached a standstill on multiple occasions, particularly with international companies, as further deliberation is necessary to address multi-country legislative concerns. Concurrently, Singapore has established an advisory committee of platform workers, involving government bodies such as the Ministry of Manpower (MOM) and Ministry of Trade and Industry (MTI), as well as industry leaders like the Singapore National Employers Federation and Singapore Business Federation. This advisory committee also includes relevant unions, trade associations, and academia to provide valuable perspectives on workers' concerns and public interests.

During the multilateral discussions of the advisory committee, MOM successfully persuaded the less cooperative companies to share data by emphasizing the significance of data in shaping policies that benefit workers and safeguard the companies' operations. This included the possibility of introducing government schemes aimed at covering workers' injuries which promotes worker welfare and support business continuity.

The negotiation is an on-going process as new businesses are venturing into platform work. One example is Lalamove which specializes in delivery of bulky items such as furniture and large electronics. The support from the companies have allowed has to form a regular of administrative data on delivery partners.

The data received from different companies have different format and characteristics. As such, we will need to clean and standardize the data before analysis. During the process, we are able to identify errors, inconsistencies, and inaccuracies within the dataset. In-depth clarifications were conducted with the companies to resolve the issues that were detected. Standardization, on the other hand, involves transforming the data into a uniform format to facilitate meaningful comparisons and analysis. This may encompass converting units of measurement, harmonizing date formats, and normalizing categorical variables.

Insights on delivery partners

Unlike a regularly employee whose work arrangement is classified into full-time or part-time based on their working hours under the Employment Act in Singapore, there is currently a lack of regulation governing delivery partners. To draw parity with regular workers for analysis purpose, we have applied the hours worked for full-time workers (35 hours per week) to our delivery partners data.

Profile of delivery partners

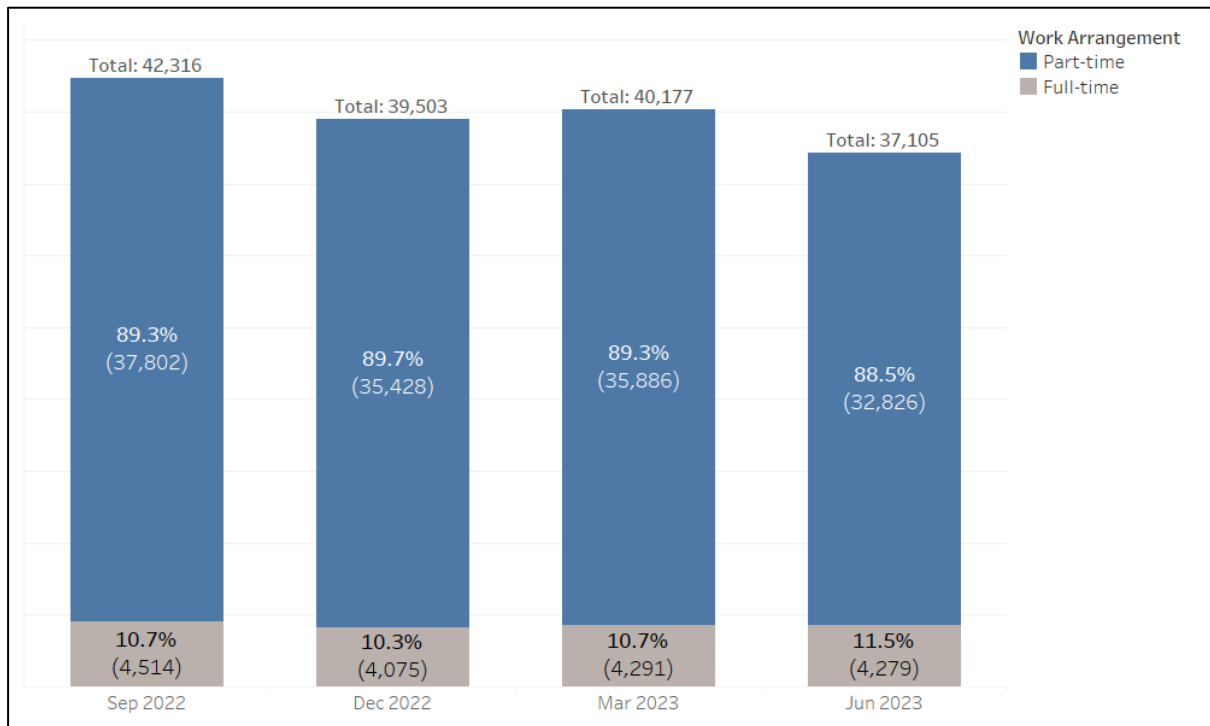


Figure 1: Delivery partner workforce by work arrangement

The share of part-time delivery partners remained high at an average of 89.2% between 2022 to 2023. The high proportion of part-time workers reflects a transient work nature in the platform delivery scene. The flexibility in work arrangement and job autonomy makes platform delivery appealing to individuals who are seeking supplementary income that can't commit to a fixed schedule. This includes individuals balancing work with other commitments such as education or caregiving responsibilities.

The peak period for delivery demands typically occurs during evenings, particularly around mealtimes, and on weekends. This presents an opportunity for full-time workers to engage in part-time delivery work, supplementing their income. However, the primary policy focus remains on supporting full-time delivery partners, as this is their primary source of livelihood. There are various areas where improvements can be made to better support them.

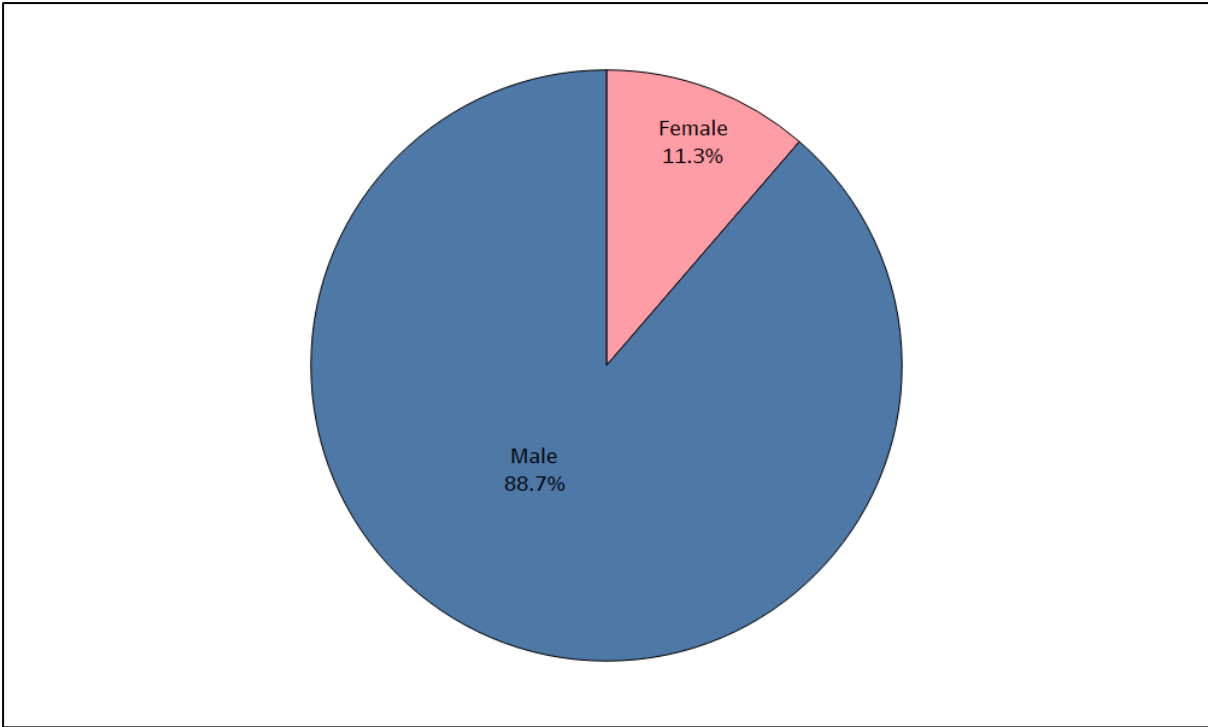


Figure 2: Delivery partner workforce by gender

In Singapore, there are more male delivery partners than females, with an average share of 88.7% male and 11.3% female workers. The physical demands and safety concerns associated with delivery work may contribute to a higher male participation, reflecting traditional gender norms related to physical labor and safety considerations.

The COLLEEM survey conducted by Joint Research Centre of the European Commission on digital platform workforce in Europe had cited a correlation between gender and work intensity, where the gender gap increases with the work intensity (Brancati et al., 2020). Females were also found to be less represented in platform work relating to specific types of services, with “software development” being the least, followed by “transport and delivery”.

The lower participation rate of females may also be influenced by perceived social norms. Grab, a prominent ride-hailing and delivery platform in Singapore, has shared that many females lack the confidence to pursue transport and delivery-based platform work in Singapore due to societal norms that discourage entry into non-traditional sectors, such as driving (Goh, 2024).

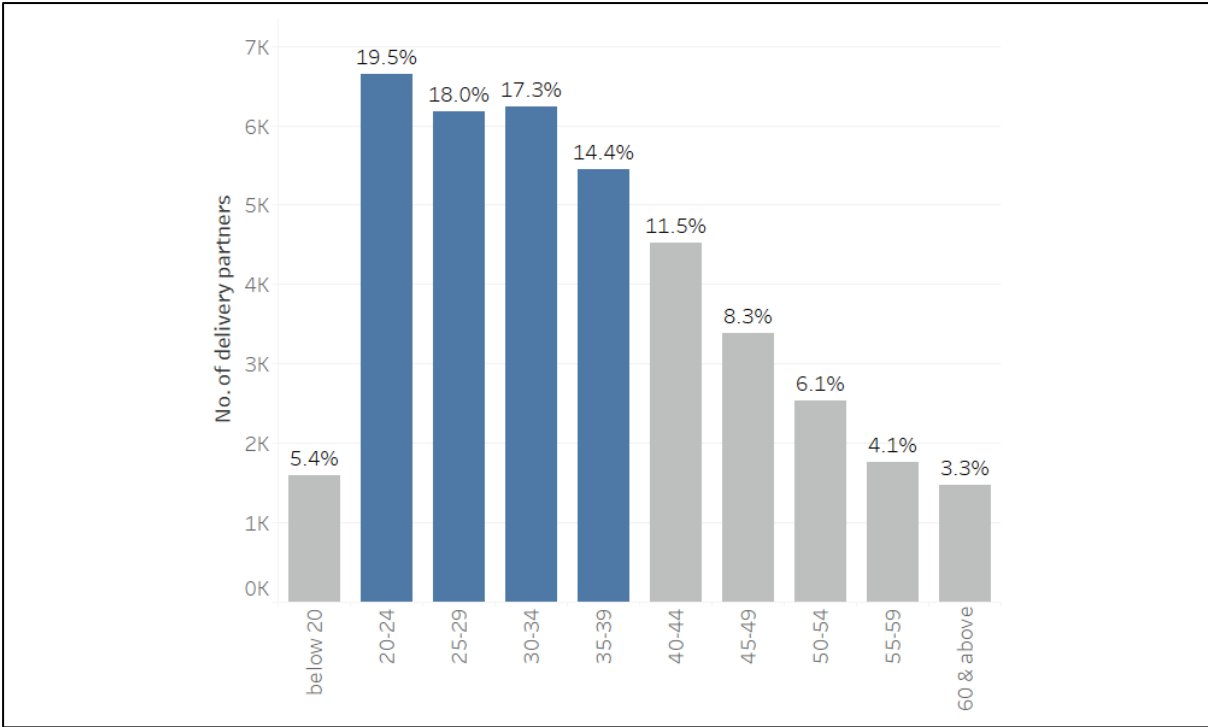


Figure 3: Age distribution of delivery partners

Delivery partners in Singapore tend to be of a younger demographic, with 69.2% of the workforce aged between 20 to 39. This corroborates with findings from the COLLEEM survey, which also observed a younger profile among digital platform workers in Europe, with a median age of 33.9 in 2018 (Brancati et al., 2020). In Singapore, the median age of delivery partners is 34.

The ability to set one's own schedule and income potential align with the preferences and lifestyle of younger workers. The physical demands of delivery work, such as carrying and transporting goods, may be more manageable for younger individuals.

Another reason is that younger workers have higher level of digital literacy compared to the elderly. Young adults are more likely to have better familiarity and knowledge of delivery platforms, and possess the necessary digital skills required of a delivery partner, including ability to navigate through online platforms or apps to perform tasks such as accepting designated jobs and communicating with customers in the event of unexpected delivery issues.

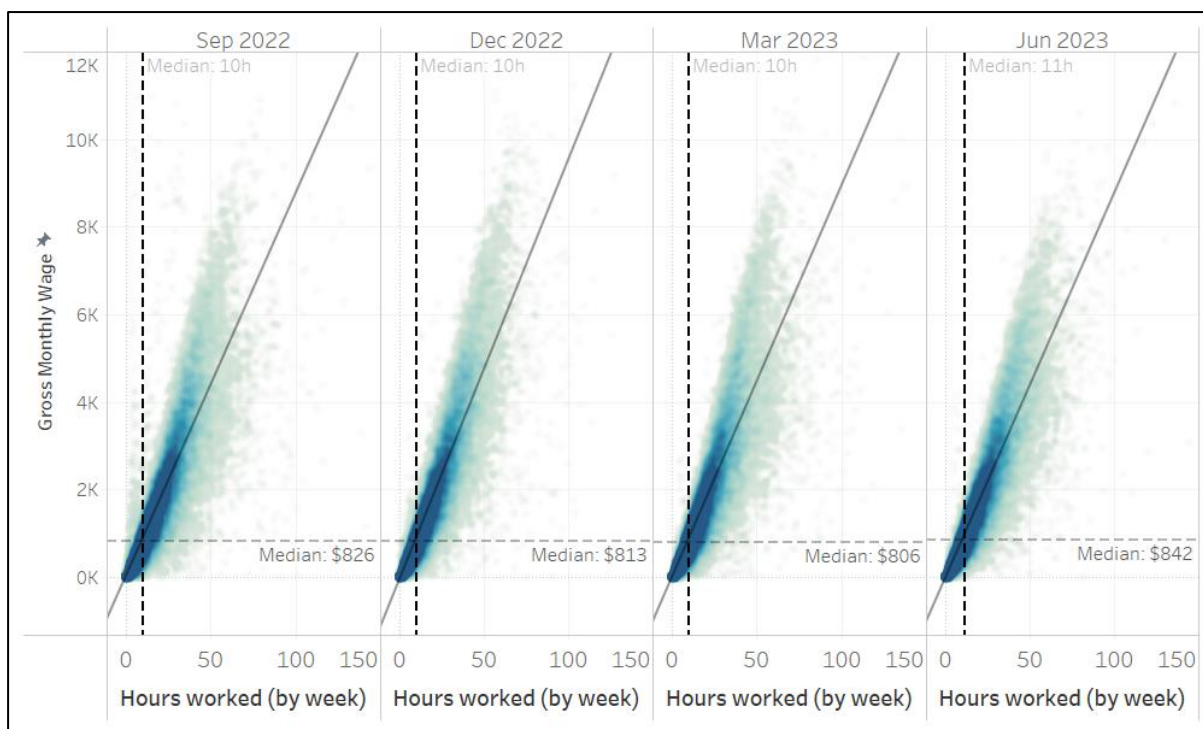


Figure 4: Relationship between hours worked and gross monthly wage

The density scatterplot between gross monthly wage and hours worked in Figure 4 shows a weak, positive, and linear association between the two variables. The delivery partners workforce is largely concentrated at the lower spectrum of the working hours.

The variability in gross monthly wage also exhibits a positive correlation with increased working hours. According to a study conducted by Institute of Policy Studies (IPS) on food delivery riders in Singapore, significant variance exists between monthly income and working hours (Matthews, 2022). The study highlights that this variability is likely attributable to the inherent uncertainty in food delivery tasks, including unpredictable waiting times during task assignment and order collection from merchants. Moreover, varying work systems adopted by different platforms to accommodate the fluctuating demands of food delivery riders may also contribute to this variability. Platforms often incentivize riders to operate during peak hours and in specific locations based on demand, allowing riders who are more proficient in planning to maximize incentives.

While data on work injury of delivery partners is currently not actively tracked, it is crucial to acknowledge the potential influence of work-related injuries on the relationship between gross monthly wage and working hours of delivery partners. It was reported that riders with higher wage and increased hours worked are more prone to accidents requiring medical attention.

Specifically, among riders earning less than \$1,000 per month from food delivery, 24.3% had reported at least one accident after commencing work as a delivery rider. The incidence of accidents requiring medical attention escalates with higher earnings, reaching 36.3% among those earning \$3,000 or more monthly from food delivery.

Similarly, among food delivery riders working between 1 to 10 hours per week, 28.5% had reported at least one accident since starting delivery work. This proportion increases with longer working hours, with 38.3% of those working 51 hours or more experiencing such accidents. The finding shows that the frequent commute on roads exposes delivery partners to the inherent risks associated with vehicular accidents and road safety.

This observation holds significant policy implications, particularly concerning the lack of financial protection and medical coverage for delivery partners in the event of work-related injuries compared to traditional employees. While certain platform companies may offer voluntary compensation schemes, such as personal accident insurance, the coverage varies among companies and may fall below the standard entitlements for a traditional employee. As such, it is one of the important areas for policy intervention.

In the following section, we will deep dive into the data on the full-time delivery partners as they are our target group for policy intervention and assistance.

Table 1: Wage comparison between full-time delivery partners and delivery workers³ in 2022

Percentile	Delivery partner	Delivery worker ⁴	Difference (%)
P25	\$3,303	\$2,117	+36%
P50	\$4,315	\$2,722	+37%
P75	\$5,485	\$3,020	+45%

In general, the wages of delivery partners are higher than an employed delivery worker due to several reasons. We are looking at a 37% wage disparity for P50 workers. Firstly, as independent contractors they have greater control over their earnings as they can decide the number of hours to work and deliveries to make. The average full-time delivery partners work 47.6 hours per week. This is slightly higher than an employed delivery worker which averages at 40 hours per week. Delivery partners have the practice of stacking orders to a similar location to maximize the profit per trip.

However, delivery partners need to manage their personal finances such as taxes, insurance, and retirement planning, without the same level of employment protections as traditional employees. Additionally, they are responsible for covering operating costs such as vehicle maintenance, fuel, or electricity. Conversely, delivery workers still enjoy traditional employment benefits associated with full-time employment, such as employer-provided insurance, paid leave and having more adequate rest on weekends and public holidays.

It is also essential to consider the higher wage variance observed with increasing hours worked as discussed in Figure 4. This variability may affect full-time delivery partner to greater extent, potentially inflating the wages for delivery partners, contributing to the notable wage disparity when compared to delivery workers.

³ Delivery workers is defined as workers employed by companies to do deliver work (e.g. pizza delivery man, logistics delivery worker)

⁴ Manpower Research and Statistics Department (Singapore). (2022). Occupational Wage Survey.

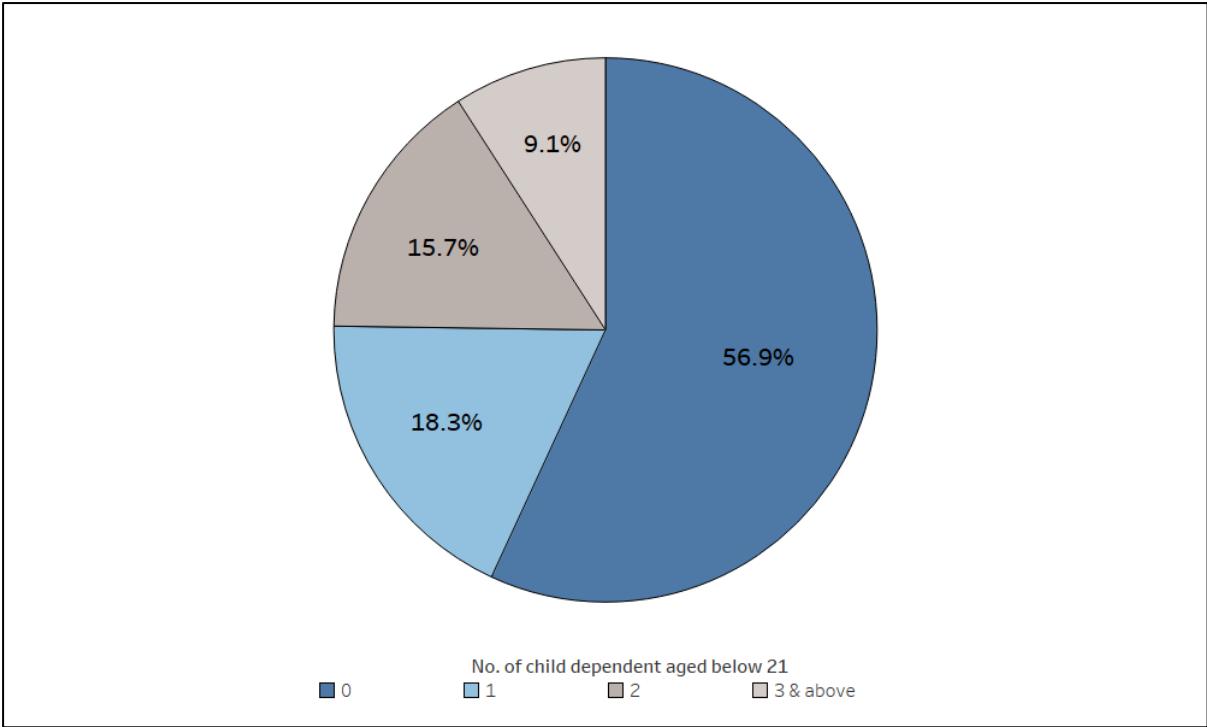


Figure 5: Household composition of full-time delivery partners

The household composition of the delivery partners is another focus of policy interest as it provides us with glimpse into their financial security, commitments, and home ownership.

While the delivery partners workforce is largely from a younger age group, it does not necessarily imply that they are free from family commitments. Based on Figure 5, 43.1% of the full-time delivery partners have at least one dependent child aged below 21. The ratio of delivery partners with family commitments is expected to be larger as the reported figure has yet to take into account of dependent spouse, parents, grandparents or disabled family member.

This finding shows that there is a substantial portion of the full-time delivery partners with family obligation, and that the flexibility and dynamics of delivery platform work have enabled individuals to balance caregiving and home commitments while earning a livelihood.

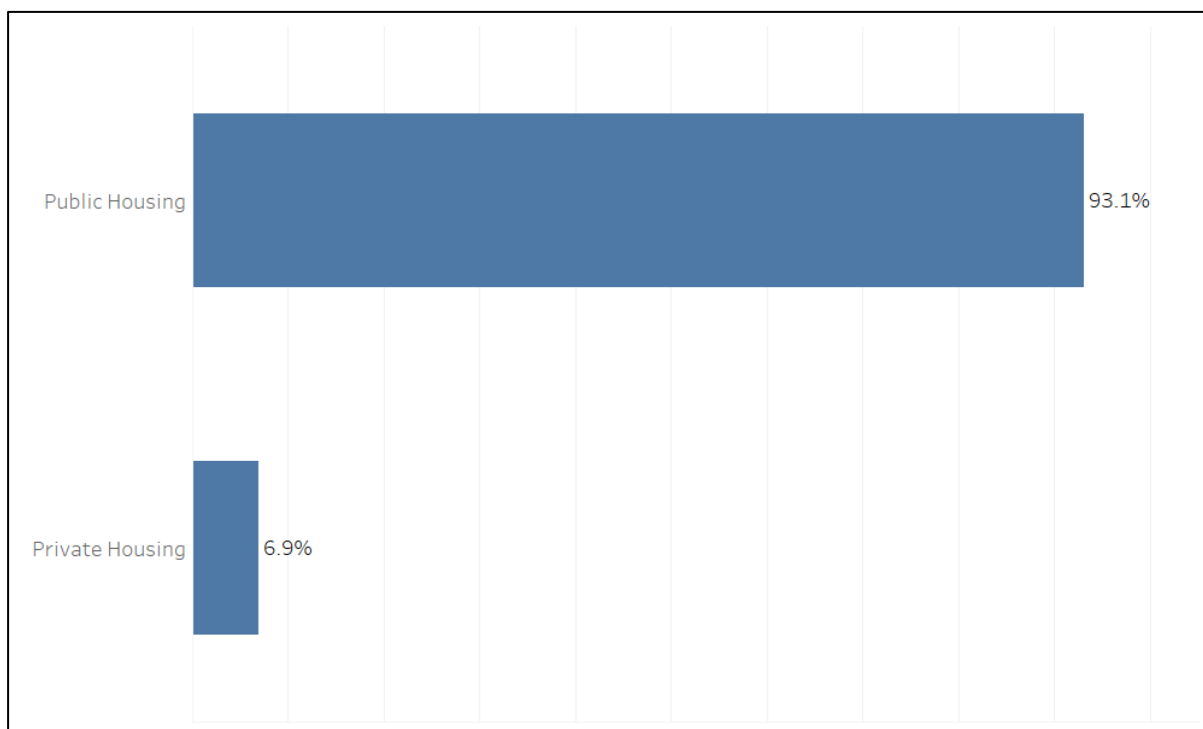


Figure 6: Housing situation of full-time delivery partners

It was observed that 93.1% of the delivery partners reside in public housing. This is in contrast compared to the general population in Singapore where 77.9% of them live in public housing⁵. Living in public housing is common among low-income families, as it provides an affordable housing option supported by government subsidies.

Furthermore, given that public housing is often located in urban centers or densely populated areas, this provides delivery partners residing within these estates advantageous proximity to diverse delivery destinations. Consequently, this proximity not only minimizes delivery time and expenses, but also improve their earning potential with higher volume of deliveries.

The above insights were used to identify gaps in the prior policy regime and allowed us to formulate targeted policies to address them.

⁵ Singapore Department of Statistics. (2022). Resident Households By Type Of Dwelling. Retrieved from [\(DOS\) | SingStat Table Builder – Resident Households By Type Of Dwelling](#)

Resulting policies and initiatives

In this section, we will look at the resulting policies and initiatives to be implemented to improve the employment and financial situation of platform workers which includes delivery partners.

Ensuring adequate financial protection in case of work injury

As delivery partners spend a significant amount of time commuting, they are more susceptible to accidents and injuries. It is therefore important to ensure that there is adequate financial protection for them compared to traditional employees. Singapore will mandate platform companies to provide work injury compensation (WIC), which is now only extended to traditional employees. This coverage will apply to all platform workers, irrespective of work frequency or hours worked. This aligns with the coverage provided to traditional employees, who receive compensation even if injured on their first day of work or employed on a part-time or hourly basis.

We have also defined when a platform worker is considered "at work" for better clarity in WIC coverage. Delivery partners defined as "at work" will cover the period from task acceptance to drop-off, with an additional fixed duration to account for waiting time in between. The WIC framework for platform workers will mirror that of traditional employees, including the provision of WIC insurance through the existing competitive market. This approach ensures sustainable premiums based on claims history and grants which enables platform companies the flexibility to choose their preferred insurers.

Improving housing and retirement adequacy

In Singapore, employees have a social security savings scheme in the form of the Central Provident Fund (CPF). This is similar to the 401k in US, and Employees Provident Fund in Malaysia. Traditional employee and platform workers experience a disparity in contribution rate for their CPF which is used to serve their retirement, healthcare and housing needs. Relative to a traditional employee, who benefits from both personal and matching employer contributions, platform workers are solely responsible for contributing to their own CPF. This has reduced the disposable income of the delivery partners since it requires them to contribute a portion of their income to their CPF.

To ensure that platform workers have access to housing and retirement adequacy similar to traditional employees, the CPF contribution rate of platform workers and companies will be aligned to the rates of traditional employees and employers over a progressive period of five years. This is especially aimed at assisting workers who depend on platform work as their primary source of income.

This initiative will be compulsory for younger platform workers below age 30 since they have a higher probability to become homeowners due to housing needs. Younger platform workers will also benefit from the compounding effect of CPF interest rates due to the longer runway for accumulation. CPF contribution will be optional for the older platform workers (aged 30 and above), providing flexibility for those who may have already fulfilled housing obligations or have alternative financial plans.

Additional support known as the Platform Worker CPF Transition Support (PCTS) will be provided for lower-income platform workers during the phase-in period. This scheme will offset part of the platform worker's share of the year-on-year increase in CPF contribution rate.

Given that a large portion of delivery partners are younger workers, they will definitely benefit from the policy measures in the long term.

Enhancing Representation for Platform Workers

Other than financial and social support, platform workers will receive improved representation to effectively communicate their needs and concerns. While existing associations such as the National Taxi Association, National Private Hire Vehicles Association, and National Delivery Champions Association already represent platform workers to some extent, many discussions and agreements with platform companies have been informal.

To address this, formal representation will be set up through a dedicated framework curated for platform workers. The legislative framework will be co-created with a dedicated tripartite workgroup established for the representation of platform workers.

Conclusion

Delivery partner work has become more accessible, offering diverse transport options and engaging work opportunities, highlighting the need for adequate support for workers and companies. As data is integral to formulate policies to help these workers, Singapore has successfully negotiated data sharing arrangement with various delivery platforms despite the challenges due to diverse corporate policies and data legislation.

Leveraging the collected data of delivery partners, an in-depth study of their work arrangement was conducted to identify areas necessitating policy intervention. The findings underscored a gap in work-related injury protection, particularly concerning the heightened risks associated with their road-based tasks. To address this, Singapore will extend the existing Work Injury Compensation (WIC) scheme to cover platform workers comprehensively.

Furthermore, recognizing the income variability, there is a need for policy intervention to ensure adequate housing and retirement assistance is rendered. This aims to provide sustainable support, especially for the younger delivery partners, and those with family responsibilities, achieved through aligning CPF contribution rates with those of traditional employees. Lastly, enhanced representation efforts will be undertaken to ensure the effective addressing of delivery partners' concerns and needs, thereby fostering a more supportive and inclusive environment for them.

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