



UNECE

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CONFERENCE OF EUROPEAN STATISTICIANS

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GLEAMING INSIGHTS ON **DELIVERY PARTNERS** THROUGH ADMINISTRATIVE DATA

Author: Chen Zhihan and Joey Tee

Introduction to MRSD

- The Manpower Research and Statistics Department (MRSD) is the national labour market statistics agency in Singapore.
- We conduct in-depth research to produce ~40 national surveys and 30 reports annually.
- Provide policy support by offering evidence-based insights and analysis on labour market trends.
- Internationally, MRSD is actively involved in the labour market statistics round through valuable partners such as International Labour Organization (ILO) and Bureau of Labor Statistics (BLS)



Introduction to speaker

CHEN ZHIHAN (HAN)

- Statistical professional specializing in data analytics and topical research (employment outcomes of niche sub-groups)
- 10 years experience in research
- IBM Certified data science professional



Global Trend In Food Delivery

- The online food delivery is a growing market, with forecasted meal delivery revenue reaching US\$357.6 billion globally. The meal delivery revenue is expected to increase at a CAGR of 16.6% from 2017 to 2027¹.
- Platform delivery services are poised to dominate this sector, with an estimated revenue of US\$254.4 billion in 2023.

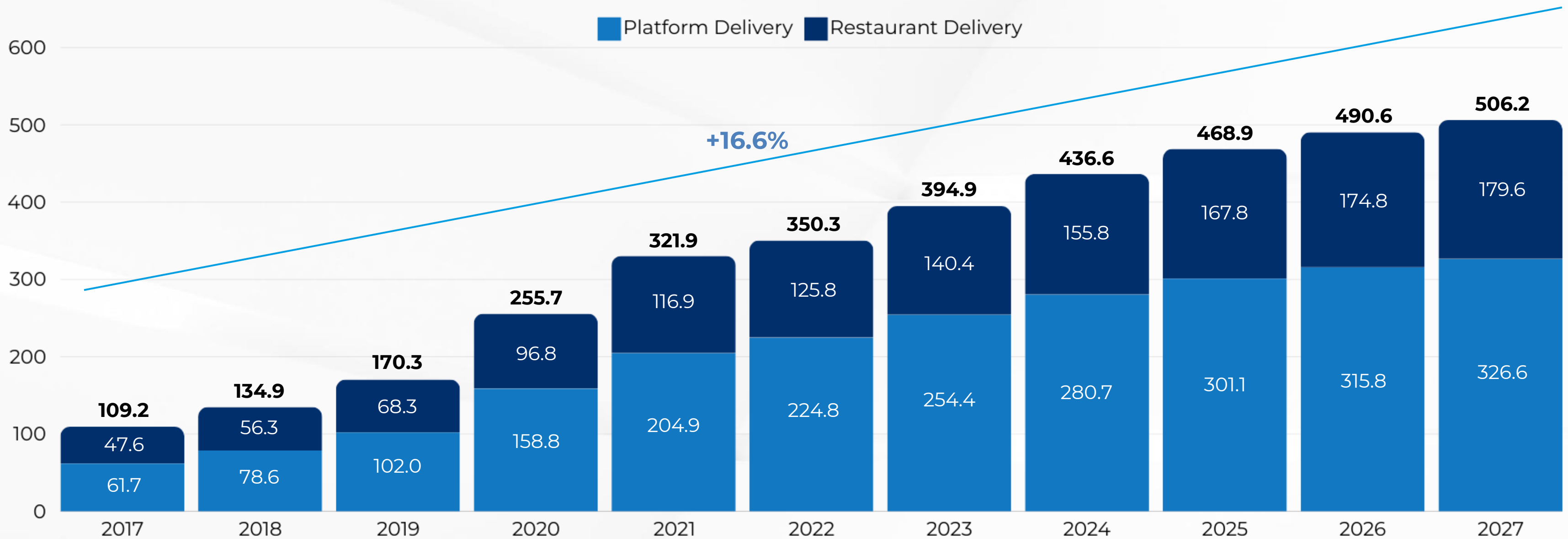
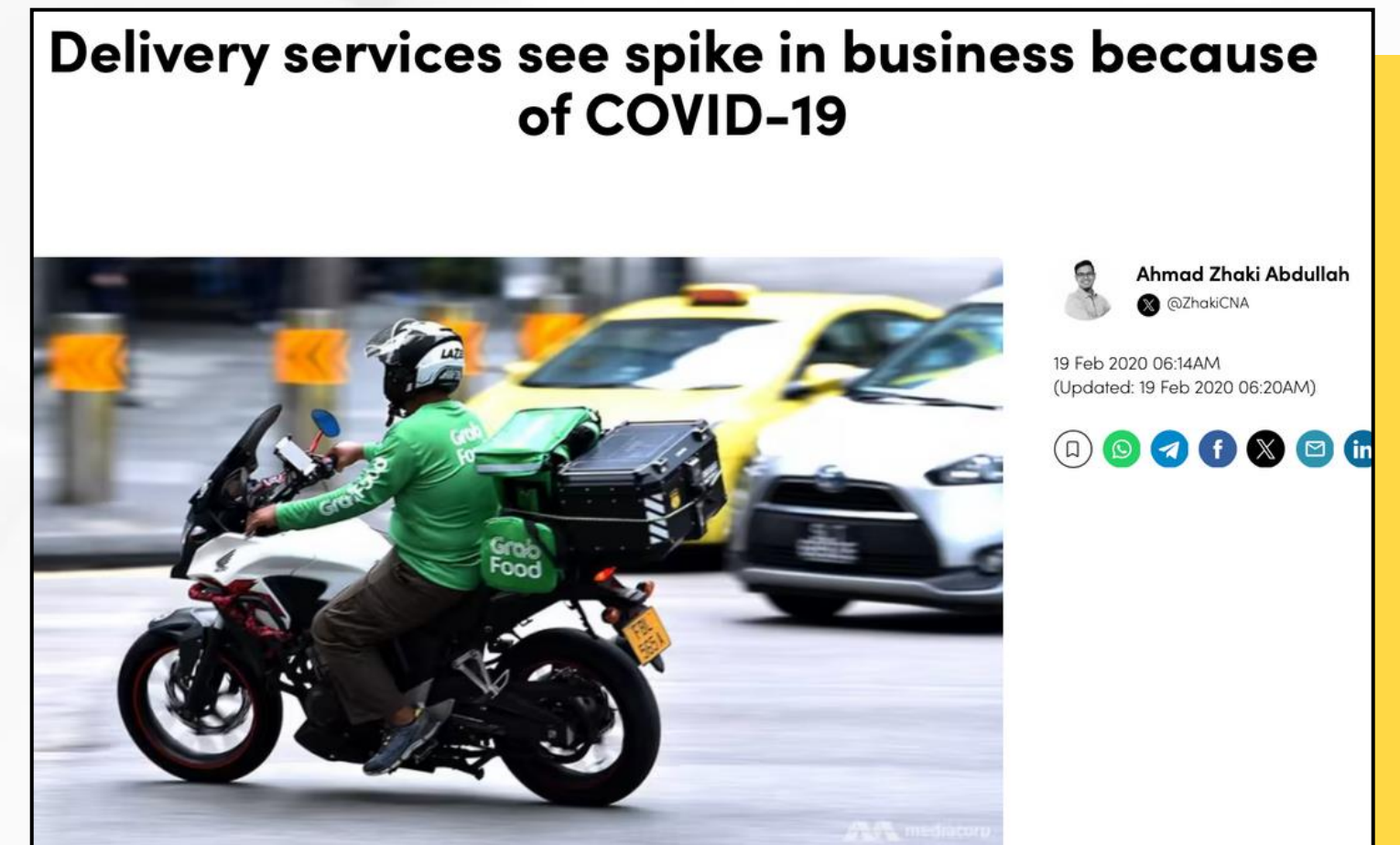


Figure 1: Global meal delivery revenue forecast in Billion US\$ from 2017-2027, Statista Market Insights

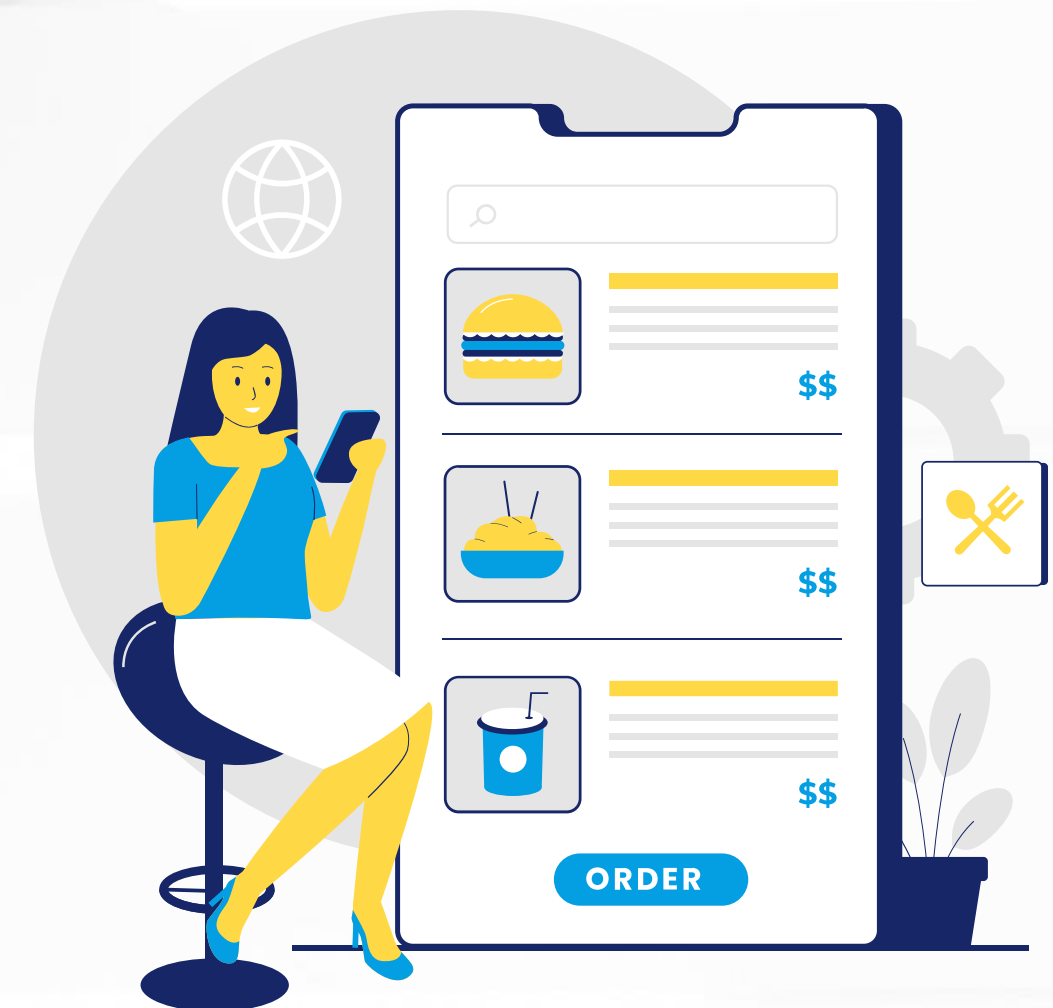
Acceleration of delivery demand due to COVID-19

- During COVID-19, consumers have increased spending up to 10 times more on food staples, up to five times more on paper products, and up to six times more on personal care and household cleaning supplies. Notable purchases include heavier items such as baby milk powder, rice, and soft drinks.
- Delivery partners have played a crucial role during the pandemic, especially as public movement was impacted by safety measures.
- Contact-free delivery and e-payments have emerged as essential measures to reduce the risk of disease spread.



Acceleration of delivery demand due to COVID-19

- Fast-paced lifestyle and technological advancements have made individuals more willing to pay for mundane tasks, particularly for family nucleus and middle/high income earners. For individuals that can afford, they tend to value time and convenience more than money.
- Brick-and-mortar businesses have transformed their operations to focus on online and delivery services to sustain their operations since conventional shopping were ceased.
- The surge in demand for delivery services has created opportunities for workers whose jobs were disrupted due to the pandemic.
- The shift in consumer behavior and the increased reliance on delivery services is expected to persist, driving continual demand for delivery services in the long run. Offering of online platforms have become a norm as it allows company to have a wider customer reach at reasonable investment.



**DELIVERY PARTNER
LANDSCAPE IN SINGAPORE**



Singapore's Delivery Partner Landscape

- **Geographical Advantage:** Singapore's compact landmass and high population density create an ideal environment for delivery work.
- **Online Commerce Culture:** The prevalence of online purchasing, driven by the bustling work tempo, has established a common practice of buying goods and services online.
- **Advanced Infrastructure:** The presence of modern roads, well-connected public transport networks, and advanced GPS technology contributes to a seamless delivery process, enhancing overall efficiency in the delivery ecosystem.

Description	Quantity
Population ⁴	5.64 mil
Land mass ⁵	734.3 sq km
Population density ⁴	8,592 per sq km
Own account workers ²	221.8 k
Delivery partners	39.8 k
Hours worked ³	43.6

Singapore Factsheet

² Comprehensive Labour Force Survey, Manpower Research & Statistics Department




³ Labour Market Survey, Manpower Research & Statistics Department

⁴ Singapore Census of Population, Singapore Department of Statistics

⁵ SingStat Table Builder, Singapore Department of Statistics

Delivery Platforms in Singapore

Amidst the growing demand for delivery services, a multitude of platform operators have established themselves in Singapore. These can be divided into 2 broad categories.

Food delivery	Parcel delivery
 <p>GrabFood</p>  <p>Deliveroo</p>	 <p>GoGoX</p>  <p>pickupp</p>  <p>LaLaMove</p>
 <p>FoodPanda</p>  <p>Why Q</p>	 <p>uParcel</p>  <p>Amazon</p>  <p>Teleport</p>

Why people choose delivery work?

- Low barrier to entry – Individual can easily register for an account, go through the necessary training and start accepting orders.
- Diverse mode of delivery such as bicycle, e-scooters, e-bikes, motorcycles, cars or by foot.
- Flexible work arrangement and choice of work.
- More engaging and dynamic compared to mundane job.
- High income potential for hardworking delivery partners and option to “stack orders”.
- Attractive to housewives and students who are looking to supplement their income.

Food deliveries on foot, rollerblades:
Small but growing number of people
signing up to be 'walkers'



Policy Interest on Delivery Partners

Unlike traditional employees, delivery partners in Singapore are classified as self-employed individuals and are exempted from the protections governed under Employment Act.


Key policy considerations include:

- How can policy measures be implemented to ensure platform workers have sufficient financial protection in the event of work-related injuries?
- What policy initiatives can be introduced to enhance the housing and retirement provisions for platform workers?
- How can policies be developed to bolster representation and advocacy for platform workers within the workforce?

Singapore

The Big Read: Faced with fatigue and rush to meet orders, food delivery riders grapple daily with road safety risks



The safety of food delivery riders has come under the spotlight recently, after it was revealed in Parliament earlier this month that five food delivery riders died on the job in the past 18 months.



Kimberly Lim
Justin Ong Guang-Xi @JustinOngCNA
18 Jul 2022 06:06AM (Updated: 18 Jul 2022 12:27PM)

Drunk driver involved in crash that killed food delivery rider gets jail

The Foodpanda delivery rider had come to a stop at a T-junction, but the driver of the Mini Cooper did not notice him until it was too late.

Lydia Lam @LydiaLamCNA
24 May 2023 04:54PM

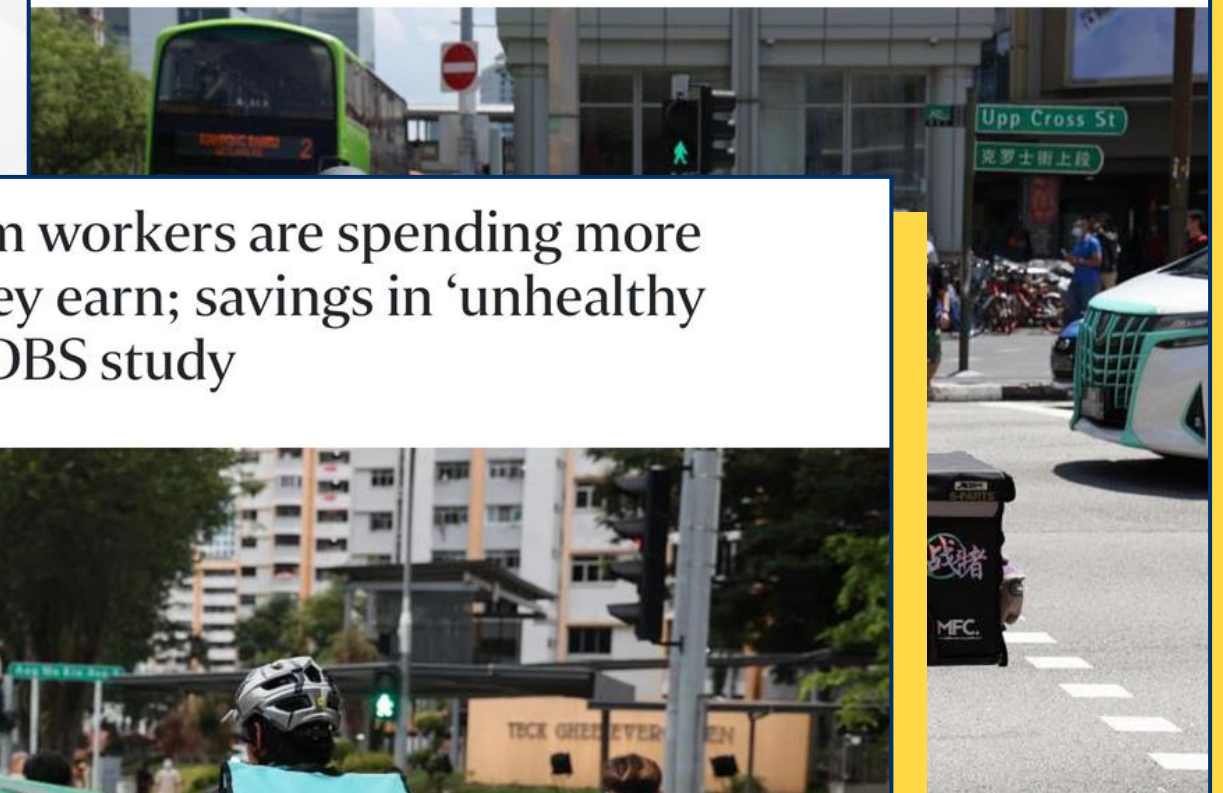
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Stagnating incomes mean gig workers must get head start on financial planning: Experts



Platform workers are spending more than they earn; savings in 'unhealthy range': DBS study



DATA PARTNERSHIPS



Data Partnerships

- MRSD engaged with two primary delivery platform providers to initiate a data collection pilot. The strategy involved gathering NRIC (Singapore’s social security number equivalent) and utilizing government administrative data for in-depth analysis.
- Initially, the data collection focused on personal information and hours worked by delivery partners. Subsequent successful negotiations led to the inclusion of additional variables, such as income.
- Challenges arose from companies in response to the Personal Data Protection Act (PDPA) and business-related apprehensions.
- Despite engagement at various levels to drive the initiative forward, the effectiveness of these efforts was limited.



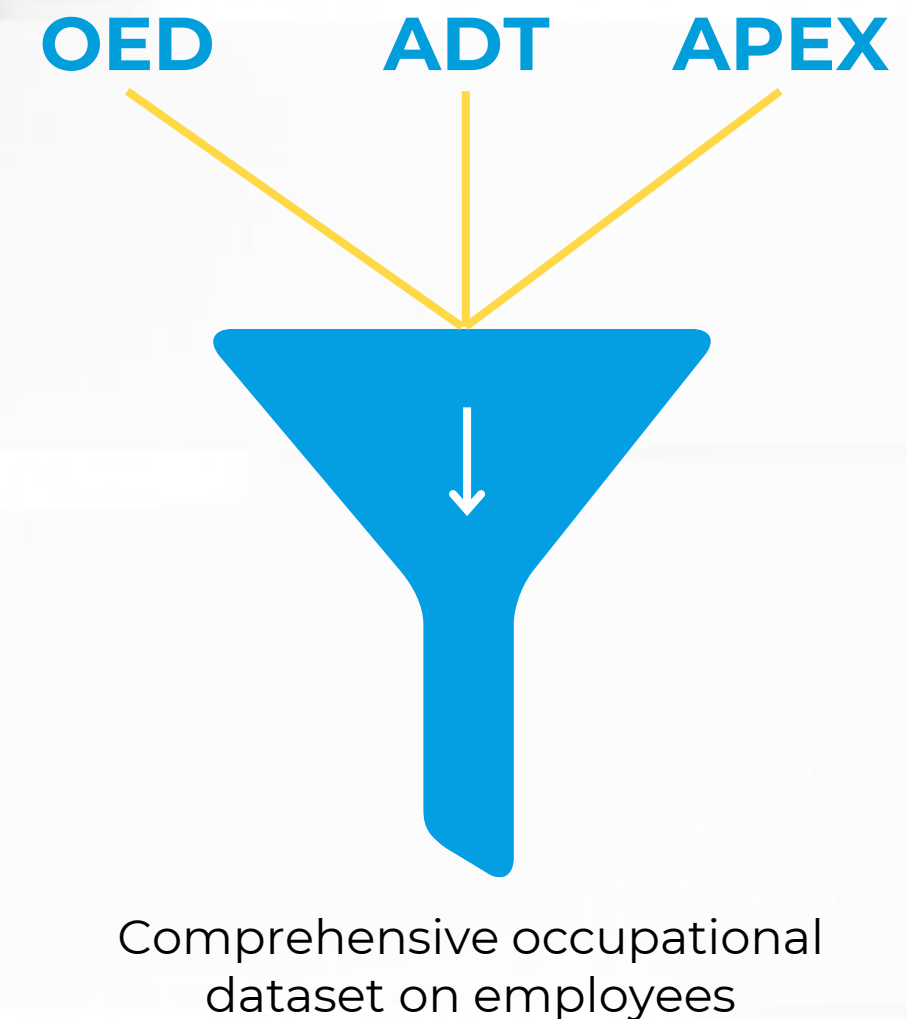
Data Partnerships (cont.)

- A pivotal development emerged with the formation of the Advisory Committee on Platform Workers in Singapore, comprising government representation, platform operators, and subject matter experts. This committee is dedicated to enhancing protections for platform workers, particularly in the realms of work injury coverage & financial stability, and was convened in September 2021.
- We have managed to establish the data provision from the companies through the working committee meeting by emphasizing that the data will be used to create win-win outcomes for both the companies and workers.
- Started to established data transfer arrangement with various companies. However, special data handling is required to manage the diverse array of data received.



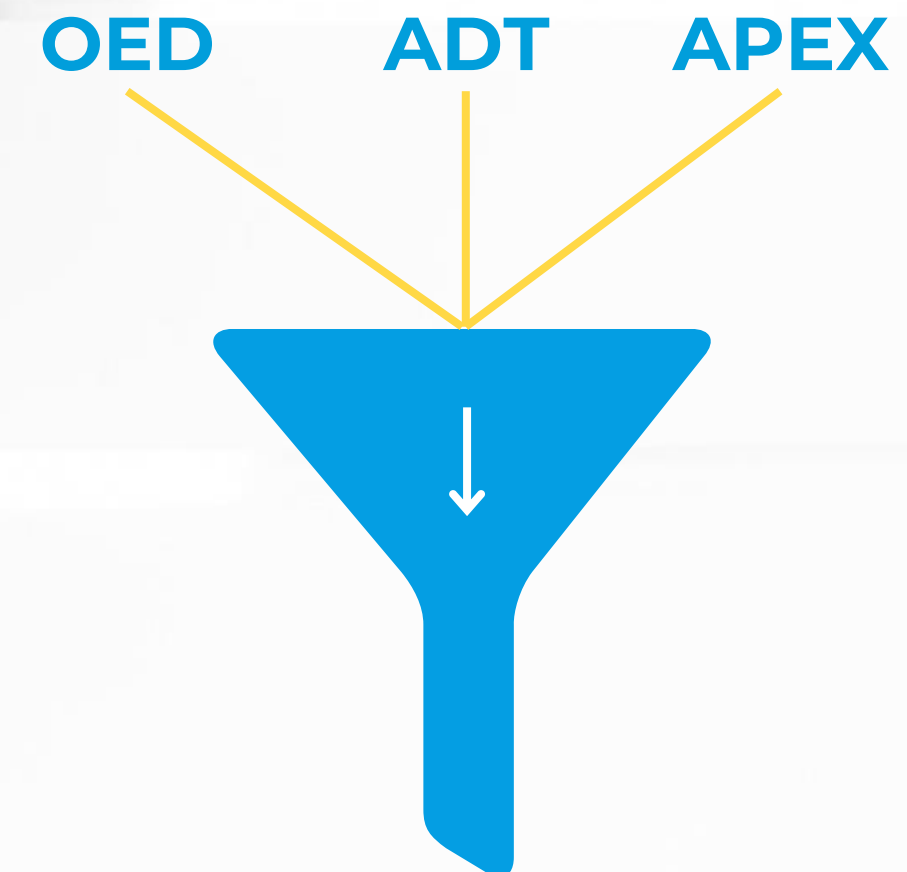
OED and Automated Data Transfer

- Singapore conducts its own company census through the Occupational Employment Dataset (OED), capturing detailed information on employees' occupations, part-time or full-time status, and work locations across the nation.
- We also offer automated data transfer by directly interfacing with companies HR system to retrieve updated employee info.
- Companies can also participate in our APEX service which is a one-stop platform for tax filing, employee CPF contribution and data provision with the Government.
- This multi-prong approach has enabled us to curate a comprehensive employee dataset, serving as a foundational resource for comparative analysis in this research.



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Comprehensive occupational
dataset on employees

ANALYSIS ON DELIVERY PARTNERS

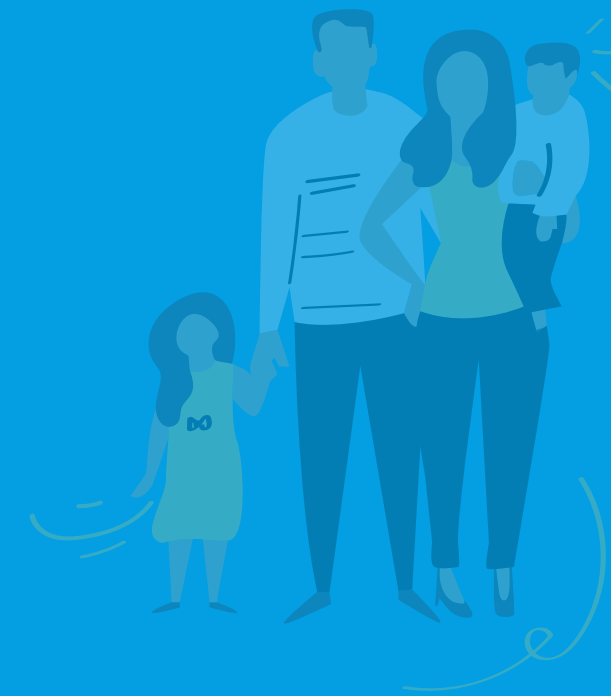


Insights on Delivery Partners

Insights were derived from MRSD's data, collected from liaised delivery platform companies through collaboration, augmented with administrative data from various government agencies to enhance insights. This includes the Ministry of Home Affairs (MHA) and Ministry of Social and Family Development (MSF).



Demographics (age, gender, housing type) – MHA



Household composition – MSF

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Household composition – MSF

Profile of Delivery Partners

Work Arrangement

- In Singapore, the gig delivery work is predominantly part-time*, with an average of 89% of delivery partners working part-time.
- Job flexibility and autonomy are the main driving factors.
- Preferred occupation choice for individuals that are balancing work with other commitments (education/caregiving).

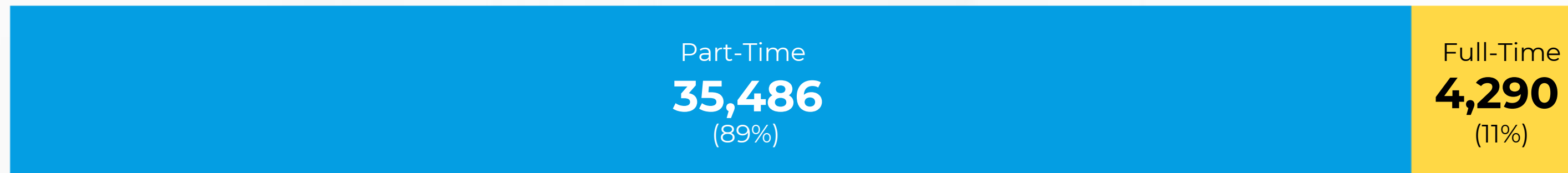


Figure 2: Distribution of delivery partners by work arrangement

* Part time refer to individuals worked below 35h per week

Profile of Delivery Partners

Age Distribution

- Delivery partner is more common within the younger demographics, with around 70% from age group between 20 – 39.
- The work nature aligns with preferences of younger demographics for individual-centric & technology-driven jobs, as delivery platform roles provide quick accessibility, flexible schedules, earning potential control, and require digital literacy.

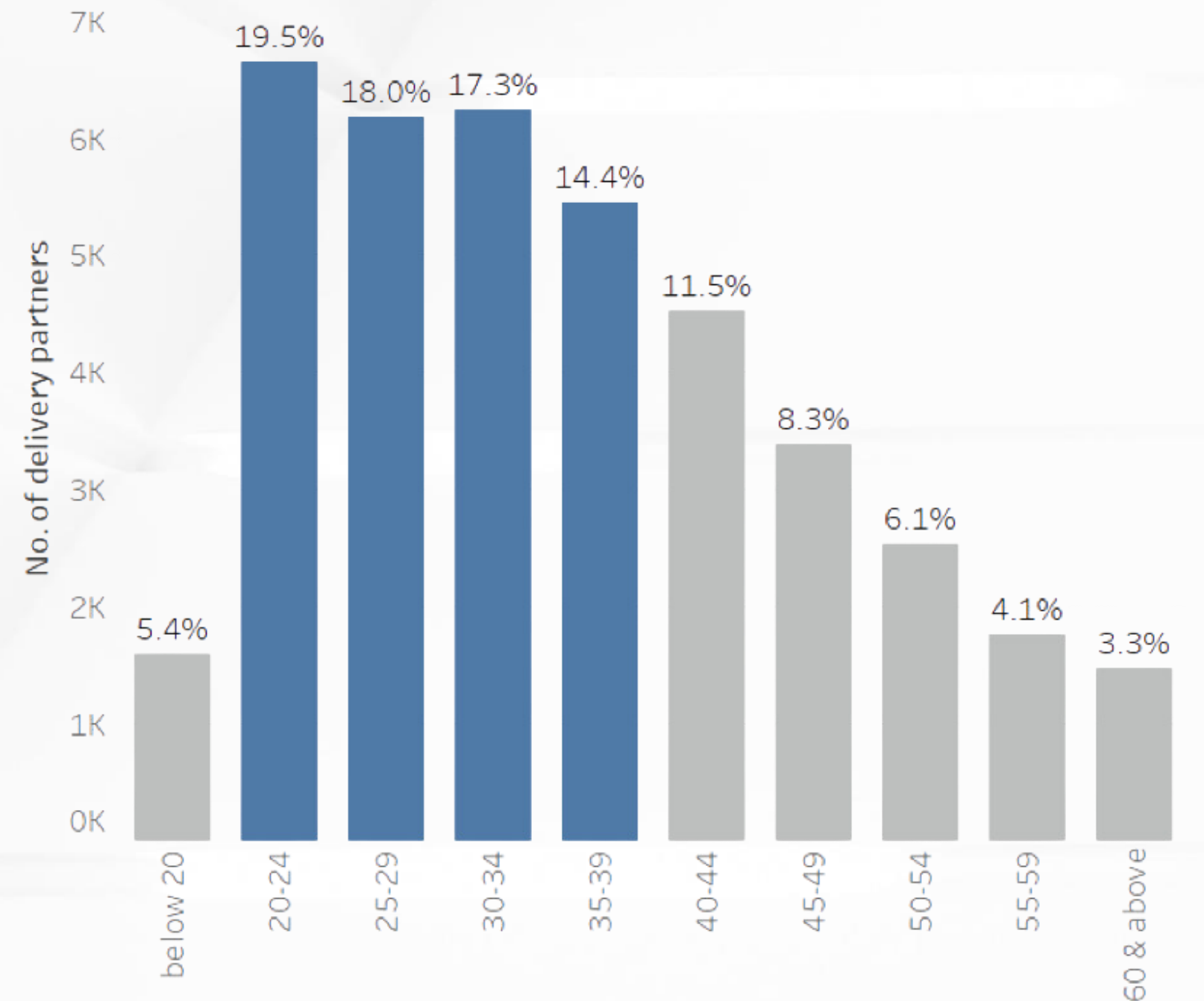


Figure 3: Distribution of delivery partners by age

Profile of Delivery Partners

Gender distribution

- Over 88% of the delivery partners are male.
- Associated with high physical demands, safety concerns and perceived social norm revolving delivery work.
 - Requires lifting/carrying of packages and food deliveries
- Driving/on the road under adverse weathers
- Influence of career choice by gendered social norm related to driving proficiency

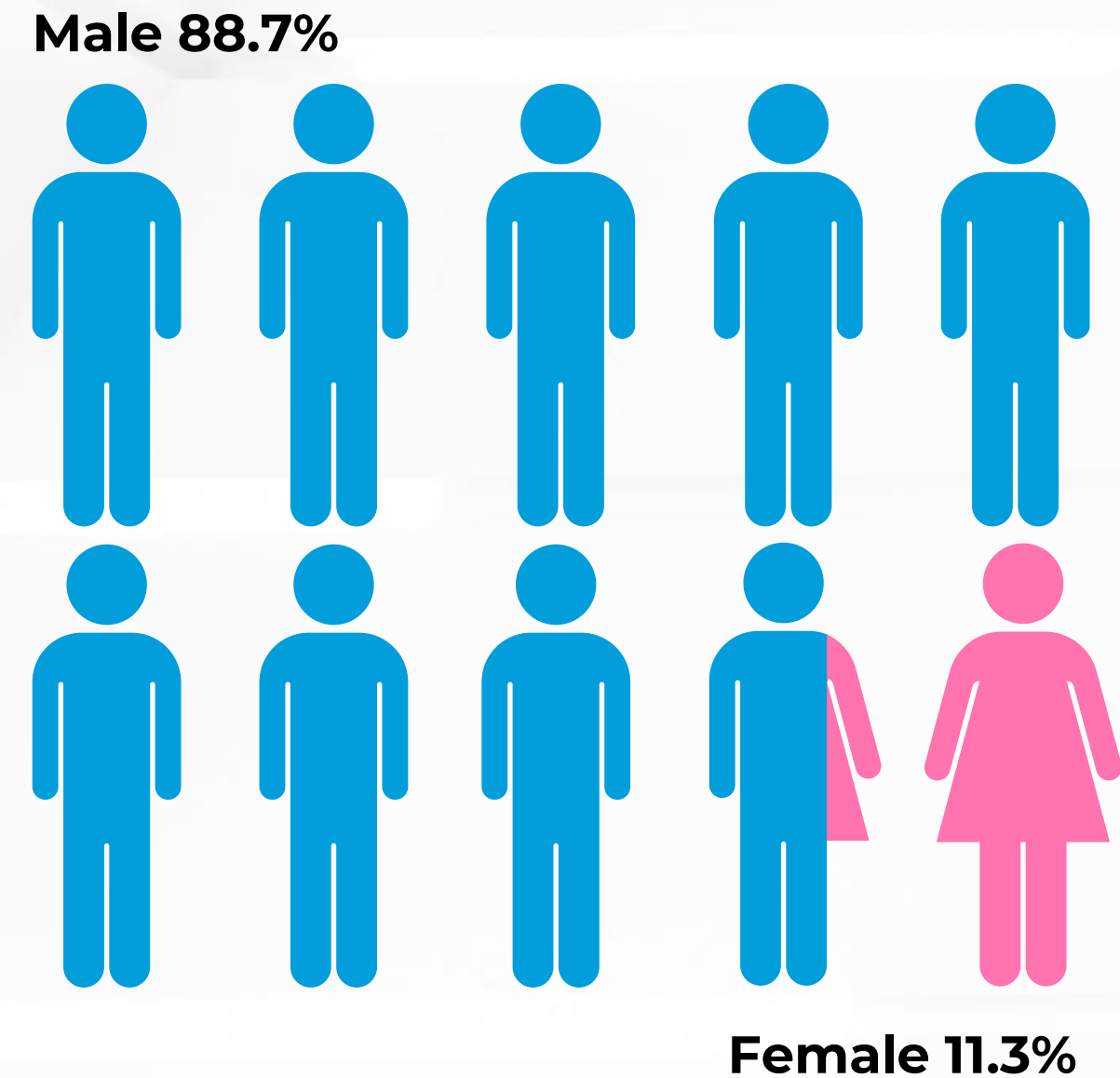


Figure 4: Distribution of delivery partners by gender

Profile of Delivery Partners

Home demographics

- Almost half of them (43.1%) have at least one child dependent. This underscores the appeal of delivery platform work for individuals balancing caregiving needs and family commitments due to the flexibility of platform work.
- Majority of the full-time delivery partners reside in public housing estate. This coincides with the common housing choice for lower income households.

No. of child dependents (aged below 21)

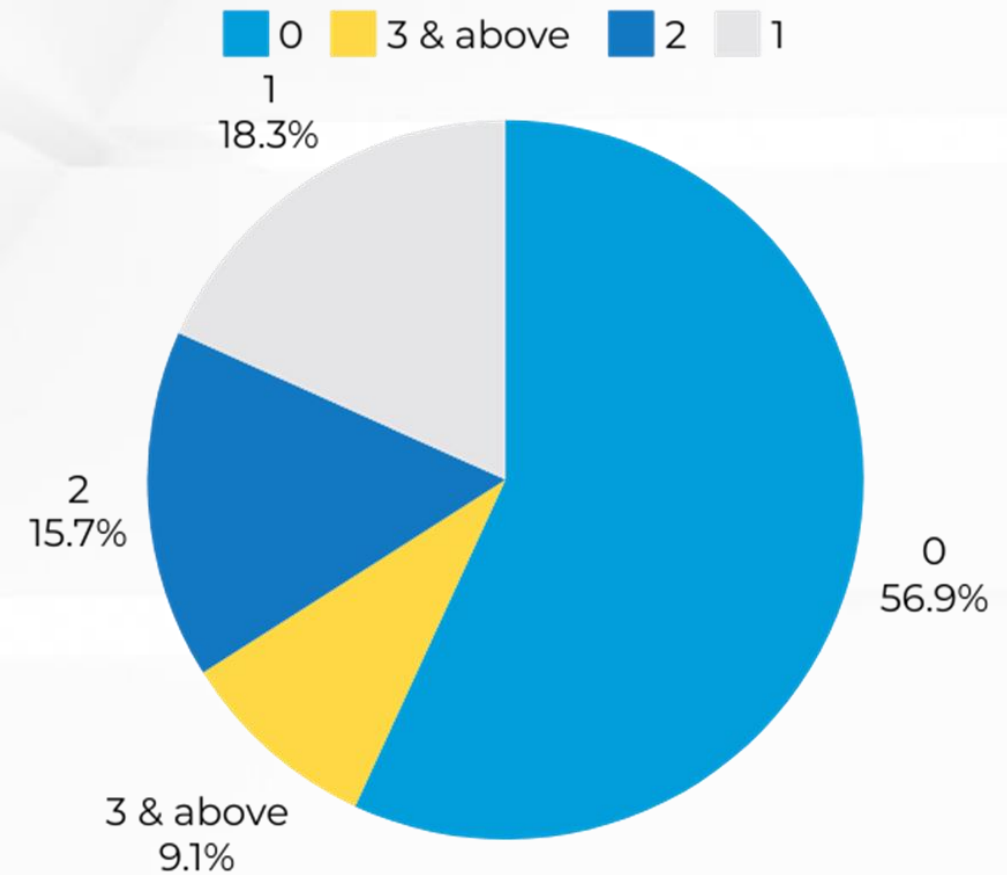


Figure 5: Household composition of full-time delivery partners

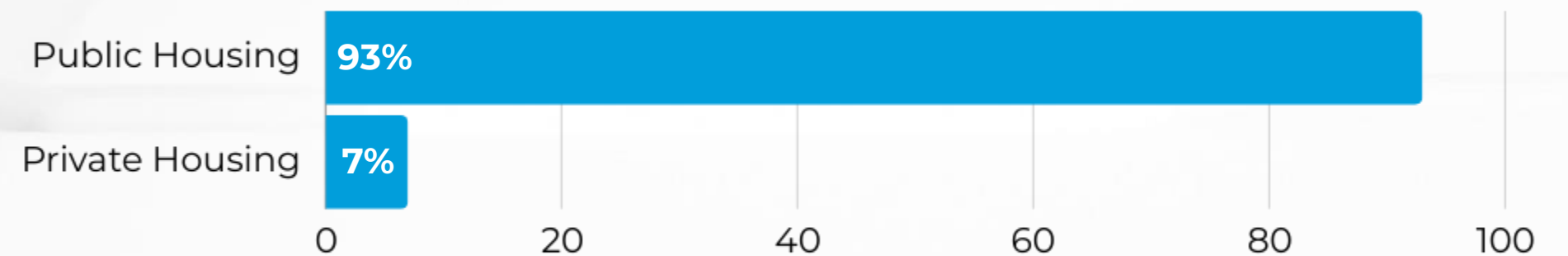


Figure 6: Distribution of delivery partners by type of residential estate

Wage comparison between delivery partner and delivery worker

- Delivery partners generally earn higher wages due to greater control over working hours & the volume of deliveries they handle, including the option to stack orders, highlighting their earning potential.
- However, unlike a delivery worker, delivery partner manage personal finances and cover operating costs without traditional employment benefits such as employer-paid insurance and paid leave.

Table 1: Wage comparison between delivery partner and delivery worker

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

Relationship between wage and hours worked

- Wage variability is a prevalent trend observed among delivery partners.
- Caused by a few reasons:
 - Uncertainty in waiting time and job allocation
 - Varying incentivization system adopted by different platforms to meet order demand based on location or peak time periods.
- Affects full-time delivery partners to greater extent, where larger wage variance is observed with increasing working hour.

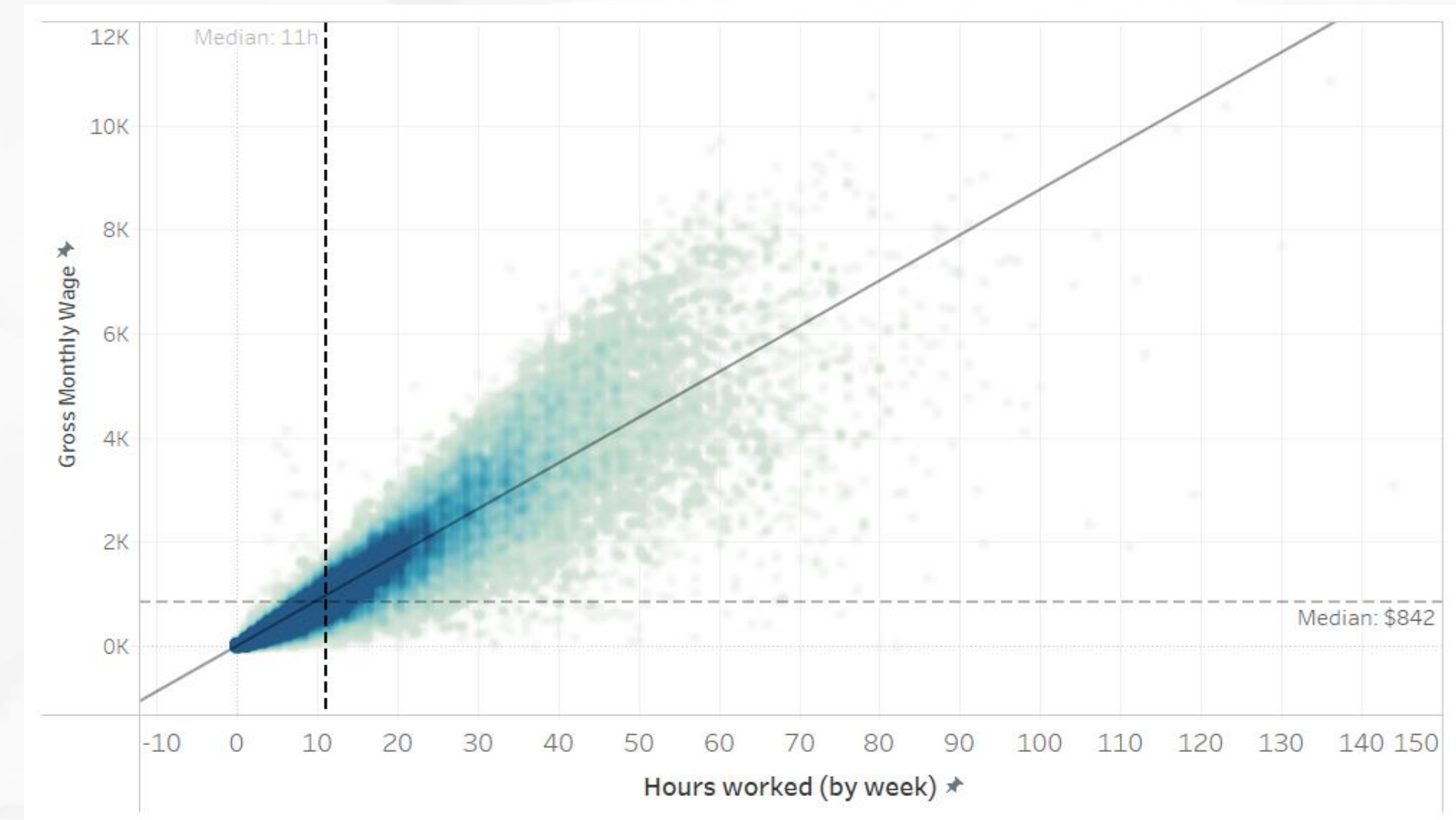


Figure 7: Density scatterplot of gross monthly wage vs hours worked per week

Relationship between wage and hours worked (Cont.)

- Wage variability poses an issue for full-time delivery partners, who rely on platform delivery work as primary source of income.
- The unstable wage will not be able to keep pace with the rising cost of living and inflationary pressures in the long run.
- This raises concerns from policy perspective in terms of their long-term financial security.

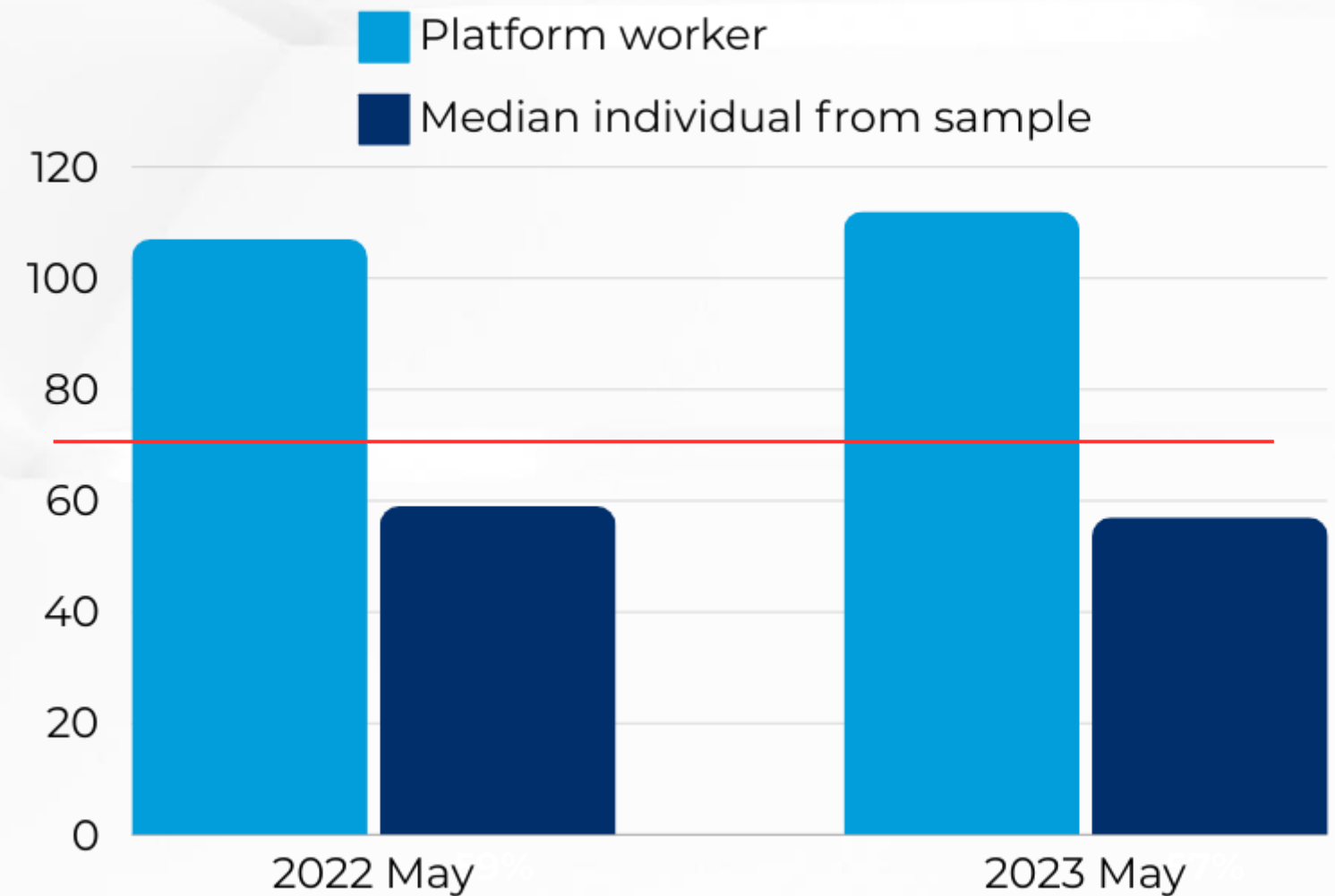


Figure 8: Expense-to-income ratio of platform workers and median individual, Development Bank of Singapore (DBS)

Key areas of concerns of delivery partners

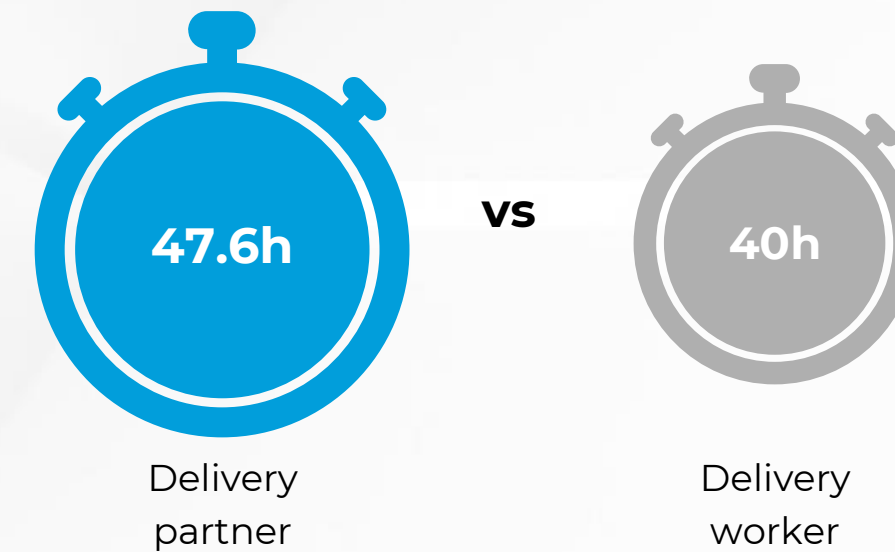
Housing Affordability	Retirement Adequacy
<ul style="list-style-type: none"> • Both public resale and private housing prices have experienced consistent growth over the past decade. • From 2014 to 2023, the price index for public resale estates rose by 25.7%, while private housing saw an even steeper increase of 35%⁶. • Rising trend in housing prices can impose significant financial pressure on younger delivery partners, who form the predominant segment of the delivery workforce. 	<div data-bbox="1959 953 2892 1341" style="text-align: center;"> </div> <ul style="list-style-type: none"> • Among platform workers aged above age 55, only one in four were able to meet their cohort Basic Retirement Sum.

⁶ Housing and Development Board, Singapore

Working conditions of delivery partners

- The demanding nature of delivery work involves extensive time on the road which heightens the risk of work-related injuries for delivery partners.
- Risk of injury is further elevated by increased workload, motivated by factors such as the aim to increase earning potential.
- Naturally, individuals who worked longer hours and earned higher wages were more prone to experiencing mishaps.
- The lack of financial protection and medical coverage for delivery partners has significant policy implications and necessitates urgent intervention.

Average hours worked per week



1 in 3 food delivery workers have been in at least one accident requiring medical attention



From January 2021 to October 2021, a total of **eight work-related traffic fatalities** were reported among Platform Workers

RESULTING POLICIES AND INITIATIVES



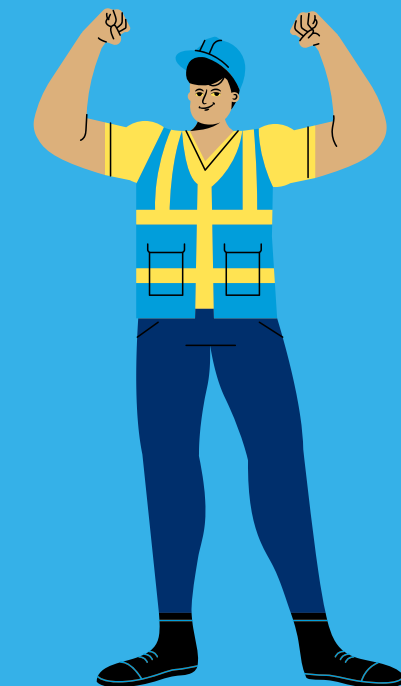
Resulting policies and initiatives



**Ensuring adequate
financial protection in
case of work injury**



**Improving housing and
retirement adequacy**



**Enhancing
Representation for
Platform Workers**

Work Injury Compensation (WIC)

Current status	Policy implementation
<ul style="list-style-type: none">• Platform companies are not obliged to grant delivery partners statutory employment benefits and protections.• Delivery partners, who are classified as self-employed persons, are not entitled to work benefits covered under Employment Act.	<ul style="list-style-type: none">• Platform companies will be mandated to provide WIC to all delivery partners, regardless of their work frequency or hours worked.• The level and scope of coverage will be aligned to that of a traditional employee receives under Employment Act.• A clearer definition of "at work" will be established to enhance understanding and ensure comprehensive WIC coverage.

Improving housing and retirement adequacy

Current status	Policy implementation	Long term impact
<ul style="list-style-type: none"> Traditional employees and platform workers in Singapore face differing CPF contribution rates, affecting delivery partners' disposable income. 	<ul style="list-style-type: none"> CPF alignment initiative: CPF contribution rates for platform workers and companies will gradually align with those of traditional employees over five years, ensuring housing and retirement parity. Flexibility & support: Platform workers aged 30 and above will have optional CPF contributions, with additional support provided to all lower-income workers during the transition. 	<ul style="list-style-type: none"> These measures are in aim to benefit the younger delivery partners, which makes up bulk of the delivery partners workforce. Younger delivery partners will also benefit from the compounding effect of CPF interest rates due to longer runway for accumulation.

Potential policies developments



Workplace Safety

Implementing workplace safety regulations to ensure that delivery riders have a safe working environment. Access to safe and available parking when they conduct deliveries.



Training and Development

Offering training and skill development opportunities to enhance the capabilities of delivery riders, including road safety training, customer service skills, and professional development programs. Additionally, the Singapore SkillsFuture programme provides avenues for workers to undergo training to facilitate job switches.



Constant Framework Review

This is to keep up to the evolving platform sector. This is the importance of having regular and updated data from the delivery platforms.

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Conclusion



Changing consumer habits and growing dependence on delivery services will continue to drive demand for delivery services, solidifying the role of delivery partners as a rising profession.



Singapore has effectively secured data sharing agreements with delivery platform companies, facilitating extraction of valuable insights for policy interventions aimed at safeguarding this vulnerable group of individuals.



The resulting policy outcomes includes long-term financial protections through WIC, housing provisions, and better retirement adequacy measures.



Singapore will continue to partner with companies to find avenues to further support delivery partners, ensuring fair treatment, sufficient safeguards, and pathways for skill enhancement and career progression.

FOR DISCUSSION

