

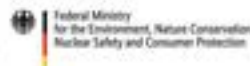


# BASELINE RESEARCH STUDY

## Pilot Project Implementation under The Collaborative Action for Single Use Plastic Prevention on Southeast Asia



On behalf of:



of the Federal Republic of Germany





allas



giz

On behalf of:

Federal Ministry  
for the Environment, Nature Conservation,  
Nuclear Safety and Consumer Protection

of the Federal Republic of Germany

**Jakarta**  
kota kolaborasi

# DKI JAKARTA CITY' REUSABLE PACKAGING BASELINE RESEARCH STUDY ON FOOD DELIVERY

Prepared for the Collaborative Actions for Single-Use  
Plastic Prevention in Southeast Asia (CAP SEA) Project

Implemented by Deutsche Gesellschaft für  
Internationale Zusammenarbeit (GIZ) GmbH

With the funding support from

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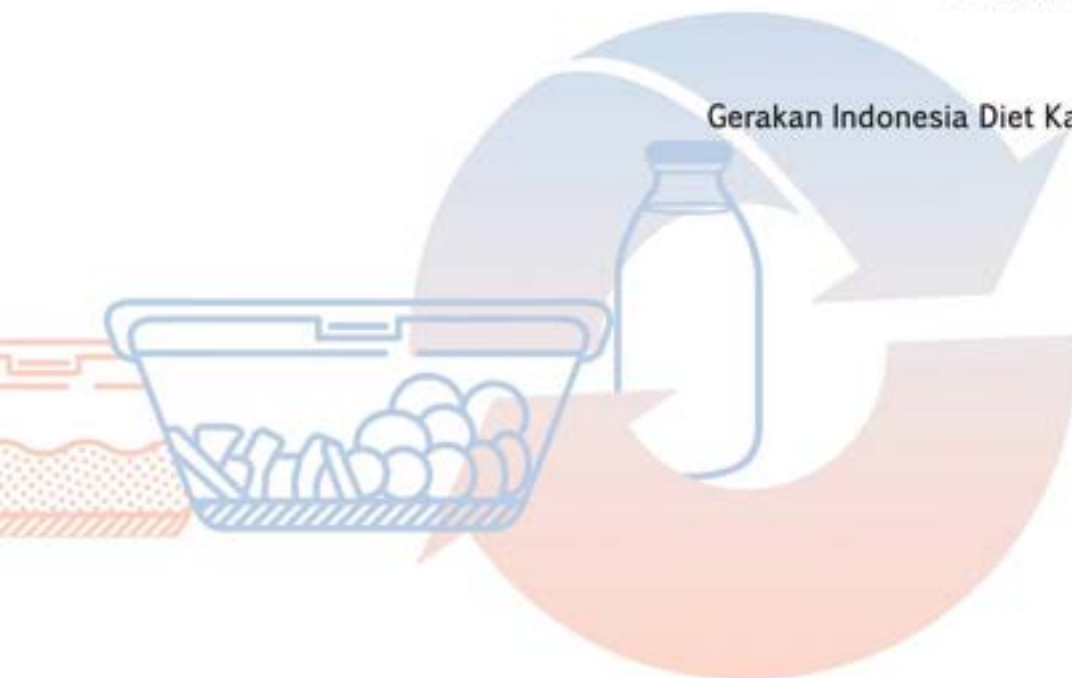
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Nuclear Safety and Consumer Protection

of the Federal Republic of Germany



Gerakan Indonesia Diet Kantong Plastik (GIDKP)  
August 2022



## FOREWORD

The global project Export Initiative Environmental Protection, funded by the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV), aims to create sustainable and favourable conditions for introducing of resource-efficient, climate-friendly, and innovative technologies in its target countries. For the regional project “The Collaborative Actions for Single-Use Plastic Prevention in Southeast Asia” (CAP SEA), the module aims to reduce disposable plastic waste, focusing on prevention and reuse. To achieve this, CAP SEA provides policy advice to stimulate a recycling economy, capacity development for key stakeholders, local pilot activities and support for innovative business models for SUP prevention.

Since 2017, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH supports BMUV initiative by providing advisory services and coordinating activities to support the development of framework conditions that enable the introduction of environmental approaches and technologies in partner countries. The project measures are implemented in collaboration with bilateral projects of German technical cooperation in seven countries (Egypt, India, Indonesia, Malaysia, Jordan, Thailand, and Ukraine) but also in global modules. The staffs deployed locally form the point of contact for other ongoing projects carried out by BMUV grant recipients in these countries. This promotes the regular exchange of information and experiences between the projects and creates synergies. In addition, the projects are better embedded in the strategies of the target countries.

The supported measures build up technical and institutional know-how and foster knowledge and technology transfer, raise environmental awareness, and build capacities, thereby contributing to the transition to more circular economies and the achievement of specific sustainable development goals (SDGs).

### General information about the project module in South-East Asia: Indonesia

In Indonesia, CAP SEA aims to contribute to the achievement of targets stated in The National Action Plan on Marine Plastic Debris (2018-2025) – reduction of plastic waste by 70% by 2025 compared to 2017; and The Roadmap to Waste Reduction by Producers (through the Ministry of Environment Forestry (MoEF) Regulation P.75/2019) – reduction of packaging waste from producers by 30% by 2029. In addition to that, CAP SEA actively participates in The Indonesian National Plastic Action Partnership (NPAP), a platform for public-private collaboration intends to: (1) Reduce avoidable plastic use and avoid the consumption of 540,000 tonnes/year of plastics in 2025 (6% of projected plastic waste generation in 2025), through policy and behaviour change and new business models; (2) Substitute 740,000 tonnes/year of plastics with alternative materials (8% of projected plastic waste generation in 2025) and (3) Collect, safely dispose and recycle unavoidable plastics with the goal of making all plastic waste a valuable commodity.

CAP SEA Indonesia is developing four work packages, of which work package 3 is the pilot project of business model implementation that aims at reducing single use plastic (SUP) packaging by providing alternative reusable packaging for food (beverage) delivery of ready-to-eat food with one local municipality. The Special Capitol Region of Jakarta (locally named Daerah Khusus Ibukota or DKI Jakarta) is chosen as local municipality pilot project because DKI Jakarta City hosts 10.5 million people and is by far the biggest agglomeration in Indonesia and its capital. DKI Jakarta Governor has banned SUP bags by issued The Governor Regulation Np. 142 of 2019 on the Obligation to use Environmentally Friendly Shopping Bags in Shopping Malls, Convenience Stores, and Traditional Markets.

## DKI Jakarta City's Reusable Packaging Baseline Research Study on Food Delivery

The objective of this report is to present the findings from the recently conducted survey on the baseline practice on food delivery, to receive **positive perception** of the pilot project from the customers and **demand for a continuation** of the pilot project as well as **expansion** to other kitchens/similar business models.

*"Single-Use Plastics" often referred to as disposable plastics, are commonly used for plastic packaging and include terms intended to be used only once before they are thrown away or recycled. These include, among other items, grocery bags, food packaging, bottles, straws, containers, cups and cutlery" (reference: United Nations Environment Programme, UNEP (2018): Single-Use Plastics: A Roadmap for Sustainability)*



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## EXECUTIVE SUMMARY

The issue of single-use plastic is still a global challenge today, including in single-use food packaging containers. Driven by its practical nature and accelerated by changes in people's behaviour during the COVID-19 pandemic, waste from ordering food online has become a new problem that must be addressed immediately. This study aims to learn the initial attitudes and behaviour of the people of Jakarta citizen in adapting the behaviour of using reusable food containers that can be returned, which the initiative is fronted by Allas. Allas is a start-up company focused on developing solutions for the reuse of ready-to-eat meals ordered online.

Through the online survey method, 39 respondents were obtained who were categorized into registrants who have not used Allas and Allas users themselves. The study showed that respondents have a critical response to the food packaging containers sent to them. Respondents consider that criteria for a good food container is one that meets the food grade standard, clean, does not leak, can be used directly as a place to eat, and durable. Following those criteria, respondents find them in Allas.

In general, the respondents claimed to have implemented reuse behaviour that is well known in their daily lives. Using the reuse model initiated by the Ellen MacArthur Foundation, this report identifies various behaviours that have been carried out by respondents, for instance refilled at home, such as filling drinking water bottles from home. This refill at home behaviour strongly boosts the increase of other reuse behaviours, in particular return from home and return on the go.

Respondents showed strong intention to continue using Allas and stated their expectation that Allas would expand to other online food delivery services as well as increase the number of merchants available. This study also showcases the respondents' opinion in terms of creating a more systematic reuse ecosystem. To this end, various leading actors' supports are needed, starting from the Government, The National Food and Drug Agency (locally named BPOM), food delivery service providers, merchants, and service providers for reusable products to create a stronger reuse ecosystem in Jakarta.

## 1. BACKGROUND

Waste accumulation in DKI Jakarta Province in the last three years has reached more than 7,000 tons per day<sup>1</sup>, exceeding the capacity of the landfill. 14% of the total waste generation is plastic waste that is difficult to process. Only less than 7% of plastic waste can be recycled. Plastic waste generation in DKI Jakarta Province is the third largest type of waste after organic and paper type waste or 14,02% of the total waste generated and 30,31% of inorganic waste generated in 2021<sup>2</sup>. One of the dominant types of plastic that becomes trash is plastic shopping bags that come from shopping centres and retail.

Based on the results of measurements of generation, composition and characteristics of waste in Bantargebang landfill and material recovery facility (MRF) in 2017, it was found that the composition of plastic waste in landfill monitored was 9% while in MRF was 33.34%. On 30 December 2019, Governor of Jakarta Anies Baswedan signed a decree that bans single use plastic carrier bags (Governor Regulation No 142/2019 on the Obligation to use Environmentally Friendly Shopping Bags in Shopping Malls, Convenience Stores, and Traditional Markets). The decree is effective on 1 July 2020. Incentive and administration sanction will be applied to the regulated subject based on their impact on complying with the regulation. Those who comply beyond the regulation will have a chance to receive regional fiscal incentives, for example, in the form of a reduction and/or relief local taxes on business activities carried out. But for those who do not comply with the regulation will get administrative penalties, such as warning letters, forced money, business permit suspension and/or business permit revocation.

However, there are other types of disposables besides plastic bags mainly used as food containers, mostly in the form of Styrofoam and transparent plastic also has created environmental problem (especially in Jakarta). A study conducted by the Oceanographic Research Center of the Indonesian Institute of Sciences (locally named Lembaga Ilmu Pengetahuan Indonesia or LIPI) supported the claim. The study - the first waste monitoring study conducted monthly in Indonesia- has identified six types of waste and 19 categories of plastic waste from nine river estuaries in Jakarta, Tangerang, and Bekasi during June 2015 to 2016. The study found that about 59 percent of the waste flowing in the nine river estuaries was plastic waste which was dominated by Styrofoam.<sup>3</sup>

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<sup>1</sup> Central Bureau of Statistics, DKI Jakarta. Volume of Waste Transported per Day by Type of Waste in DKI Jakarta Province (Tons), 2019-2021. <https://jakarta.bps.go.id/indicator/152/916/1/volume-sampah-yang-terangkut-per-hari-menurut-jenis-sampah-di-provinsi-dki-jakarta.html>, last accessed on August 3, 2022.

<sup>2</sup> Central Bureau of Statistics, DKI Jakarta. Percentage of Waste Composition in DKI Jakarta Province 2017-2021. BPS Provinsi DKI Jakarta. Last accessed on August 3, 2022.

<sup>3</sup> Cordova, M.R., Nurhati, I.S. Major sources and monthly variations in the release of land-derived marine debris from the Greater Jakarta area, Indonesia. *Sci Rep* 9, 18730 (2019). <https://doi.org/10.1038/s41598-019-55065-2>



In 2019, online food delivery services partnered with The Indonesian Plastic Bag Diet Movement (locally named Gerakan Indonesia Diet Kantong Plastik or GIDKP) to help educate the public and on plastic waste through GoGreener Program that aimed to help solve single-use plastic waste crisis by promoting, leveraging technology in an in-app banner, outlets that provide a “separate cutlery kit” option. This initiative seeks to promote awareness of sustainable practices and appeal to eco-conscious customers. Moreover, the current COVID-19 pandemic condition requires people to carry out all activities from home which has also caused online shopping transactions to increase. According to the LIPI study in 2020, during the period of implementing Large-Scale Social Restrictions (locally named Pembatasan Sosial Berskala Besar or PSBB) of the COVID-19 pandemic, there was an increase in transactions of 62% in the marketplace sector and 47% in the food delivery service sector. In fact, the plastic packaging used for shipping is more varied (including bubble wrap, polystyrene foam, plastic tape, plastic raffia, or plastic bags). This concern has also prompted the Plastic Free Parade movement (locally named Pawai Bebas Plastik) to initiate an open letter to all e-commerce stakeholders, both marketplaces and food delivery services, to provide fewer plastic options to consumers. The Plastic-Free Parade is a campaign initiated by GIDKP, the Econusa Foundation, Divers Clean Action, Greenpeace, Pandu Laut Nusantara, Pulau Plastik, Indorelawan, and WALHI Jakarta as a form to encourage the community to jointly fight single-use plastic pollution.

Enviu, Allas, The Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ), and GIDKP share the ambition to reduce plastic pollution and to develop the market for reusable packaging for food delivery in Indonesia, starting in DKI Jakarta City. Enviu is an impact-driven venture building organization which has worldwide experience in developing reuse solutions, including the development of reusable meal container solutions. In Indonesia, Enviu started with market research and validation of the market for a reuse solution for food delivery, in the project Allas. Allas started with market research and validation of the market for a reuse solution for food delivery. GIZ is working on sustainable development worldwide and is creating collaboration between public and private parties. GIZ is running the Collaborative Actions for Single-Use Plastic Prevention in Southeast Asia (CAP SEA) program. As part of CAP SEA Indonesia, GIZ is starting a pilot project to prevent single use plastic and is initiating collaboration for building the market for reuse solutions for food delivery in Indonesia. Meanwhile GIDKP aims to stimulate the reduction of single use plastics and is focusing on societal awareness creation to do so.

With this regard, Enviu, Allas, GIZ and GIDKP are working together to achieve their common objective. As the start of the pilot project, a baseline study is needed to see the initial profile and dynamics of the field in particular Allas’ subscribers’ acceptance of the pilot project.

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<sup>4</sup> LIPI. Increased Plastic Waste from Online Shopping and Delivery During PSBB. <http://lipi.go.id/berita/peningkatan-sampah-plastik-dari-belanja-online-dan-delivery-selama-psbb/22037>. Last accessed August 3, 2022.

## 2. OBJECTIVES

This baseline research aims to obtain a mapping of the initial profile of Allas subscribers, their perceptions and behaviour towards reuse initiatives in general and Allas' service, as well as various inputs and opinions for pilot project improvement and behavioural retention in the future.

## 3. OUTCOMES

In general, the outcome of the program is that customers, especially subscribers of Allas' reusable system, have positive perceptions of the pilot project and promote the experience to their peers. Through this research, it is expected that the majority of consumers (Allas subscribers) demand for a continuation of the program and expansion to other kitchens/ similar business models.

## 4. METHODOLOGY

The general target of this research respondent is individuals who have been in contact with Allas as a provider of reusable food containers that can be returned, both those who have not and have used them. With this fairly specific target, and the situation in the midst of a COVID-19 pandemic that were not yet allow face-to-face interview, data gathering was obtained by adopting the technique of distributing online questionnaires. By using an online survey application, namely SurveyMonkey, the application has various facilities that are considered good to support the data collection process. The questionnaires can be accessed via <https://www.surveymonkey.com/r/XVCBCLG>.

This survey uses a quantitative approach, meaning that almost all the data obtained are in the form of numbers or numbering from several answer choices, so that the data will also be processed using certain statistical techniques. Although it is also possible in certain relevant questions, open-ended questions are asked to produce qualitative answer choices that can be analysed later.

The sampling technique applied to the respondents is purposive, which is limited only to the qualifications of the respondents who have been recorded on the Allas contact list, with a population of 330 people. Purposive sampling technique is one type of non-probabilistic sampling technique that has the characteristics of non-random sampling, where random sampling is not carried out, and the researcher determines the sampling by determining special characteristics that are in accordance with the research objectives so that it is expected to answer the research problem. This type of sampling was chosen because with the online questionnaire method which can only be filled out after giving consent, it is impossible to carry out random sampling because of the possibility that the return rate of the questionnaire cannot be ascertained.

To obtain data according to the sampling technique described earlier, there are several steps taken. First, Allas provides a subscriber list that has been previously filtered according to the initial category of respondents who are determined, namely those who only live in the DKI Jakarta City. From this data, then Allas contacted the first time to explain the plan and ask the willingness of prospective respondents to be contacted by surveyors. After the subscriber gives consent to become a respondent, the surveyor will contact the prospective respondents to introduce themselves and convey their intentions, and then send the online questionnaire link. Surveyors can also help respondents in filling out the questionnaire if there is any difficulty.

Respondents filled out a questionnaire as a research instrument with a self-administrated questionnaire scheme. This means that respondents fill out the questionnaire directly themselves without any question-and-answer process in face-to-face interviews. Data collection was carried out on May 10-24, 2022 (two weeks of calendar days), with the achievement of 39 respondents. However, there were at least 3 respondents who did not complete the questionnaire until the end. The four respondents who did not fill in completely were not removed from the data set to enrich the variety of answers given by these respondents. With this condition, total number of respondents (N) for certain questions could be N=39, N=36 or even N=33, and so on. In each analysis will also be told the number of respondents used so as not to cause misinterpretation. With these conditions, it produces a margin of error (MoE) of  $\pm 12.38\%$  with a 90% confidence level. That is, from all respondents, the value that emerges from the analysis results has a margin of error range of 12.38% minus the analysis result number, up to 12.38% plus the analysis score value. The margin of error uses the following formula:<sup>5</sup>

$$MOE = z * \sqrt{p * (1 - p) / \sqrt{n}}$$

where:

MoE is the margin of error,

z is the z-score associated with a level of confidence,

p is the sample proportion, expressed as a decimal,

n is the sample size.

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<sup>5</sup> Mendenhall, W., Beaver, R.K., & Beaver, B.M. (2013). Introduction to Probability and Statistics, Fourteenth Edition. Boston: Cengage Learning.

## 5. RESULTS

### 5.1. Respondent Category

At the beginning of the research design, respondents will be divided into three categories, namely (i) Registrants, who have not made a payment, let alone used; (ii) already paid but not yet used Allas service; and (iii) users. However, after receiving input from Allas, related to the planned system change in their business model, finally the categories of respondents analysed in this survey became (i) Registrants, (ii) First time users, and (iii) Repeating (regular) users, more than once used.

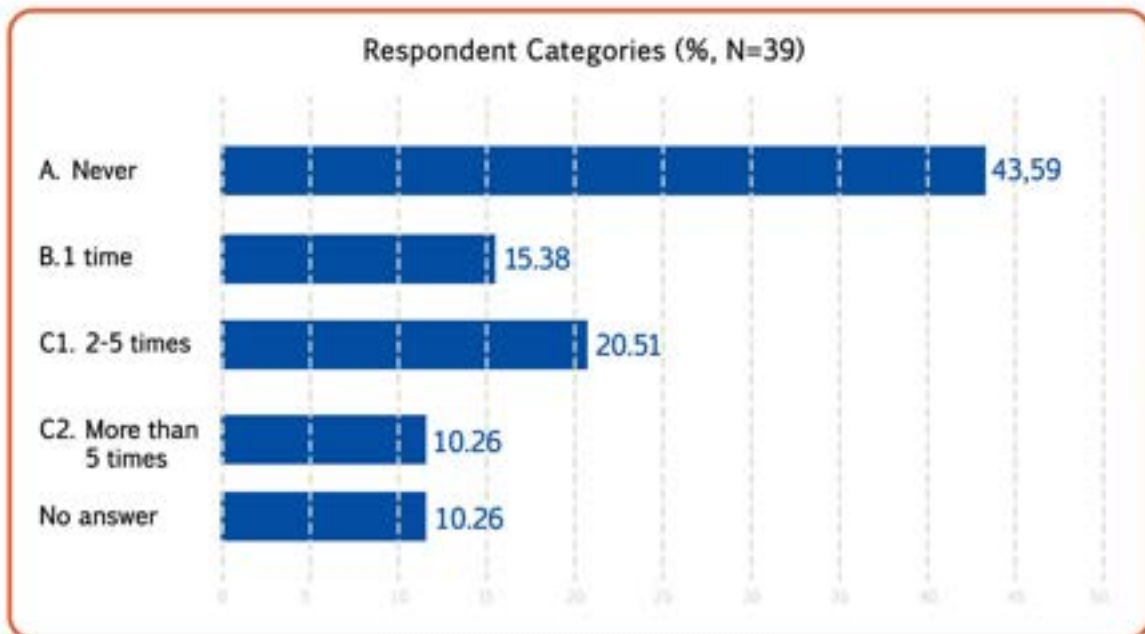


Figure 1 . Respondent Categories

Of all respondents who took part in filling out this survey, 43.59% (N=39) admitted to having used Allas. Respondents who were Allas users for the first time were 15.38% (N=39), while those who had used it 2-5 times were 20.51% (N=39), and those who claimed to have used it more than 5 times were 10.26 % (N=39).

## 5.2. Respondent Demographics

Respondents who took part in this survey were dominated by women as much as 79.49% (N=39). Respondents were also dominated by those aged 31-40 years 35.90% (N=39) and 21-30 years old as many as 35.90% (N=39) or in the other words most respondents were millennial generation. This generation is often described as “lazy” and is considered to prefer to spend the money they should have saved to buy a house for a snack or iced coffee. But they are also digital natives who can adapt well with digital and technology.<sup>6</sup> From this, it can say that millennials generation is a very potential target market for Allas.

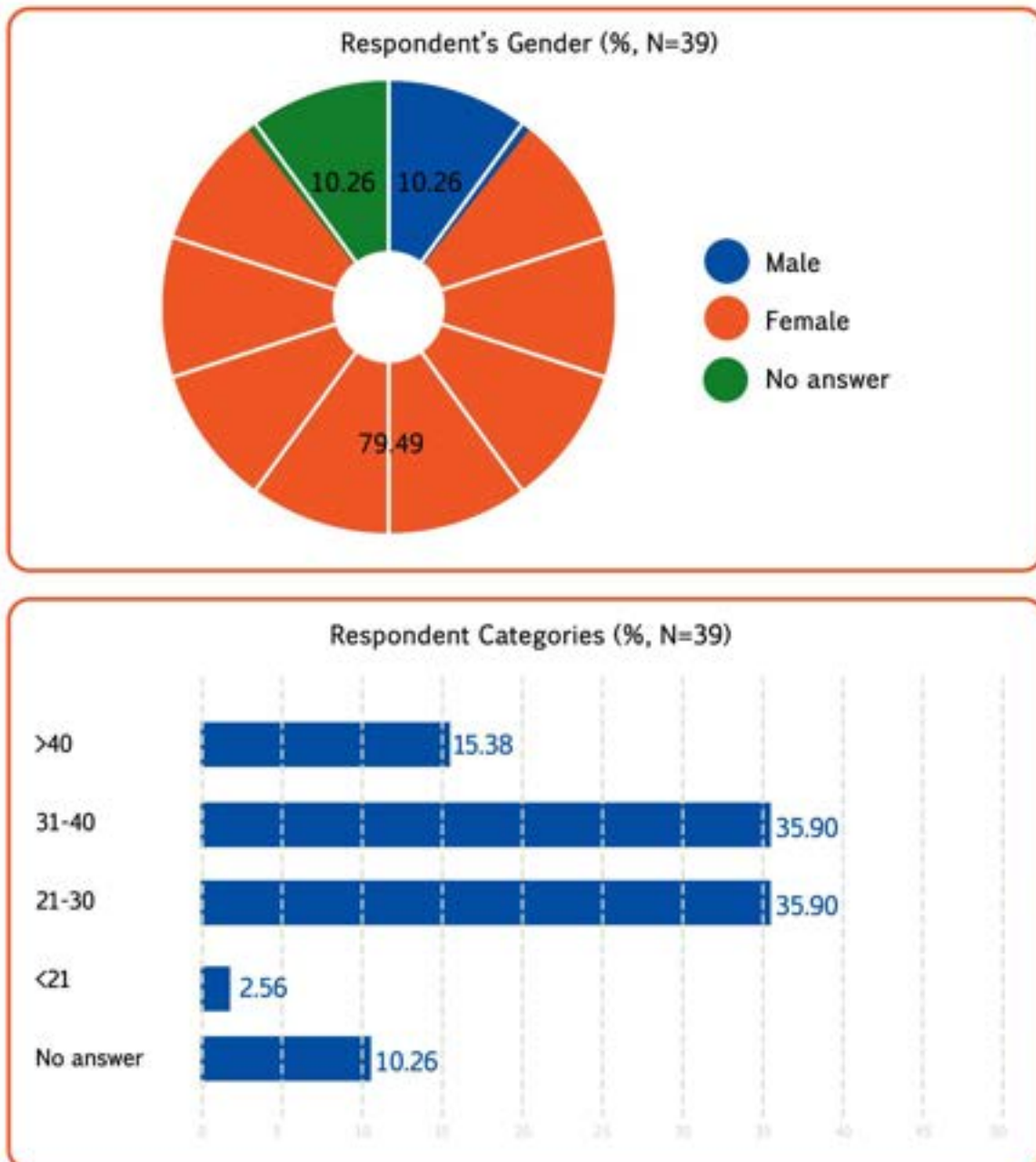


Figure 2 . Respondent's Gender and Age

<sup>6</sup> Mengenal Apa Itu Generasi Baby Boomers, X, Y, Z, Millenials, dan Alpha Halaman all - Kompas.com, last accessed on 25 July 2022.

Respondents also claimed to have completed their last education, most of them had a bachelor's level (66.67%, N=39). And none of the respondents had a final education lower than the diploma level. This shows that all respondents have a good educational background, which of course can affect wider perceptions, knowledge, and access to information.

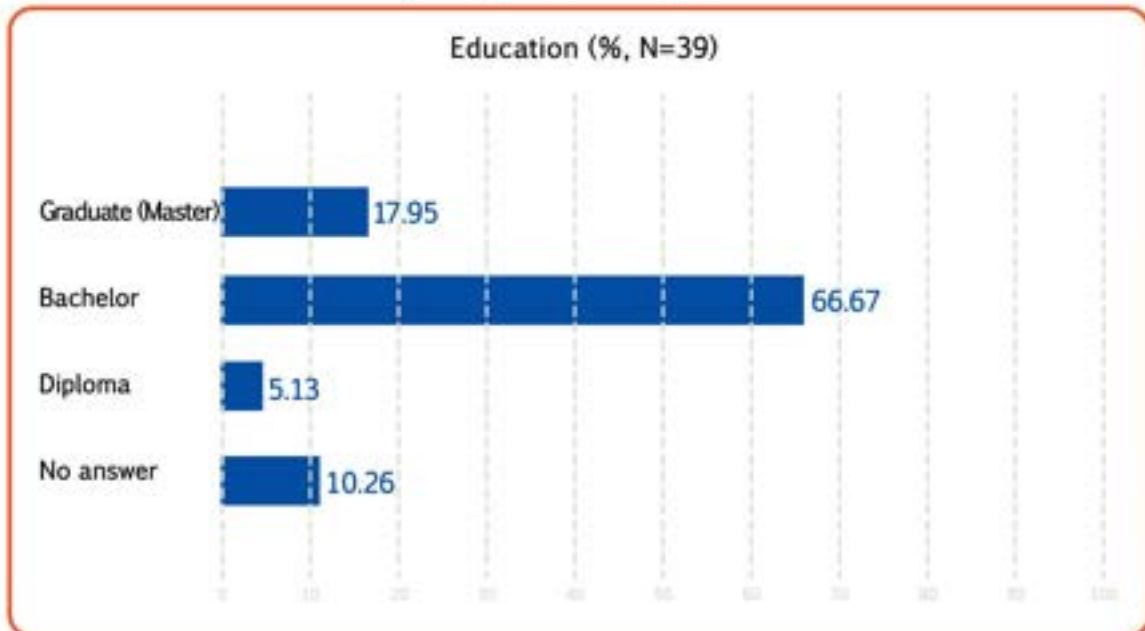


Figure 3 . Respondent's Education

Respondents who claimed to work as private employees (33.33%, N=39), followed by housewives (17.95%, N=39), are two of the largest percentage for job profile. Housewives comes out as the top two because most of respondents are female (see Fig. 2). By noticing that only 5.13% of respondents that have not worked, it can be ascertained that these respondents are of productive age.

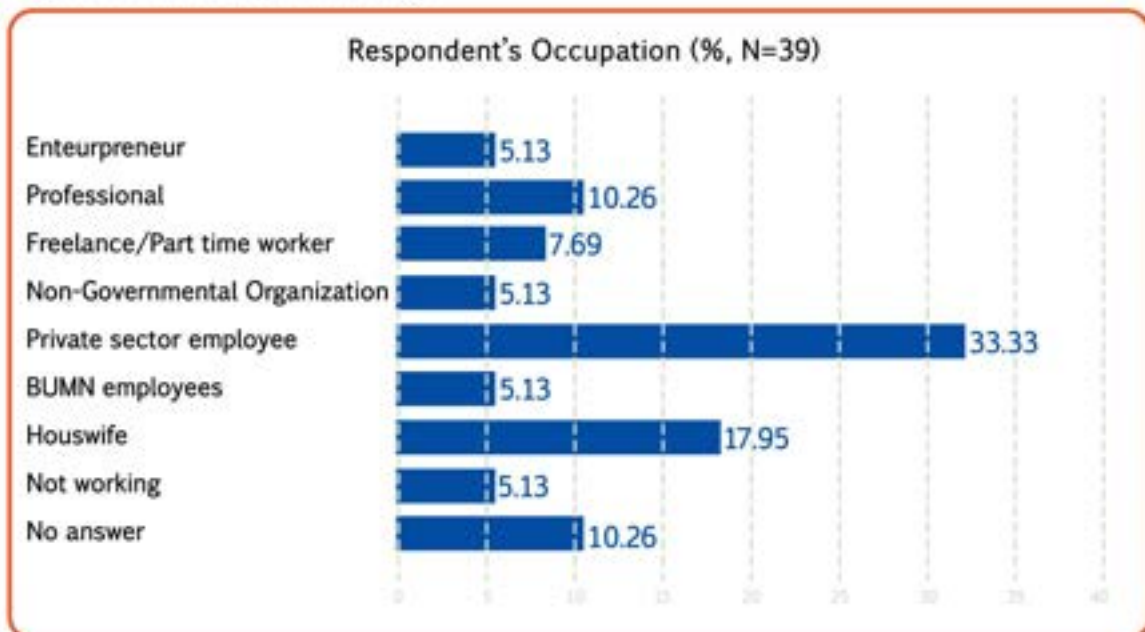


Figure 4 . Respondent's Occupation

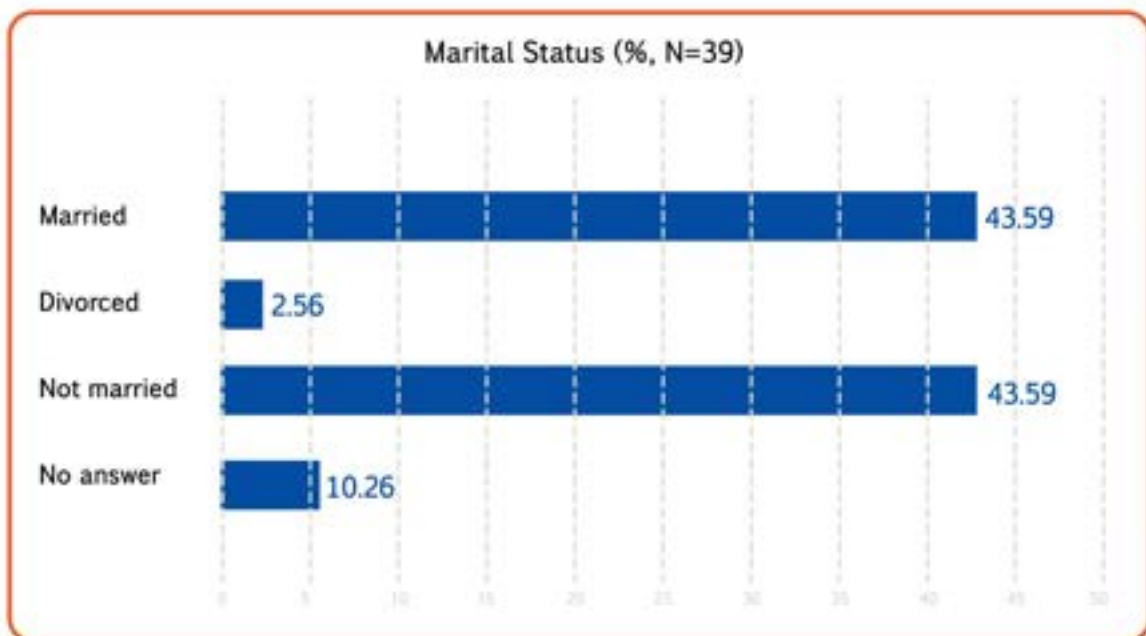


Figure 5 . Respondent's Marital Status

Almost half of the respondents claimed to be unmarried (43.59%, N=39). Related to that, 41.03% (N=39) lived with their parents and/or relatives. Meanwhile, there were 38.46% (N=39) of respondents who claimed to live with their main family (either spouse or children), and only 10.26% (N=39) of respondents who claimed to live alone.

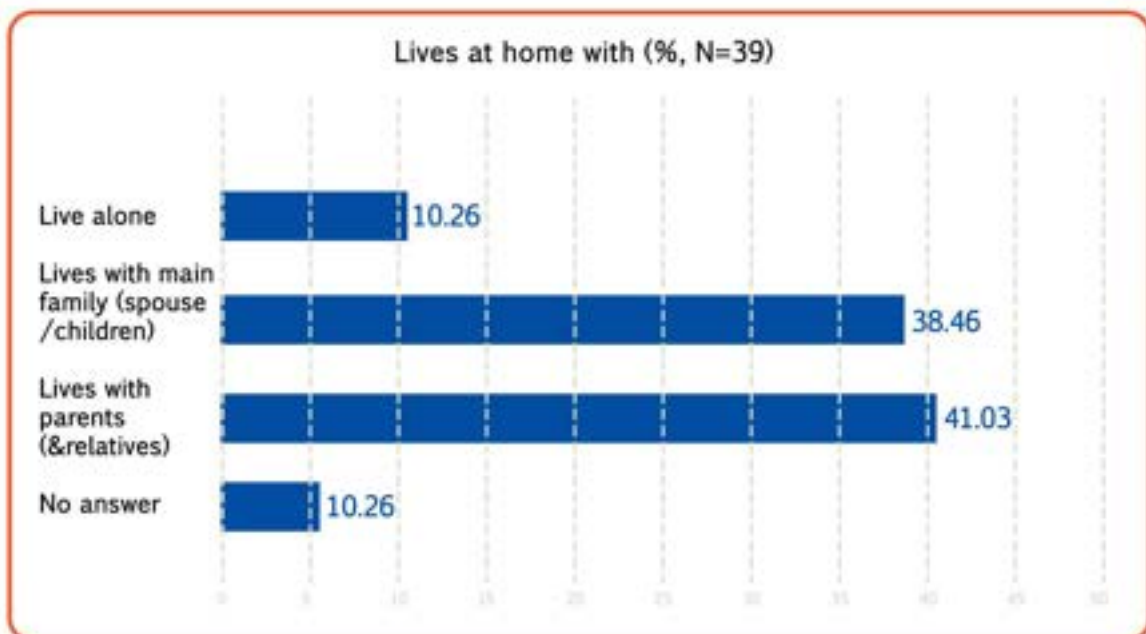


Figure 6 . Family Members Living with the Respondent

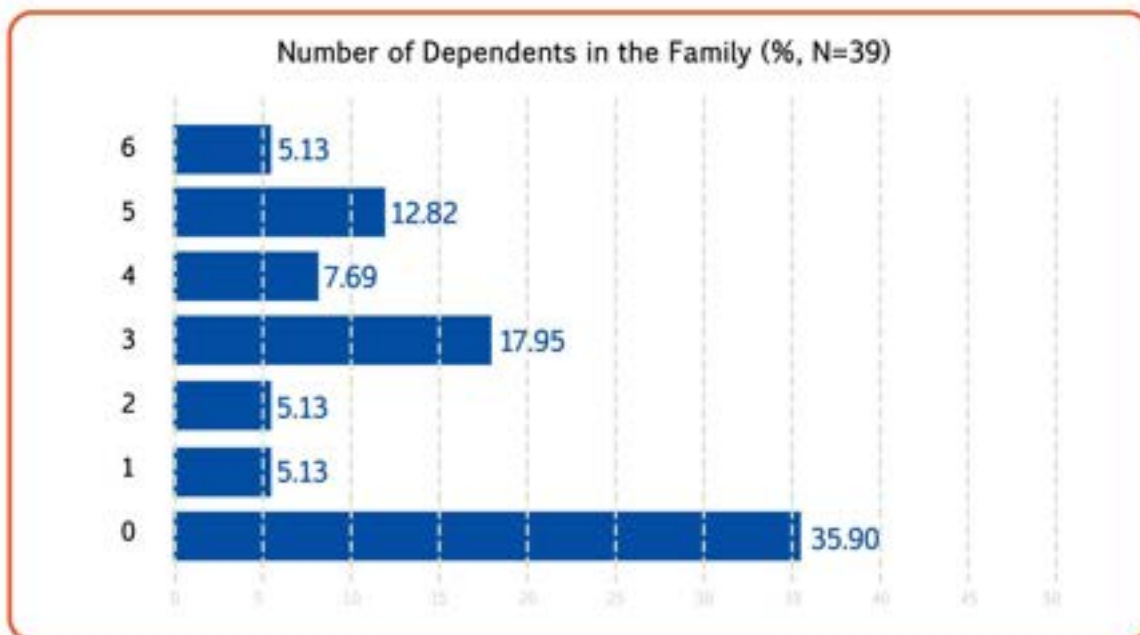


Figure 7 . Number of Dependents in the Respondent's Family

From these families, the number of dependents in the respondent's family is quite different. 35.90% (N=39) respondents admitted that they had no dependents at all, while the rest claimed to have dependents ranging from 1 to 6 people. This means that one third of respondents of the respondents at least buy food for themselves.

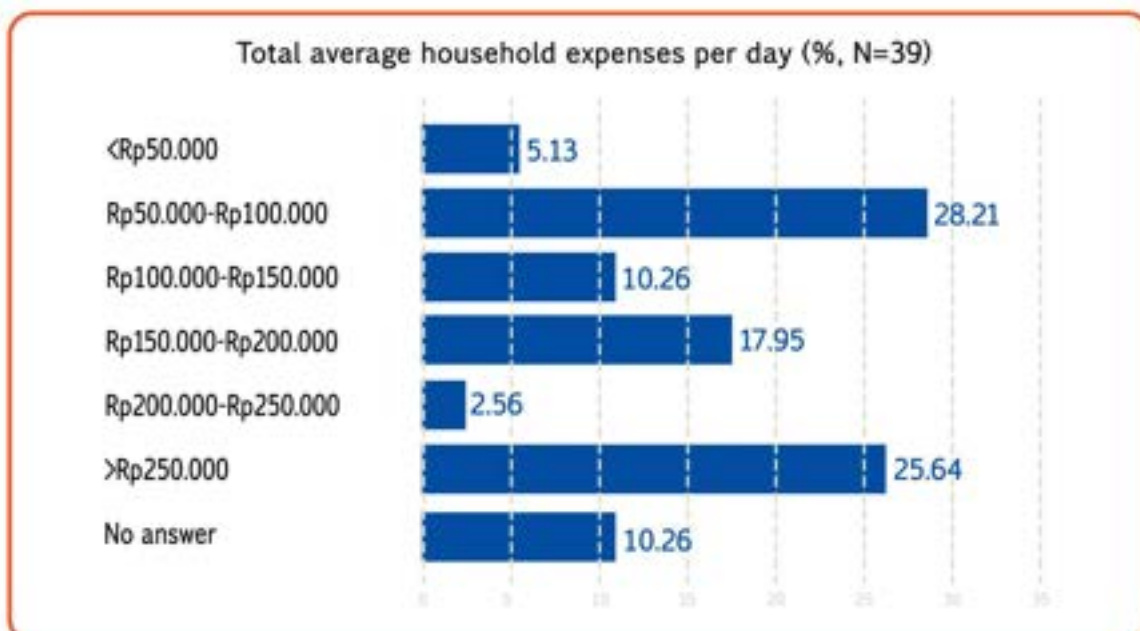


Figure 8 . Total Average Household Expenses per Day



More than a quarter of the respondents had an average total household expenditure per day of more than IDR 250,000 (25.64%, N=39), and more than 33% (N=39) of the respondents claimed to have an average expenditure of under IDR 100,000 per day. In the other words that more than 56% of respondents can be categorized as middle-income group because their average of total expenditure is IDR 3,000,000 – 7,500,000 per month (30 calendar days).<sup>7</sup>

### 5.3. Online Food Order Behaviour

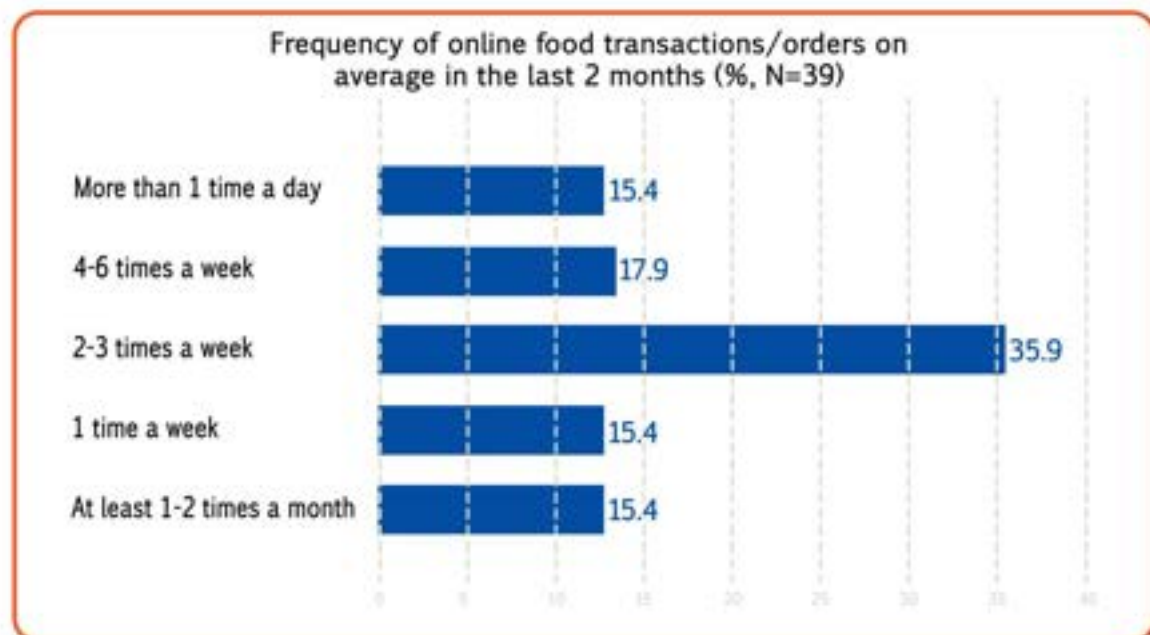


Figure 9 . Frequency of Online Food Orders on Average in the Last 2 Months

Of all respondents in this survey, in the last 2 months most of the respondents (35.9%, N=39) admitted to ordering food online an average of 2-3 times a week. Followed by the frequency of purchases 4-6 times a week (17.9%, N=39). From this, even in the midst of transition from COVID-19 pandemic to the new normal, market demand for ordering online food is still very high. This finding is also reinforced by the results of a survey carried out by The Strategic Result Institute that many consumers intend to continue using (99%) and increase their use (96%) of online food delivery (OFD) services.<sup>8</sup>

<sup>7</sup> Berita - PENGHASILAN KELAS MENENGAH NAIK = POTENSI PAJAK? (kemenkeu.go.id), last accessed on 26 July 2022.

<sup>8</sup> Riset Tenggara Strategics: GoFood Jadi Layanan OFD Terbanyak Diunduh dan Digunakan di Indonesia (kompas.com), last accessed on 26 July 2022.

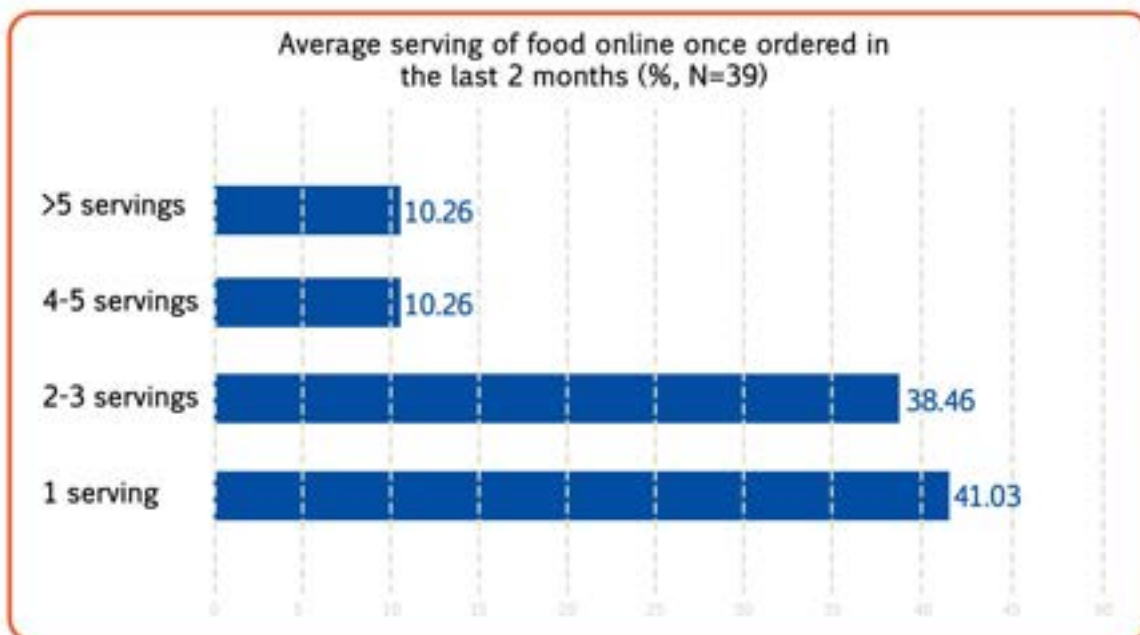


Figure 10 . Average Serving of Food Online Once Ordered in the Last 2 Months

Most of respondents (41.03%, N=39) also admitted having ordered 1 portion of food at one time, and followed by 38.46% (N=39) respondents ordered 2-3 portions at one time.

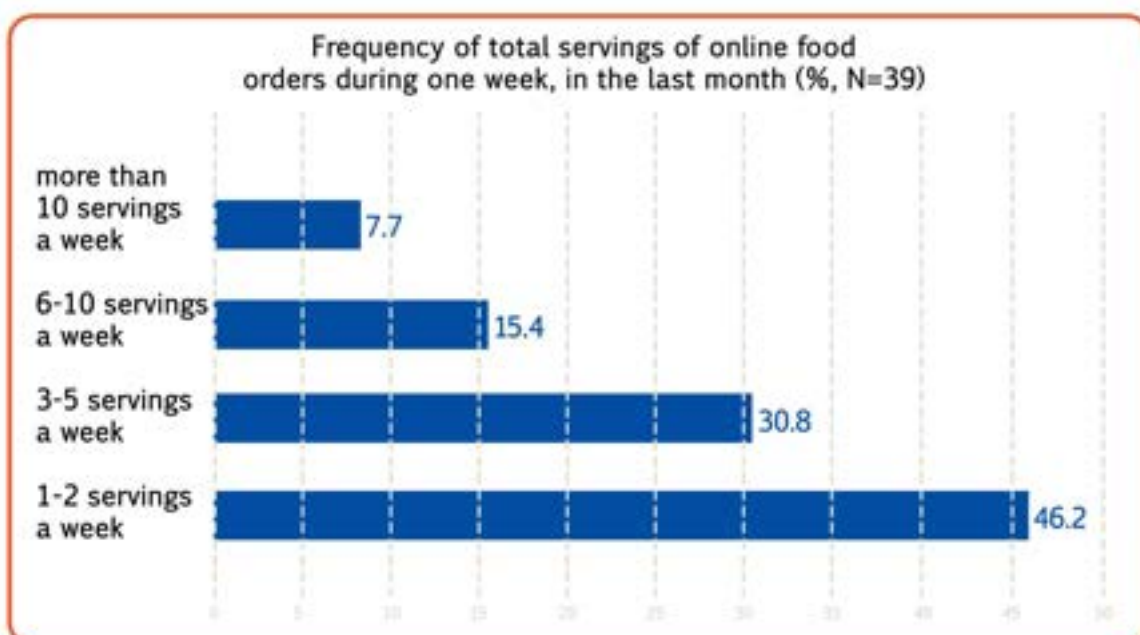


Figure 11 . Total Servings of Online Food Orders in a Week, Last Month

However, in the past month, 46.2% (N=39) of respondents admitted to ordering 1-2 servings a week. More than half of respondents tend to consume more than 2 servings a week.

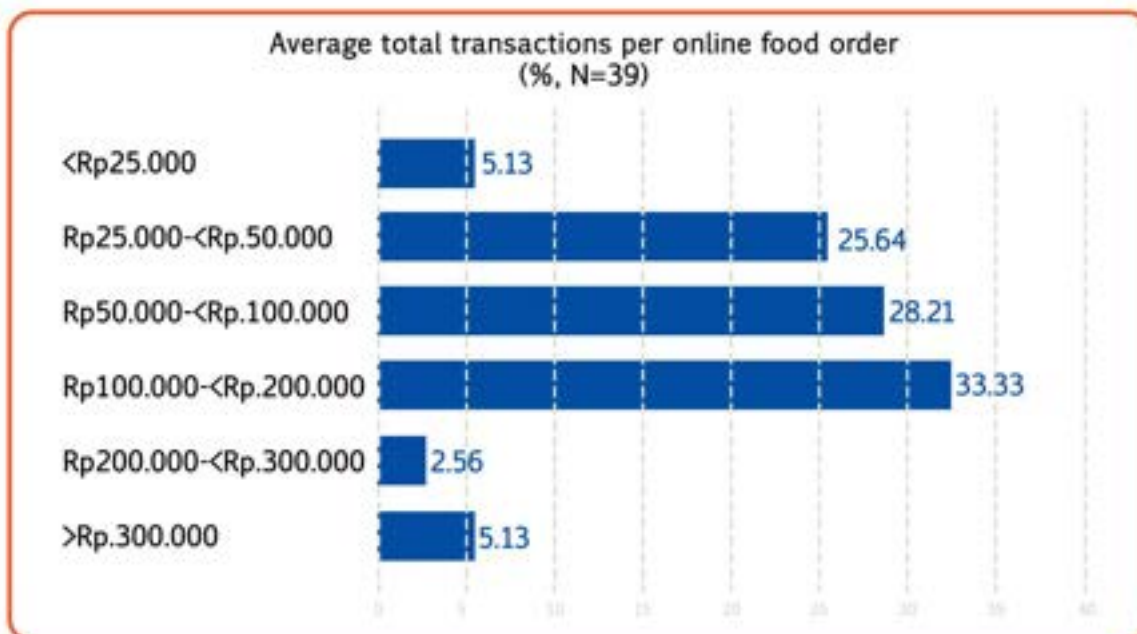


Figure 12 . Average Total Transactions per Online Food Order

A total of 33.33% (N=39) of respondents also admitted to spending an average of IDR 100,000 - IDR 200,000 per online food order, followed by 28.21% (N = 39) who spent IDR 50,000 - IDR 100,000.

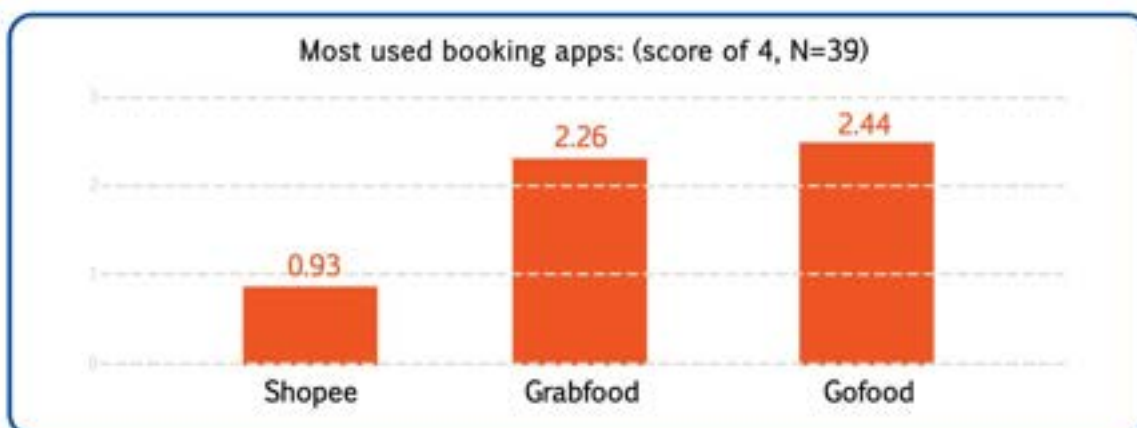


Figure 13 . Most Used Booking Apps

In ordering food online, respondents admitted that they most often order through the Gofood application, followed by Grabfood and Shopee. Based on the ranking of the applications they use the most, Gofood ranks the highest of the overall average score, at 2.44 out of a scale of 4. This is in line with the results of a survey carried out by The Strategic Result Institute.<sup>9</sup>

<sup>9</sup> Riset Tenggara Strategies: GoFood Jadi Layanan OFD Terbanyak Diunduh dan Digunakan di Indonesia (kompas.com), last accessed on 26 July 2022.



Figure 14 . Online Food Order Location

The location for ordering food online is most often done at home, followed by offices, hotels/inns, and schools/campuses. By rating the most frequently used locations, the house occupies the highest score of the overall average score, at 3.54 out of a scale of 5. This may be because millennial generation prefers to work from home or stay at home on weekend in the midst of the new normal life.

#### 5.4. Experience with Food Packaging

Regarding their experience with food packaging purchased online, most respondents (43.59%, N=39) said that used online food packaging is usually collected separately and then handed over to waste banks or other collectors. Furthermore, 20.51% (N=39) of respondents admitted that the used food packaging was reused but not as a place for food (repurpose). Only 15.38% (N=39) of respondents admitted that the used food packaging was reused as food containers.

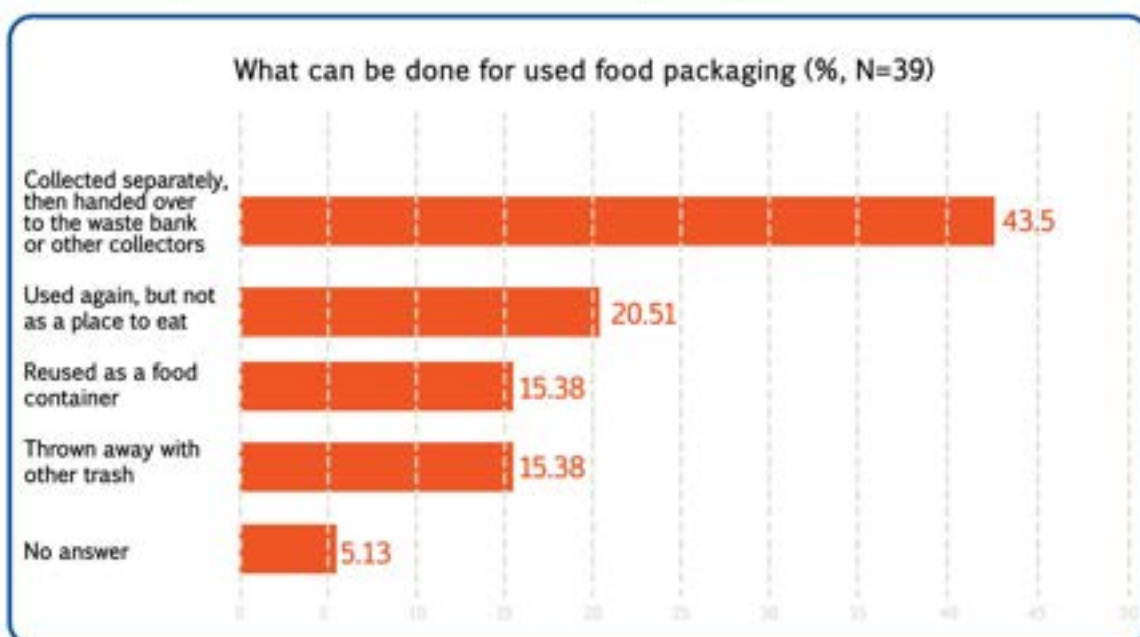


Figure 15 . Post-consumption Behaviour for Used Food Packaging

A total of 33.33% (N=39) respondents also answered that they had obtained reusable containers of 1-3 times in the last two months (apart from Allas), such as thin wall, glass bottles, literal beverage bottles, etc. One fourth of respondents (25.64%, N=39) admitted that they never got it. This means they most often receive single-use packaging. While only 15.38% (N=39) of respondents admitted having received it more than 10 times.

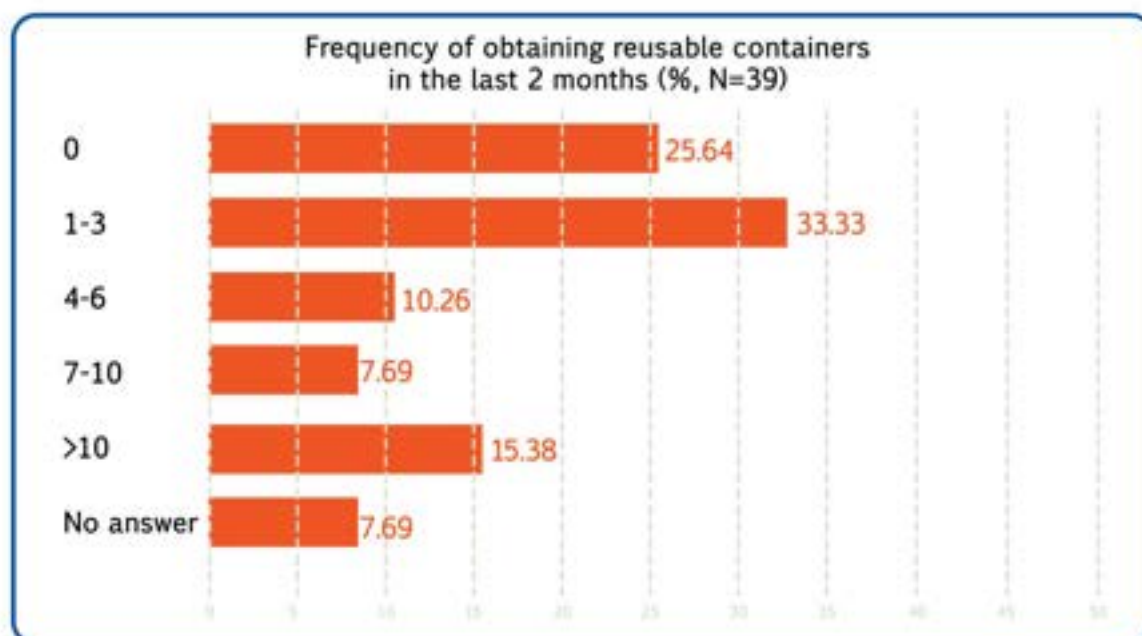


Figure 16 . Frequency of Obtaining Reusable Containers

Surveyors also asked about the characteristics for food packaging using online delivery services. From 39 respondents, the five most important characteristics, according to respondents, are:

- Food grade (87.18%, 34 votes)
- Cleanliness (87.18%, 34 votes)
- Not leaking (79.49%, 31 votes)
- Can be directly used as a place to eat (46.15%, 18 votes)
- Durable (38.46%, 15 votes)

These results indicate that food safety and hygiene are the highest priority as a factor in considering food containers.

Furthermore, surveyors also asked the types of packaging that respondents often received as food packaging in online food delivery services. From 39 respondents, according to them, types of packaging that are often used to package food in online food delivery services:

- Plastic packaging containers (76.92%, 30 votes)
- Paper packaging containers (66.67%, 26 votes)
- Clear plastic bags (56.41%, 22 votes)



Figure 17 . Illustration: (i) Plastic Packaging Containers, (ii) Paper Packaging Containers, & (iii) Clear Plastic Bags

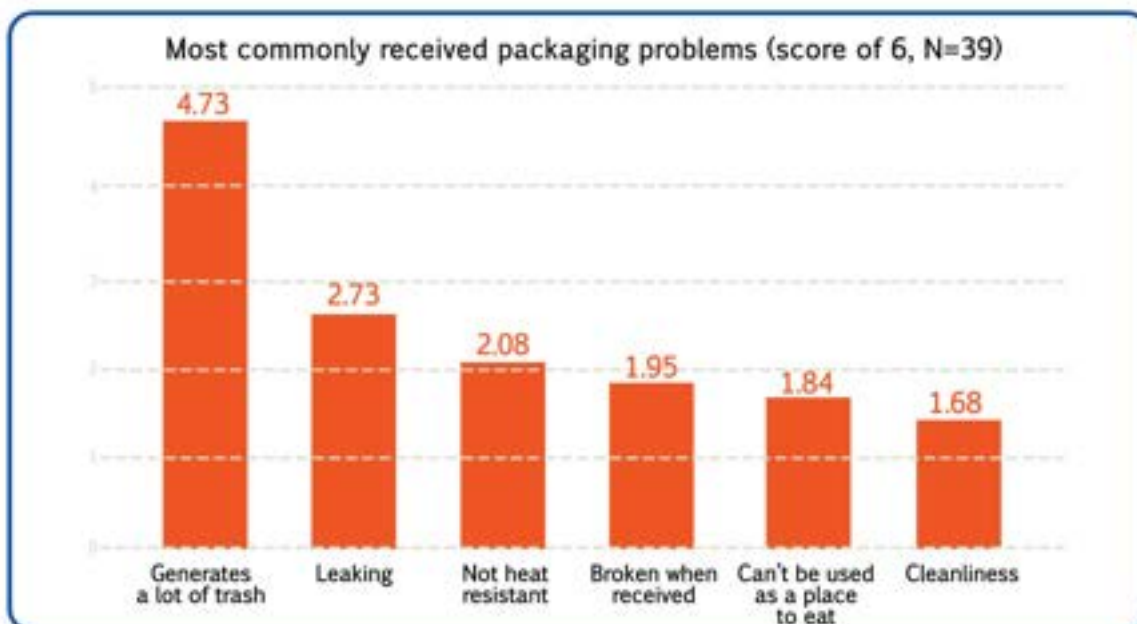


Figure 18 . Most Commonly Received Packaging Problems

From all of respondents' experiences of receiving food packaging containers online, they admitted that the most common problem encountered was that these containers produced a lot of waste. From a scale of 6, the obtained average score for waste issue is 4.73. The next problems encountered were packaging that leaked (2.73), not heat resistant (2.08), damaged when received (1.95), cannot be used as a place to eat (1.84), and related to cleanliness (1.68). There were 2 respondents who did not answer the question.

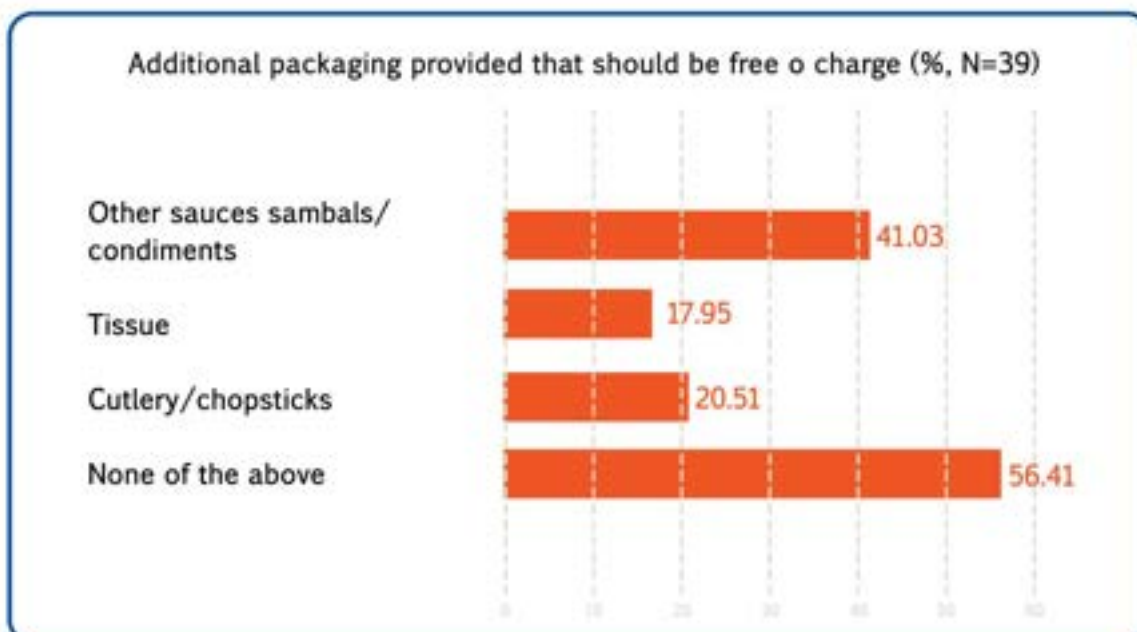


Figure 19 . Opinion on Additional Packaging that Should be Free of Charge

Regarding the additional tools or condiments provided during food purchase, the majority of respondents (56.41%, N=39) think it is better for the restaurant/merchant to not give it for free. Respondents who think that products can be given free are 41.03% (N=39) for sauces/sambal/other seasonings, 20.51% (N=39) for spoons/forks/chopsticks, and 17.95% (N=39) for tissues.

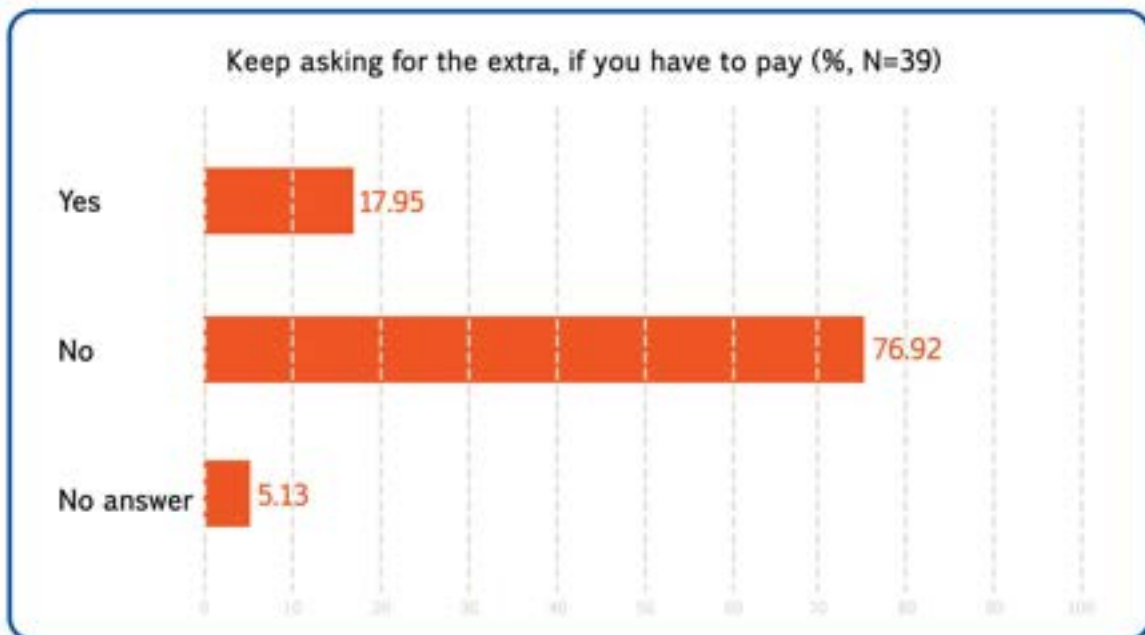


Figure 20 . Respondent's Willingness to Keep Asking for the Extra, If Need to Pay



Figure 21 . Opinion on Additional Price per Container of Food Received

When asked whether the respondents still asked for addition if they had to pay, most of the respondents (76.92%, N=39) answered no, and there were 17.95% (N=39) respondents who answered yes.

If they need to pay, 25.64% (N=39) of the respondents are willing to pay an additional fee of IDR1,000-IDR3,000, 20.51% (N=39) pay IDR500-Rp1,000, and 15.38% (N=39) pay < Rp500. About 12.82% (N=39) respondents are not willing to pay at all. 10.26% (N=39) of respondents are willing to pay IDR 3,000 - IDR 5,000. As for those who are willing to pay > IDR 5,000 or pay at any price, each answer is 5.13% (N=39) respondents.

To explore the respondents' understanding, surveyors also asked about their perception and understanding of the dimensions of the term "cleanliness" in food containers. Surveyors asked them, "When you hear "reusable packaging must be clean" what is the first things that comes to your mind first?" From 39 respondents, 3 respondents did not answer, and 1 respondent answered irrelevant. After the answers be categorized based on the similarity of factor dimensions, the results as follows:

1. Washing and sanitizing process (18)
  - Washed & sterilized from previous food containers (8)
  - Washed with dish soap & running water, until dry (5)
  - Cleaned to standard (2)
  - UV Sanitized (germ & virus free) (2)
  - Transparency of the cleaning process and cleaning results from third parties (1)
2. Sensory physical characteristics (7)
  - Sensory clean (looks clean, odorless, not greasy when we touch it) (5)
  - No dust & dirt (2)
3. Product appearance (3)
  - Clean as indistinguishable from new packaging (1)
  - Doesn't look like used stuff (1)
  - The food is not messy (1)
4. Subjective assumptions (2)
  - No characteristics, just believe it (1)
  - Convenient to reuse (1)
5. Related product containers (5)
  - Food Grade - contamination free (3)
  - Easy to wash and not easy to leak (1)
  - Food containers for food storage only (1)
6. Irrelevant/no answer (4)



## 5.5. Reuse Behaviour

Regarding reuse behaviour in the last three months (February – April), most of the respondents (64.10% & 69.23%, N=39) admitted to using tumblers and shopping bags every day. For other types of reusable products, such as straws, cutlery, and eating utensils, respondents have not shown a consistent tendency to use them. In this question set, 3 respondents did not answer the question.

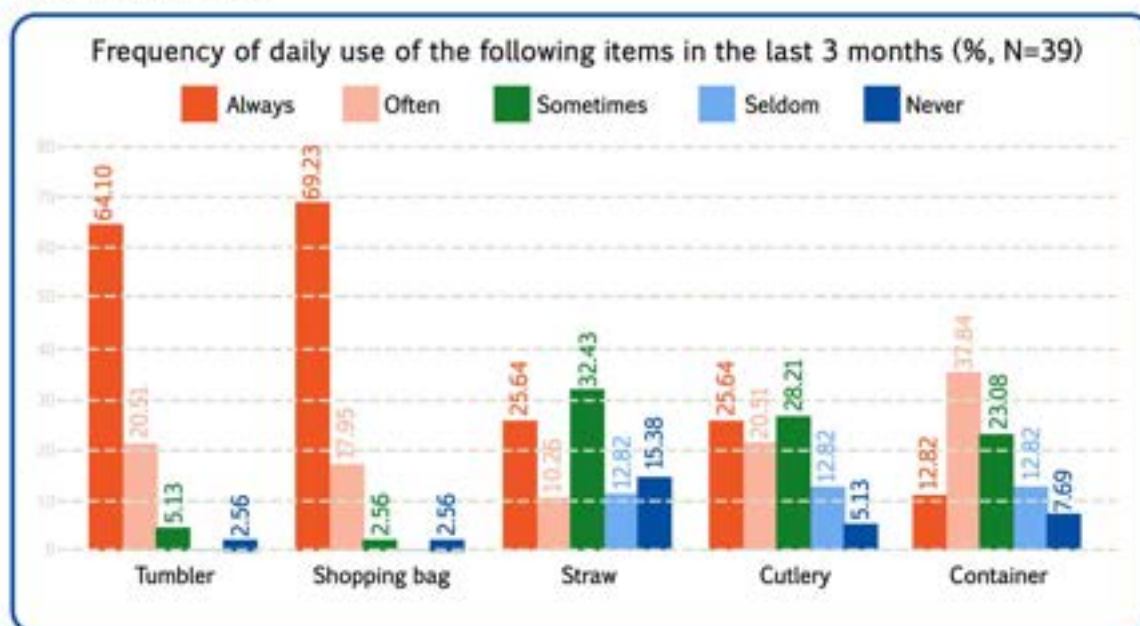


Figure 22 . Frequency of Daily Use of the Following Items in the Last 3 Months

Respondents seemed quite confident to agree that the reason for using reusable products was because they can help the environment (89.75%, N=39) and feel more comfortable (84.62%, N=39). Regarding the reason that reused products can save money, only 62.93% (N=39) agree with this factor.

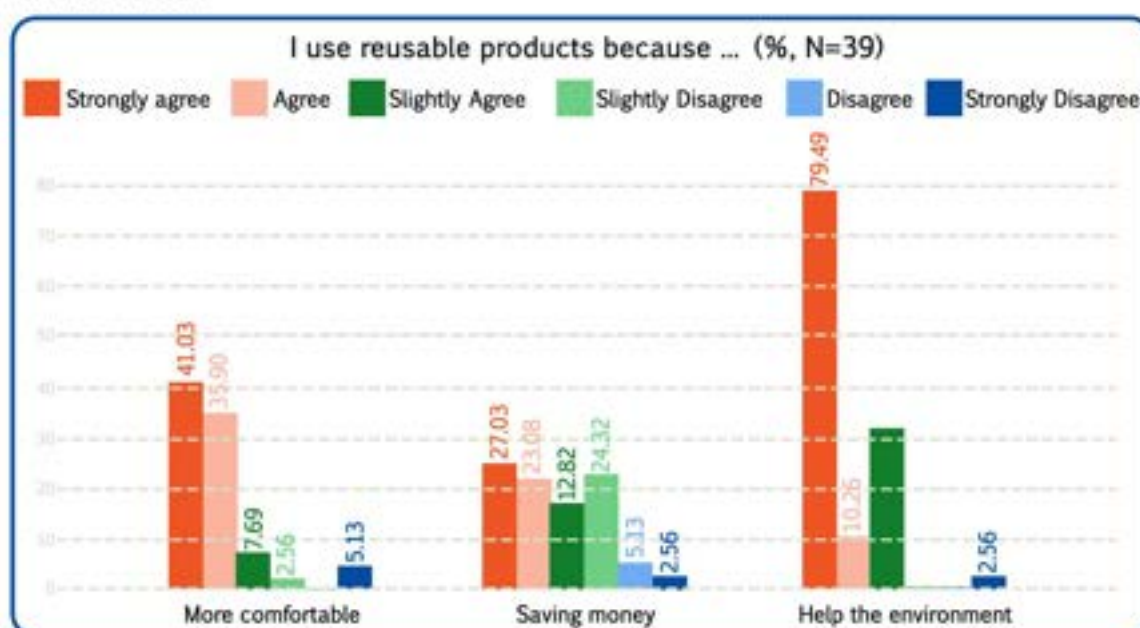


Figure 23 . Reasons for Using Reusable Products

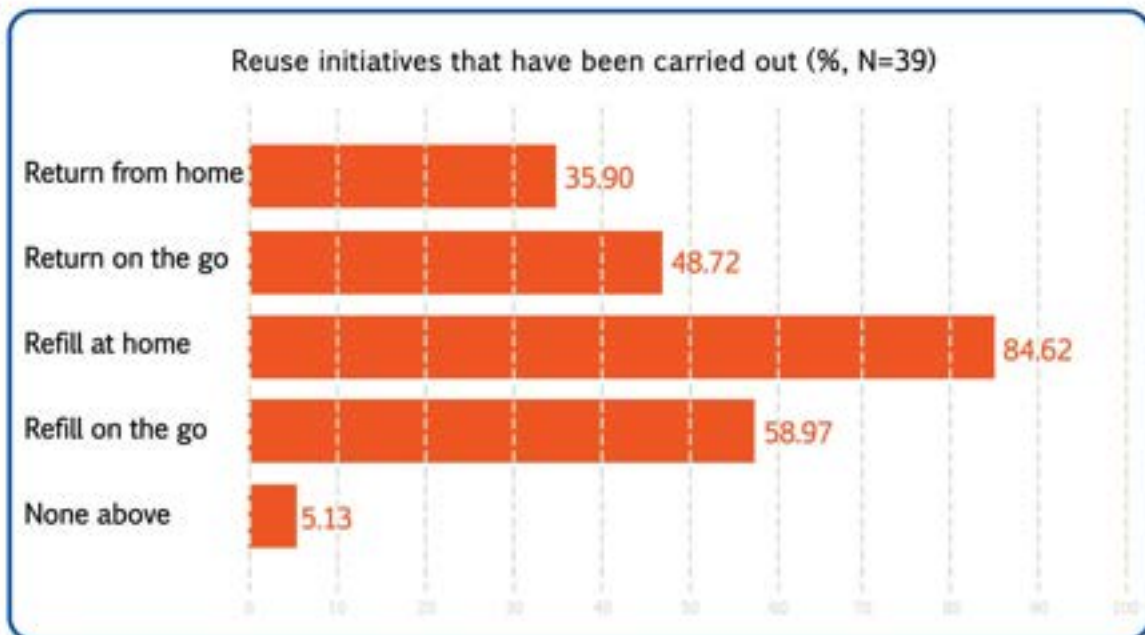


Figure 24 . Reuse Initiatives That Have Been Carried Out

Even in larger initiatives, 84.62% (N=39) of respondents claimed to having refilled at home, such as filling drinking water bottles from home while traveling or buying product content delivered to their home. Followed by Refill on the go (58.97%, N=39), such as buying product content using its own container in a store, such as bulk store. 48.72% (N=39) respondents carried out Return on the go, by returning containers when shopping at the store, such as gallons of drinking water. Finally, 35.90% (N=39) have implemented Return from home, by returning used containers at home, such as Allas.<sup>10</sup>

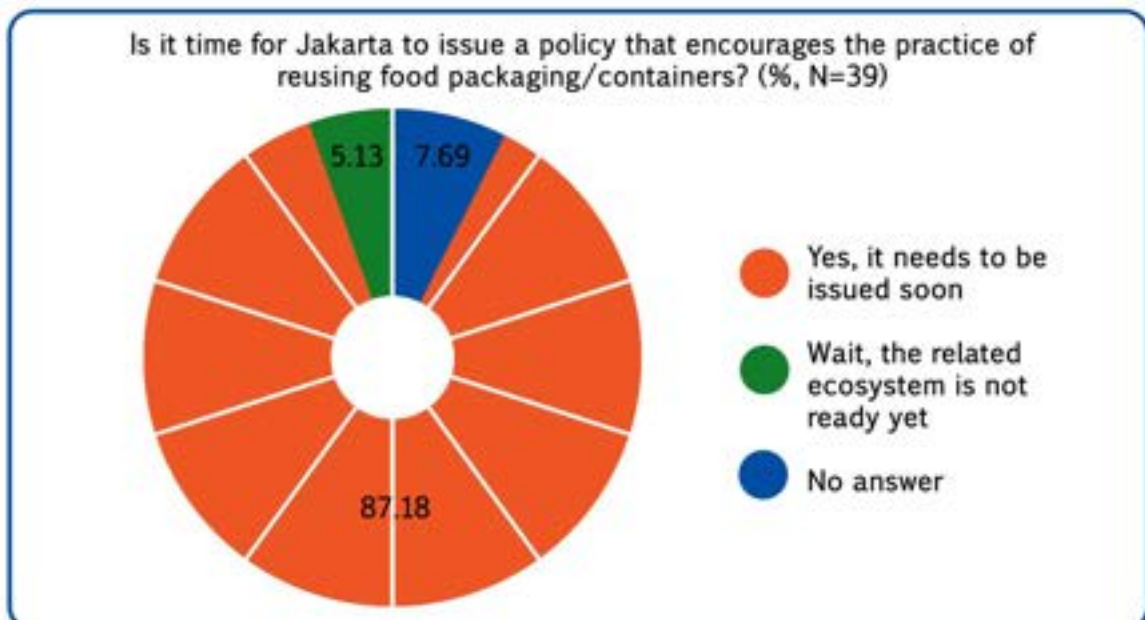


Figure 25 . The Urgency of Jakarta Needs to Issue Regulations Regarding Reuse Practices

<sup>10</sup> For further explanation about the model, please read Ellen MacArthur Foundation. Reuse—Rethinking Packaging. (2019). <https://ellenmacarthurfoundation.org/reuse-rethinking-packaging>

With various behaviours and initiatives that already exist, most of respondents (87.18%, N=39) agree that it is time for Jakarta to issue a policy that encourages the practice of reusing food packaging/containers.

Regarding these aspirations, the assessment with the highest category, respondents perceive that the community/consumers as less ready (28.21%, N=39), merchants/restaurants are considered slightly ready (30.77%, N=39), service providers for containers/reusable packaging is considered ready (33.33%, N=39), food delivery service providers are considered ready (32.43%, N=39), the government is considered slightly unready (28.21%, N=39), while related institutions, such as BPOM, were considered slightly ready (33.33%, N=39).

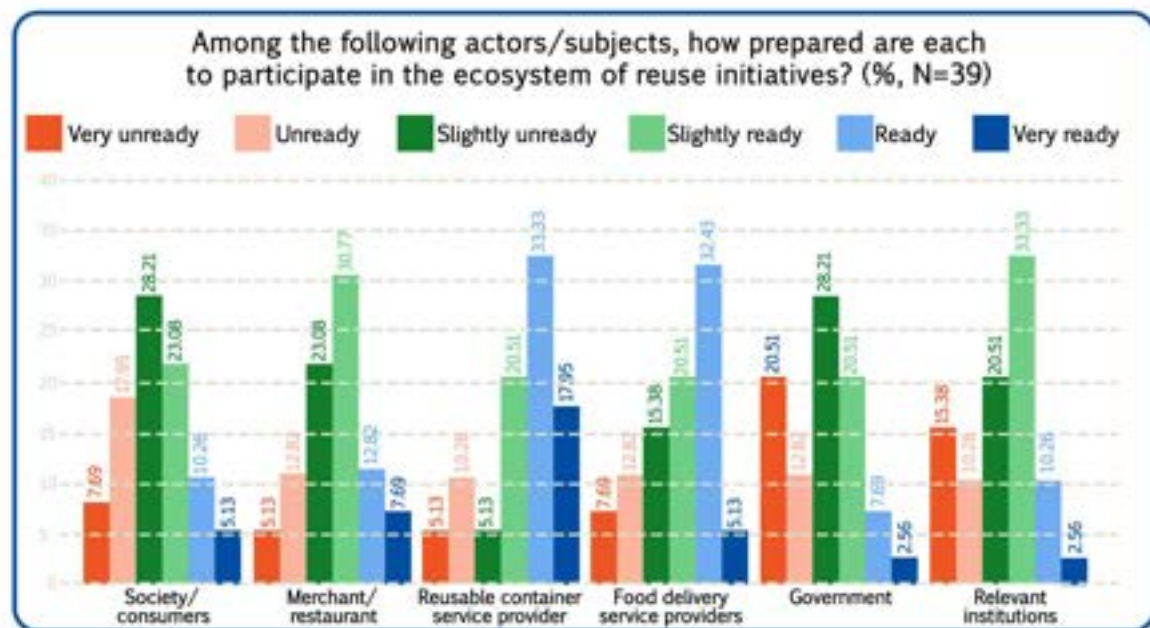


Figure 26 . Perception on Preparedness of Certain Subject in the Reuse Ecosystem

However, if calculating the average value for each subject, will be found that respondents perceptions of the highest level of readiness, out of a scale of 6, are assigned to reusable containers/packaging service providers (e.g., Allas, etc.) with a value of 3.97. The next highest average score was given to food delivery service providers (e.g., Gojek, Grabfood, etc.) with a score of 3.46; then merchant/restaurant with a score of 3.33; society/consumers with a score of 3.03; relevant institutions (e.g. BPOM, etc.) with a score of 2.97; and finally Government with a score of 2.67.

Following up on these questions, respondents were then asked what things they think should be prepared/improved if they want to build a good reuse ecosystem. Respondents can answer more than one suggestion. The answers, after being categorized based on the similarity of factor dimensions, is given as (N=39):

#### 1. System (12)

- o There is a drop box option to return reusable packaging in various places (2)
- o Delivery service for reused packaging must use a zero-emission courier (1)
- o Easy access in returning containers (1)
- o Availability of required applications and facilities (2)
- o Sauces is only on request, not automatically included in the purchases (1)
- o Container exchange food ordering system (1)

- Clear standards for hygiene procedures and product usability (1)
- Minimizing pick-up and drop-offs when finished (1)
- Manufacturers of reusable packaging must be prepared in large quantities and low cost (1)
- 2. Policy (9)**
  - There is a firm policy that regulates practice in the field (9)
- 3. Communication & Campaign (11)**
  - Education and awareness raising for consumers, restaurants, and food drivers (6)
  - Socialization of government regulations that are easy-to-understand (2)
  - Massive campaign (1)
  - Equitable understanding between restaurants, drivers, and consumers so that technical implementation can be more effective (1)
  - Communication and collaboration of relevant stakeholders (1)
- 4. Financial (2)**
  - Financial support (1)
  - The price of the product is kept affordable so that it can be accessed by many people (1)
- 5. Actors & Behavior (4)**
  - Build habits to reuse and manage waste in the community (2)
  - Changes in consumer and seller behavior (1)
  - All parties must work well together to build a reuse ecosystem (1)
- 6. No answer (1)**

Surveyors then also asked the respondents whether there were any ideas that could be put forward to strengthen the practice of reuse in DKI Jakarta City. According to them, ideas to support the use of reusable packaging in Jakarta (N=39), while respondents can submit more than 1 idea, after categorized the answers based on the similarity of factor dimensions, are:

- 1. Education/Campaign (6)**
  - Educate merchants to follow this movement. (2)
  - Education through program collaboration between business actors (1)
  - Improved online campaigns with busy applications (1)
  - Promote traditional Indonesian practices that already use reusable containers, such as: baskets, thermos, etc. (1)
  - Foster a sense of love for the environment and a zero-waste lifestyle (1)
- 2. Product development (4)**
  - Reusable plastic bags (1)
  - Develop compostable packaging products, because recycling is not a long-term solution (1)
  - Develop reusable bags for drivers (1)
  - Develop packaging for liquid (hot/cold/gravy/beverage) (1)
- 3. System Expansion (12)**
  - Multiply drop points within range to recover reusable containers (3)
  - The Existence of a packaging service in restaurants (1)
  - Construction of this reusable container rental station, along with cleaning machines that have been certified by the relevant parties/institutions (1)
  - Reusable packaging is applied for other consumption needs (toiletries, laundry, hygiene) (1)
  - Applications for online food delivery service providers need to add a need/do not need cutlery option in the menu description (1)
  - Expand bulk stores at affordable prices for the lower middle class (1)
  - Restaurants can create thin wall box return programs (1)
  - Provide massive and free reusable packaging containers in public open spaces (1)
  - Cheap containers and food rental fee (1)
  - Massive policy trials can be carried out, to see the community's readiness (1)

4. Stakeholders related (5)
  - o The government bans single-use plastic (1)
  - o Government regulations are implemented consistently (1)
  - o E-commerce companies need to be involved (1)
  - o Food delivery service providers provide opt in/opt out options in the application for using the SUP (1)
  - o Provide incentives for MSMEs that make environmentally friendly packaging alternatives (1)
5. Consumer behavior (7)
  - o Consumers buy food at Streetfood in their own containers (1)
  - o Get rewards when using reused products (2)
  - o Stop using plastic shopping bags from retail (1)
  - o Reduce the use of plastic spoons (1)
  - o The need as a consumer to avoid merchants who are known to use a lot of single-use plastic (1)
  - o The act of returning food containers has not become a habit (1)
6. Others (10)
  - o Be prepared to mitigate the risk of opposition from the petrochemical industry (1)
  - o Not submitting new ideas (3)
  - o No answer (5)

## 5.6. Perception of Allas Users

From all respondents who claimed to have used Allas services, namely 18 people, surveyors then asked their various perceptions and opinions about this product. Most respondents (83.33%, N=18) revealed that the presence of Allas packaging options influenced the decision to order food from certain merchants.

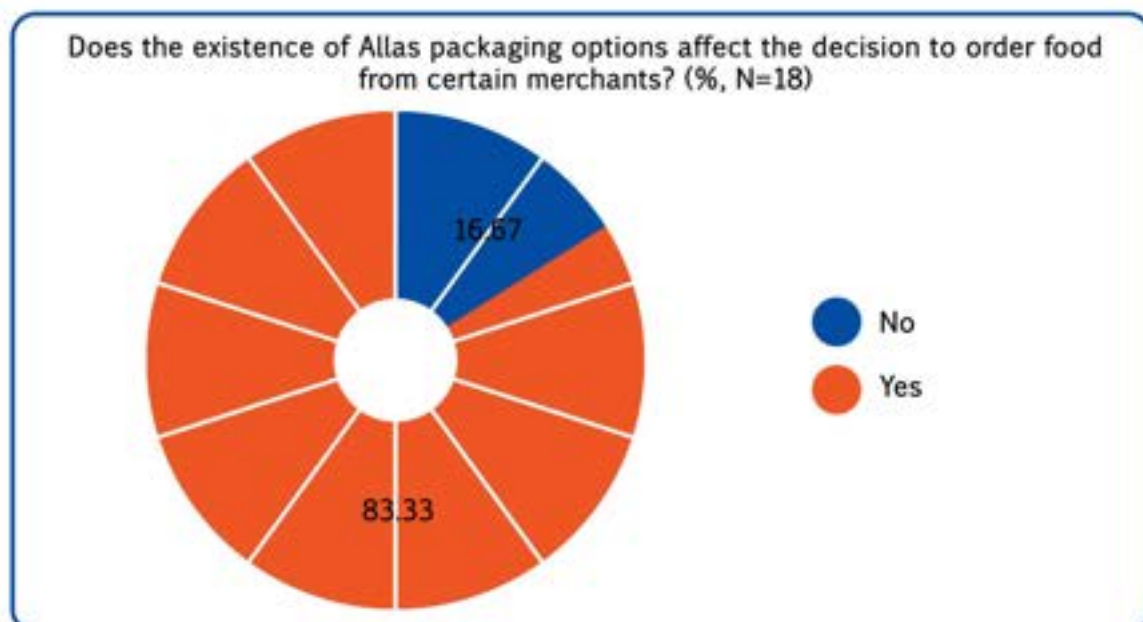


Figure 27 . Allas packaging Options Affect the Decision to Order Food

This is also in line with the perception of respondents using Allas, which almost entirely (94.44%, N=18) revealed that the use of Allas was considered useful.

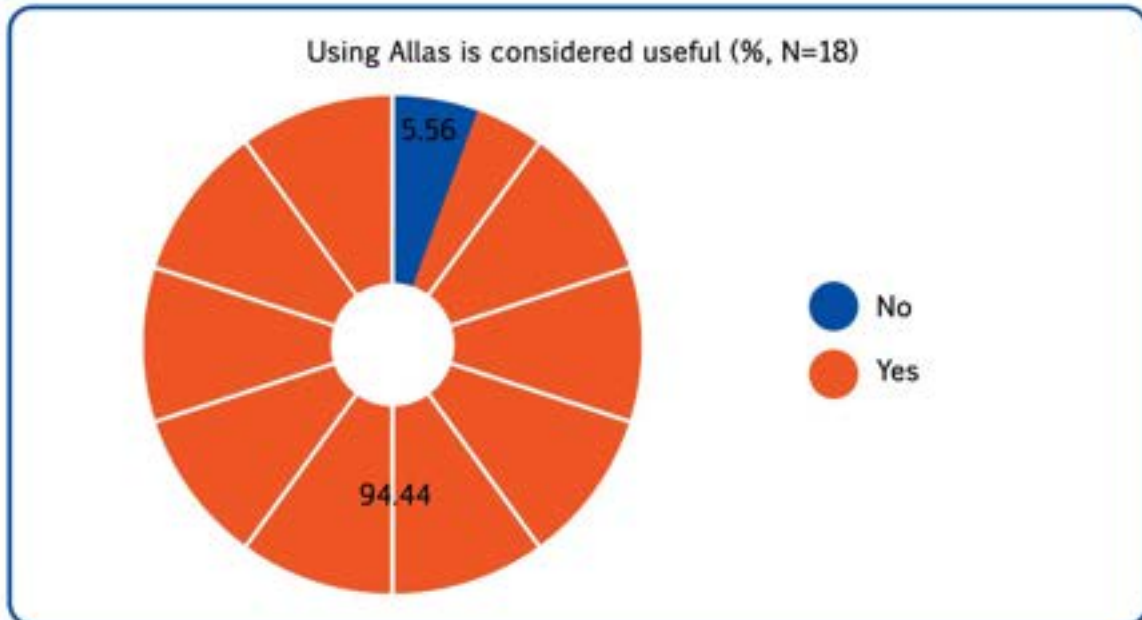


Figure 28 . Perception of the Allas Usefulness

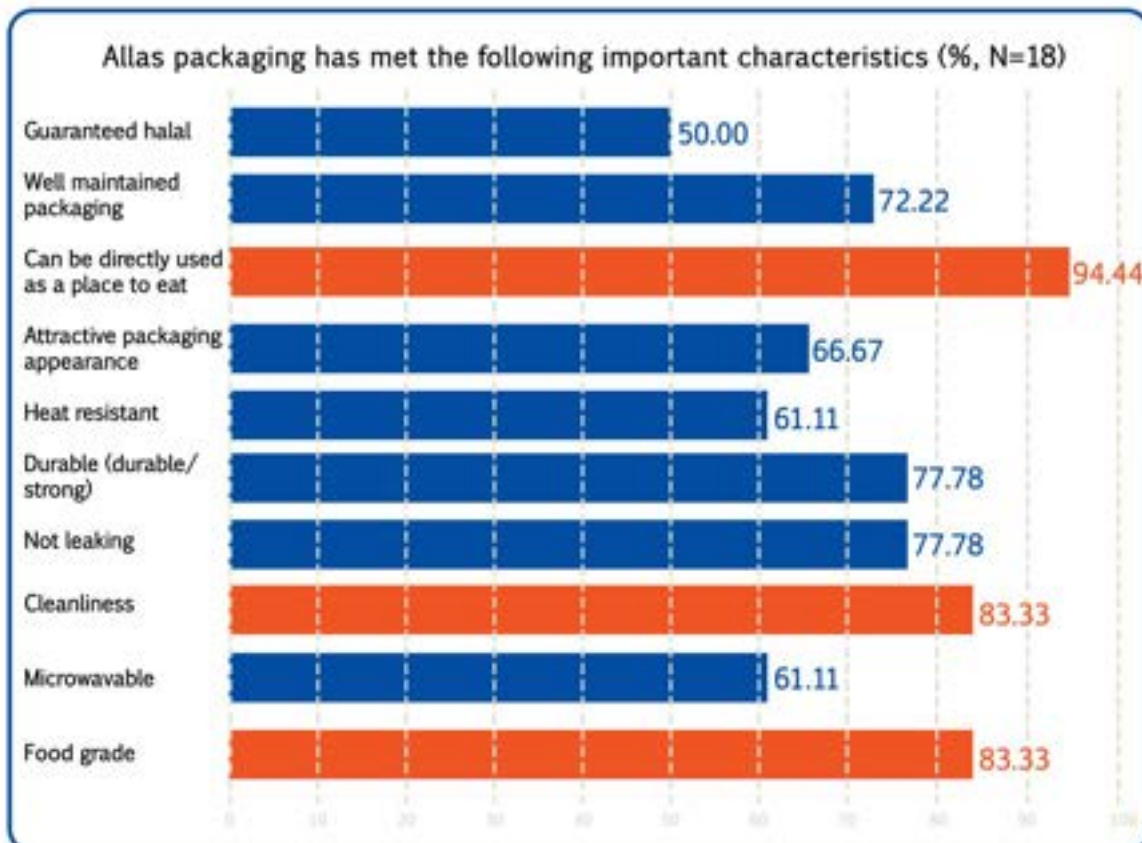


Figure 29 . Acclaimed Allas Packaging Characteristics

Allas packaging was also rated positively, with the three highest characteristics (marked in red on the chart) according to respondents' ratings, namely that it can be directly used as a place to eat (94.44%), food graded (83.33%), and clean (83.33%).

## 5.7. Intention of Use Allas

To measure the intention to use Allas in the future, surveyors asked three questions, first "will return to using Allas regularly in the future" second "I will use Allas more often in the future" and third "I will promote Allas to those who are closest to me". The last question received the most "Strongly Agree" answer choices, which was 44.44% (N=18), compared to other items that received the most "Agree" answers. If each answer choice is given a score for Strongly agree = 6, Agree = 5, Slightly Agree = 4, Slightly disagree = 3, Disagree = 2, and Strongly Disagree = 1, then averaged overall, the value of the Intention construct score for existing users (both the first-time and repeating/regular users) is of 5.22 out of a scale of 6.

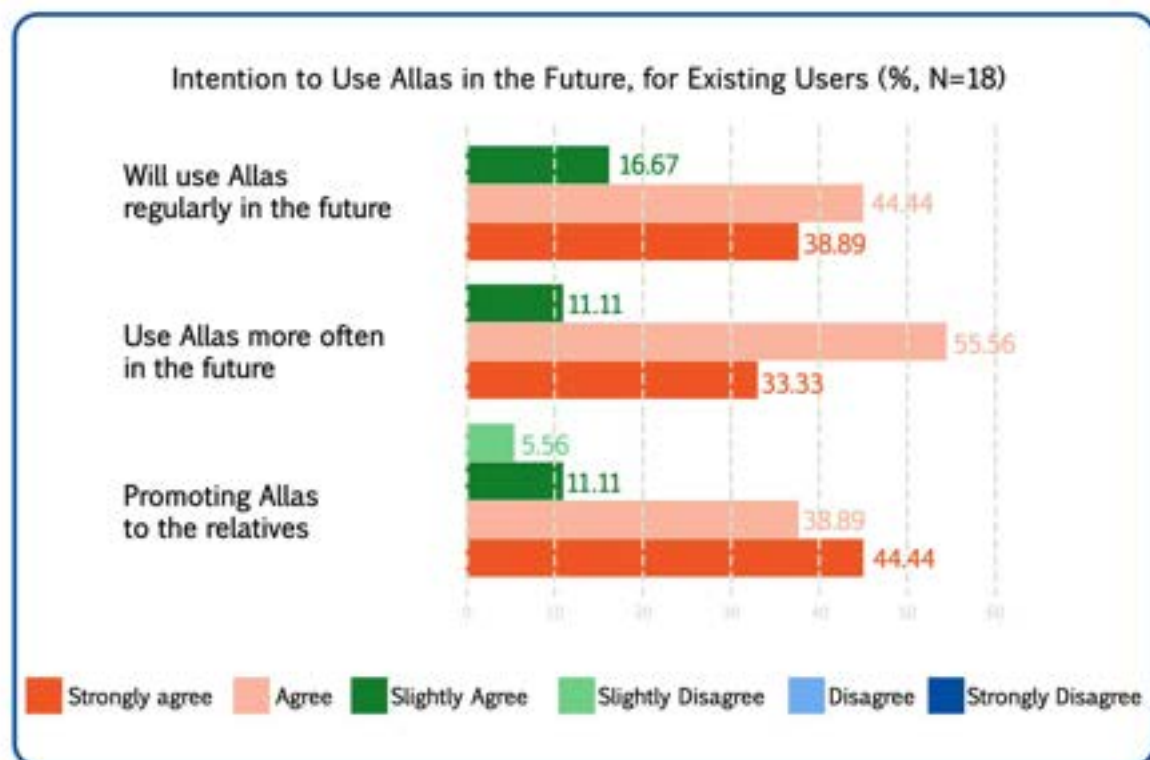


Figure 30 . Intention to Use Allas in the Future, for Existing Users

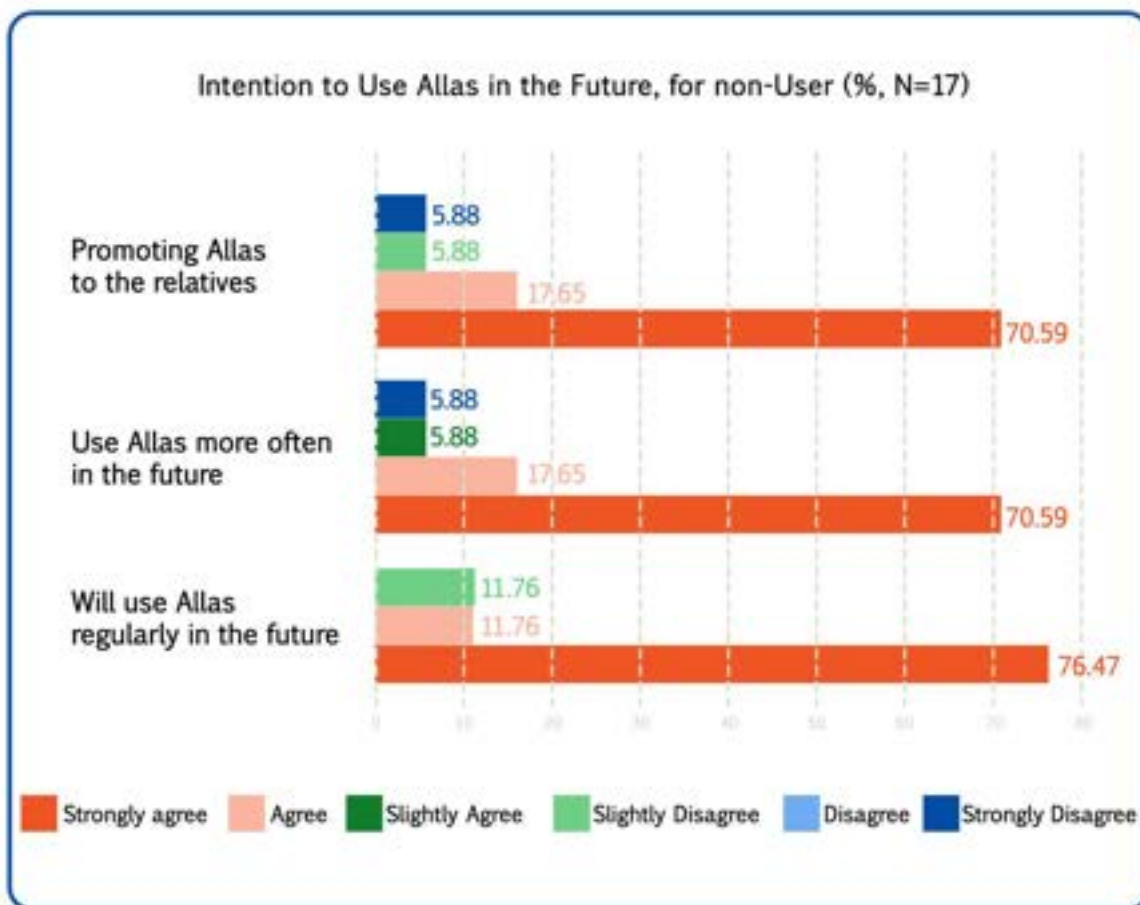


Figure 31 . Intention to Use Allas in the Future, for non-Users (Registrants)

With the same question items, surveyor measures the future intention of using Allas for respondents who have never used it (registrants), totalling 17 respondents. All items received the most answers "Strongly Agree", followed by "Agree", with the number of respondents who answered these two answers as much as more than 88%. (N=17). With the same method as before, the score of the Intention construct for registrants is 5.43 out of a scale of 6. This indicates a very high desire of respondents to use Allas in the future.

## 5.8. Aspirations for Expansion of Initiatives

From all respondents who claimed to be Allas users, they indicated the aspiration of the need for additional, both the number of merchants/restaurants that they felt was lacking (100%, N=18), as well as the addition of online food delivery services other than the existing ones (88.89%, N=18).



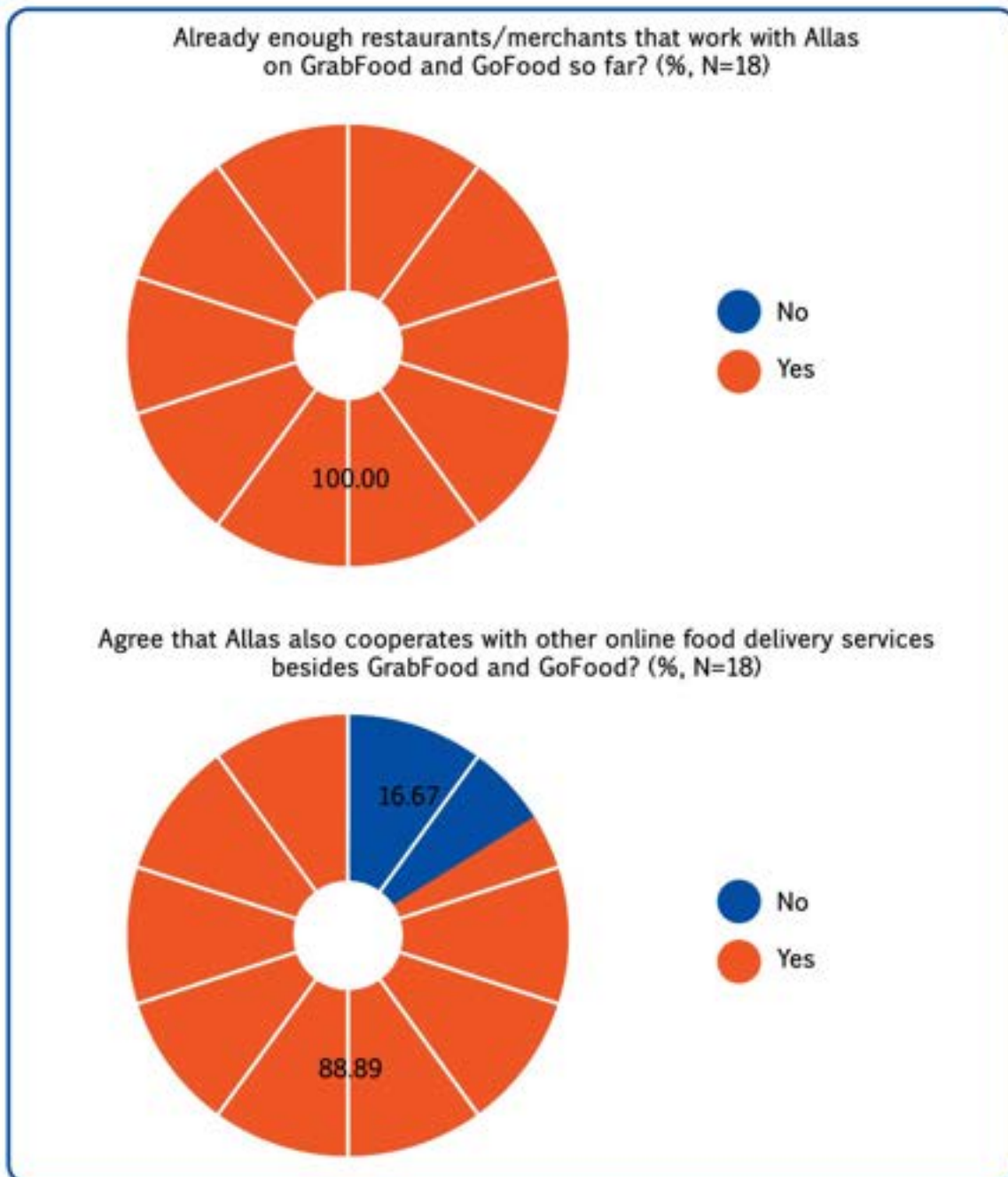


Figure 32 . Respondents' Aspirations on Allas Expansion

The names of the proposed online food delivery services, which can be submitted more than 1 by the respondents, are:

- Shopeefood (9)
- Traveloka eats (6)
- Delivery service for each restaurant (4)

The proposed restaurant names, which have been grouped by category similarity, are as follows:

- Food/Restaurant:  
Bakmi GM, Rush Hour, Truffle Belly, Hangry Group, Sushi Tei, Imperial, Solaria, Restoran Padang Sederhana, Ask for Patty, BNB Terogong, Hainambah, Demie Bakmi, Seeds, Chick n Check, Levant, EATH, Bara Api, Bebek H. Slamet, Crunchaus, Sprouts Parlor, Kyuri, Janji Kenyang, Bakso Boedjangan, Warteg, Warung Pasta, Lawless Burger.
- Fast food:  
Burger King, KFC, McD, Hokben.
- Healthy Foods:  
Burgreens, Salad Stop, Salad Point, Good Habit.
- Beverages:  
Kopi Kenangan, WorkCoffee, TUKU, Starbucks, Anomali Coffee, Ray's Bottle of Joe, Feel Matcha.
- Snacks:  
Upnormal, Roti Bakar Kemang.

## 6. DISCUSSION AND CONCLUSION

Following are discussion points in order to answer the objectives and outcomes of this baseline report.

**Respondent' profile.** Respondents who filled out this survey were dominated by women compared to men, which means that more women began to subscribe and even join the Allas program. This shows that women seem to have a higher environmental concern than men. This is also reinforced by various previous studies that found the same thing, such as Mohai (1997), or the latest study by Dhenge (2022). Desrochers, et al (2019), provides an explanation why women are more concerned about being conscientious because they have a higher level of conscientiousness than men, so that women are more likely to support environmental protection, are less supportive of environmental utilization, and are more likely to participate in pro-environmental behaviors. Theoretically, Sakellari and Skanavis (2013) also offer an explanation of ecofeminism that underlies women's concern for pro-environmental actions.

Respondents in general are also concentrated in the age range of 21-40 years, which is referred to as the millennial generation, namely the active working age. This finding can be interpreted that the respondents—most of whom are Allas users—certainly have the financial capacity to be able to decide the adaptation behavior of using reusable packaging containers. Furthermore, it was also found that more than 30% of respondents claimed to have daily expenses of more than IDR 200,000. Indirectly, it also needs to be realized that the need for using Allas containers is clearly not a primary need which can then be posteriorly compared to other needs. Allas users in this context, are people who have a higher socio-economic level or in other words, they are from (upper) middle-income group.

**Respondent' behaviour.** Respondents also appear to have fairly consistent and regular online food shopping behaviour. This is an important basis in opening up opportunities to shift the behaviour of using reusable containers. In ordering food online, respondents admitted that they most often order via the Gofood application, followed by Grabfood and Shopee. The location for ordering food online is most often done at home, followed by offices, hotels/inns, and schools/campuses.

Most of the respondents do not seem to order food online every day for consumption, where only 33.3% of respondents (N=39) admit the opposite, of which 15.4% can even order more than 1 time a day. From the frequency of these orders, around 80% of respondents on average ordered 1-3 portions in one order. Referring to the previous time, the last two months are assumed to be in the range of March- April, where April is in the fasting month of Ramadan in 2022. This survey does not control the consumption factor in the fasting month specifically, but the question of "two months" intended so that respondents can also consider the time before the fasting month in conveying the frequency of behaviour requested. In this survey, surveyors did not ask each respondent's religion.

However, it can still be suspected that there is an influence of this factor on food purchase transactions for respondents. This is also indicated by the question of the total number of servings of food purchases online in the past month, most of the answers (46.2%, N=39) indicate that in a week, respondents only order 1-2 servings. Only 15.4% (N=39) ordered 6-10 servings and 7.7% (N=39) respondents ordered more than 10 servings a week. On average, the number of purchases in the last month (April), looks less than when asked from the previous month (March).

**Respondent' perception** about the pilot project. Respondents gave a positive impression of Allas packaging containers and considered this initiative to be useful. In particular, respondents also considered that the characteristics of Allas containers were in accordance with the most important characteristics that reusable containers should have, namely that they can be directly used as a place to eat, comply with food grade standards, and are considered clean.

In particular, respondents who used Allas said that they had a high intention to use the Allas container again in the future, with a score of 5.22 of 6 scale. This score was even higher for respondents who had never used Allas at all, which is 5.43 of 6 scale score. Respondents' positive perception of Allas is also indicated by their statement that they intend to promote Allas to their relatives, whether they have used it or not, with an average of 83% - 88% of respondents who are willing and very willing.

The next interesting thing is how respondents perceive what is defined as "clean" in a reusable container. From the various inputs given by the respondents, it is noted that there are at least five main aspects in assessing a container to be called clean, namely: (i) related to the washing and sanitizing process, (ii) characters that arise from the sensory physical aspect, (iii) as far as where product appearance can convince consumers, (iv) subjective assumptions from consumers that are built on the basis of trust, and (v) related to the product containers themselves.

**Respondent' demand for expansion or continuation.** Respondents also expressed the aspiration of the need for additional, both the number of merchants/restaurants that were deemed insufficient, as well as the addition of online food delivery services other than the existing ones. The names of the proposed online food delivery services are Shopeefood, Traveloka eats, and delivery service for each restaurant. This data also shows the demand for respondents' needs in order to reach a wider use of Allas. Respondents indicated that the biggest motivation for using reusable containers was for environmental reasons, rather than economic factors and personal convenience.

Reuse behaviour in general is not new to the respondents. Respondents claimed to have carried out several initiatives and general reuse behaviour. More than 90% of respondents have carried out the Refill at home initiative, while more than half of the respondents have carried out Refill on the go and Return on the go. Return from home occupies the least portion, approximately one third of respondents. Respondents claimed to have used reusable products quite often for tumblers and shopping bags. However, for straws, cutlery, and eating places, it has not shown a consistent trend of use.

With the various behaviours and initiatives that already exist, almost all respondents agree that it is time for Jakarta to issue a policy that encourages the practice of reusing food packaging /containers. However, respondents also highlighted that of the many actors who should have been involved, only the container/packaging service providers for reuse and food delivery service providers were deemed ready. Meanwhile, merchants/restaurants and BPOM are considered slightly ready, while the community/consumers and the government are considered less ready.

In general, as stated above, the target of the results of this program is that Allas customers have a positive perception of this project. From the findings above, this research can conclude that respondents have considered Allas to be a very useful initiative, especially its impact on the environment. In addition, respondents also considered that the characteristics of Allas products had met their expectations in assessing whether this product was good or not.

With all these strengths, all respondents, whether Allas users or registrants, expressed their strong desire to use Allas in the future. This study also identified that respondents want the expansion of Allas, either in the addition of online food delivery services, or the number of restaurants that use Allas services. This is clearly good news for the development of future reuse initiatives.



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