International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 05 Issue 04 April 2022
DOI: 10.47191/ijcsrr/V5-i4-38, Impact Factor: 5.995
IJCSRR @ 2022
www.ijcsrr.org

Consumers Behavior Evaluation and Segmentation of Millennial and Generation Z in Indonesia Instant Noodle Market

Andrea Devina[1], Wulan Asti Rahayu[2]
[1,2] School of Business and Management Institut Teknologi Bandung

ABSTRACT: Intense competition in Indonesia instant noodle market makes instant noodle companies should select their target market appropriately. Currently, many of them are targeting Millennial and Generation Z, due to the keep rising numbers that dominates Indonesia populations. However, before determining the target market, marketers should understand deeply each type of Millennials and Generation Z which can be resulted through segmentation process. Moreover, the pandemic Covid-19 has shifted the consumers' behaviour in terms of technology usage and purchasing behaviour which also can be reflected in the segmentation result. Based on these issues, there are two research objectives that should be achieved including to examine the shift in instant noodle consumers behaviour and to develop market segmentation of Indonesia instant noodle young consumers. The consumers' shifting behaviour analysis will be proceed using statistical T-test method, while the market segmentation will be proceed using statistical K-means method. The result shows the media which are mostly used by Indonesia Millennial and Generation Z are Whatsapp, YouTube, Instagram, TV, and Zoom. There is also a significant rise both in instant noodle consumption and total packages purchased after the pandemic strikes. In addition, online purchasing channel specifically, e-commerce is greatly benefited during the pandemic situation. For the segmentation, there are 5 clusters resulted which consist of family caretaker, diner, socialite, health trainer, and explorer.

KEYWORDS: Consumers Behaviour; Instant Noodle; Generation Z; Millennial; Segmentation

I. INTRODUCTION

According to Australian Export Grains Innovation Center, Indonesia's noodle market is majority contributed by "instant" noodle [1]. About 13 billion packs of instant noodles are sold annually in Indonesia. Based on World Instant Noodles Association, Indonesia is the second largest instant noodle market (behind China), that contributes more than 10% of instant noodle consumption in the world in 2020 [27]. Moreover, Indonesia possessed the fourth largest per capita of instant noodles consumption, with average 48 packages per person per year in 2017. Comparing this number to other country such as Australia and South Korea as the world's largest per capita consumer of instant noodles, the consumption of instant noodle per person per year is only 16 packages (around 1 package every 3.5 weeks) in Australia and 73 packages per year (around 1.5 packages per year every week) in South Korea for 2017 [1]. Until now, the instant noodle market in Indonesia is still dominated by two companies, which are Indofood with their main brand is Indomie and Wings with Mie Sedaap brand. These two companies have covered over 80% of total market share with Indomie as the market leader.

The instant noodle market is also influenced by the rising of young generations in Indonesia, which are Millennial and Generation Z. The easiest way to see the impact of this phenomenon is the shifting of instant noodles advertisement from family content to fun and young content that are more suitable with young generations. According to Statistics Indonesia, Millennial and Generation Z have the biggest portion (as much as 53.81%) among the other generation, which are Baby Boomer, Generation X, and Post Generation Z in Indonesia population [4]. The 2020 Population Census that was conducted by Statistics Indonesia in February until September 2020 stated that the number of Millennial generations reached 69.9 million people or 25.87%. Meanwhile, for Generation Z reached 75.49 million people or equivalent with 27.94% of total Indonesia population 270.2 million people. Millennial generation is Indonesian who were born in 1981 – 1996 period and Generation Z was born in 1997 – 2012. The dominance of these generations in the market means huge market potential and many companies are racing to attract the attention of Millennial and Generation Z.

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 05 Issue 04 April 2022
DOI: 10.47191/ijcsrr/V5-i4-38, Impact Factor: 5.995
IJCSRR @ 2022
www.ijcsrr.org

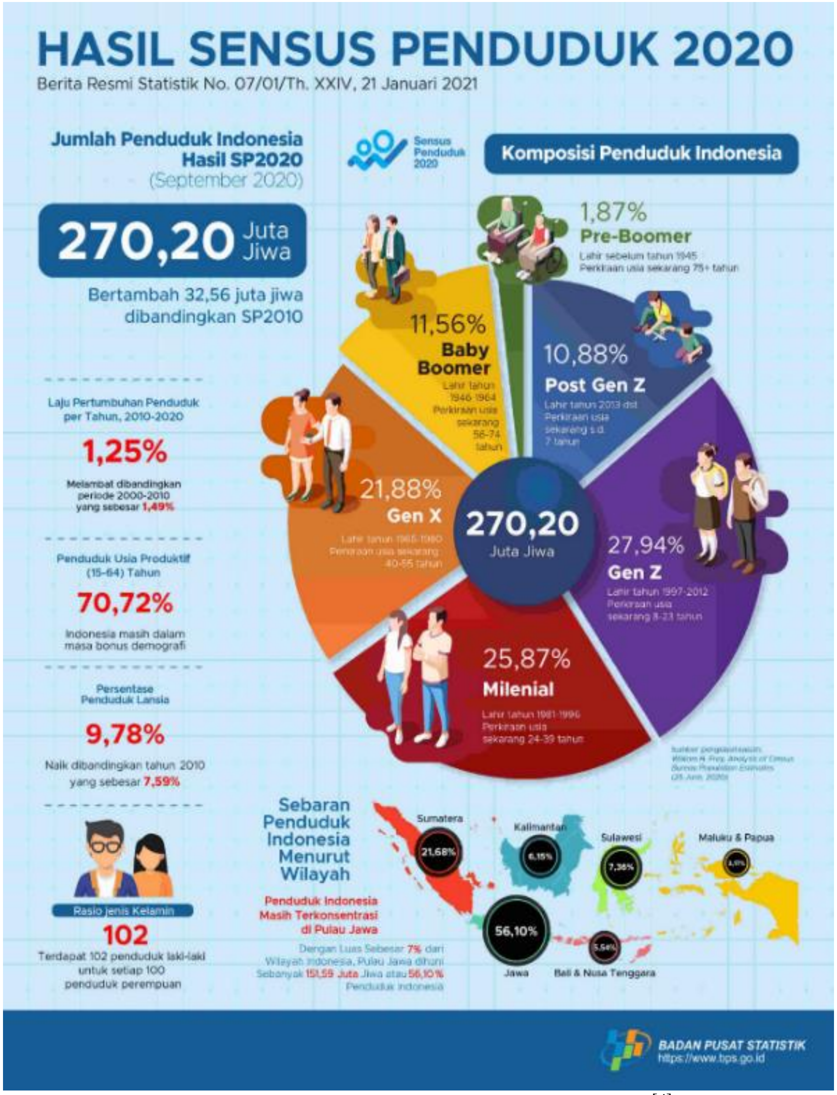

Figure 1. 2020 Indonesia Population Census [4]

Comparing these two generations with the others, they possess different consumer behaviour due to major exposure to technology. The rapid evolution of using technology to communicate and interact between people is a generation shaping consideration [16]. Both Millennial and Generation Z have the similar characteristic, which is, they are engaged with social media and devices. Millennial is really engaged with modern communication technology in their daily life, to assess reality and anything they do [7]. Millennials love to contribute in giving online comments and posts, share content, and check information in advance [7]. Millennials also have characteristics interested quickly on something new [8]. Moreover, Generation Z is a digital native generation [21]. There are very technological savvy and always linked to their devices. They also love to create content and preferred contacting customer service through social media. In addition, Generation Z prefer engage with brands that reflect their current or aspirational self-concept [9]. With all these characteristics, in reality, marketers have been struggling to connect with Millennial and Generation Z because the traditional methods of advertising have proven ineffective to capture their attentions. Channel-surfing has traditionally demarcated distraction [16]. Responding to this, instant noodle companies try to utilize online marketing and social media as an additional way to reach the internet-savvy younger demographic [1].

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 05 Issue 04 April 2022
DOI: 10.47191/ijcsrr/V5-i4-38, Impact Factor: 5.995
IJCSRR @ 2022
www.ijcsrr.org

II. BUSINESS ISSUES

Intense Competition in Indonesia Instant Noodles Market

The Indonesia's instant noodle market is highly concentrated. According to AEGIC, there were 20 instant noodle companies that are competed in Indonesian market [1]. Currently the market leader is still Indomie by Indofood, with 71.1% market share in 2017. Meanwhile, Mie Sedaap by Wings is the second position in the market, with 18.9% of market share in 2017.

Table 1. Companies' Market Share of Instant Noodles in Indonesia [1]

Company Name	2012	2013	2014	2015	2016	2017
Indofood	73.1	73.2	72.8	72.2	71.7	71.1
Wings Corp	15.4	15.5	15.7	16.5	17.8	18.9
Jakarana Tama	3.1	3.1	3.0	3.1	2.9	2.7
ABC President	1.6	1.6	1.6	1.7	1.9	2.0
Medco Group	1.3	1.2	1.2	1.2	1.1	1.0
Nisshin Foods	1.1	1.1	1.0	1.0	1.0	1.0

In the addition, the competition of instant noodle market in Indonesia is getting fiercer due to flourishing of foreign brands. As the second biggest instant noodle market in the world, Indonesia attracts overseas players such as Japan's Nisshin Foods and Korea's Samyang. To sustain their business in Indonesia, they implement several strategies such as in-country investment in manufacturing, product development, and halal certification to gain more trust from Indonesian, since Indonesia population is dominated by Moslems [1]. Even though the market share of the foreign brands in Indonesia is still low (single digit), but it has potential to become another threat for the local brand.

Shifting in Consumers Behaviour

Pandemic Covid-19 has happened all over the world, including Indonesia. In Indonesia, the first case was identified on 6 March 2020 [23]. Adapting to this situation, consumers have adjusted their everyday behaviour started from how they conduct their work to how they spend their leisure time and what they buy. According to BCG article, the shifting in consumer behaviours is led by the generations of consumers who are most adventurous and least settled in their ways, which are Millennials and Generation Z [2]. The shifting in consumer behaviour is creating challenges and opportunities for brands to adjust their strategies.

Based on data from BCG, the consumer spending has shown a significant change in behaviour [2]. In US and UK, the e-commerce spending has risen more in the past eight weeks than in the decade before, from 16% to 27% and 18% to 30% for the respective countries. Refer to Millennial and Generation Z, they have altered their behaviour and possess more spending compared to the older generation. Based on the survey averages across US, Canada, UK, and France, 6% of Millennials and` Gen Z consumers have increased their online spending in the pandemic situation. Meanwhile for the older generation including Baby Boomers and Generation X results only 1%. In the addition the decreased in in-store spending for the young generations was slightly less than the older generations.

Moreover, the outdoor activity and travel restriction during the pandemic makes young people spend more time at home. Hence, the survey shows that 62% have increased their time spent on social media, 70% have improved their video streaming time consumption, and 59% have risen their time spent in gaming activities.

The shift in young consumers behaviour is also expected even until the aftermath of pandemic. The rising in their spending for at-home consumption, essentials, and health and wellness is estimated to be maintained beyond the outbreak. For more detail, 10% of young consumers expect to increase their spending on packaged food and beverages, 12% on household products, and lastly 6% on health and personal care products compared before the pandemic strikes. At the contrast, spending for higher price items such as electronics, mobile devices, cars and motorcycles will be fallen [2].

This disruption phenomenon drives marketers to revisit their segmentation strategies and re-evaluate again what type of marketing strategy that can effectively engage with their new target market. Change in consumers behaviour will also influence change in consumers segmentation, especially in behaviour and psychographic factors.

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 05 Issue 04 April 2022
DOI: 10.47191/ijcsrr/V5-i4-38, Impact Factor: 5.995
IJCSRR @ 2022
www.ijcsrr.org

Figure 2. What Post-Outbreak Millennial and Gen Z Consumption Will Look Like [2]

III. METHODOLOGY

To collect the data, the quantitative method is used by distributing online questionnaire to minimum 400 respondents of Millennial and Generation Z in Jakarta, Bogor, Depok, Tangerang, Bekasi (JaBoDeTaBek) area using QuestionPro platform. The minimum respondents of questionnaire are calculated by utilizing Slovin's formula. Slovin's formula calculates the number of samples required when the population is too large to directly sample every member and works for simple random sampling. According to Indonesia Statistics, the population census in 2020 stated that the population of Millennial in Jakarta is around 2.83 million people or 26.78% of Jakarta population and for the Generation Z is around 2.7 million people or 25.65% of Jakarta population [3]. However, there is no information of total Millennial and Generation Z in JaBoDeTaBek area. Therefore, to estimate the total population of this study, the proportion of Millennial and Generation Z in Jakarta will be applied also to other area with the total population in other area is taken from Indonesia Statistics.

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 05 Issue 04 April 2022
DOI: 10.47191/ijcsrr/V5-i4-38, Impact Factor: 5.995
IJCSRR @ 2022
www.ijcsrr.org

Table 2. Total Millennial and Generation Z in JaBoDeTaBek Calculation

Area	Total Population	Millennial (26.78%)	Generation Z (25.65%)	Total Millennial and Generation Z
DKI Jakarta	10,562,090	2,828,528	2,709,176	5,537,704
Bogor	7,215,160	1,932,220	1,850,689	3,782,908
Depok	2,484,186	665,265	637,194	1,302,459
Tangerang	6,495,455	1,739,483	1,666,084	3,405,567
Bekasi	6,974,707	1,867,827	1,789,012	3,656,839
Grand Total				**17,685,477**

From the calculation above, it can be known that the estimation of Millennial and Generation Z in JaBoDeTaBek area is 17,685,477 people. Next, the author can calculate the minimum sample using Slovin's formula:

$$n = \frac{N}{1 + N(e)^2}$$

Where n is the sample size, N is the population of Millennial and Generation Z in JaBoDeTaBek area, and e is the level of precision. For social research, it is suggested that a 5% margin of error is acceptable [22]. When this formula is applied to the sample, it can be calculated as:

$$n = \frac{17{,}685{,}477}{1 + 17{,}685{,}477(0.05)^2} \approx 400\ samples$$

Hence, the questionnaire should be filled by minimum 400 respondents and the author was successfully collected 466 respondents. The purpose of this questionnaire is to analyse the consumers' behaviour including the shifting behaviour during the pandemic and aggregate the consumers into several segments. The content of questionnaire can be detailed as:

- 1 Geography question about the city of residence
- 7 Demography questions about gender, age, marital status, number of kids, education level, occupation, and social economy status
- 1 Psychographic question about hobby
- 1 Question about media usage, where respondents should choose medias that are often used along with select the option if the time usage for those medias during pandemic is increasing, similar, or decreasing
- 6 General behaviour statements and 18 general psychographic statements about education and training, technology, way of purchase, marketing tools usage, lifestyle, traditional value, innovation, and social orientation which should be filled with Likert scale [14, 15, 19].
- 8 Questions about instant noodle consumption and purchasing behaviour including top 3 most consumed brands, consumption frequency (before and after pandemic), total package in 1 consumption, conditions in consuming instant noodle, considerations in buying instant noodle, total packages per purchased (before and after pandemic), purchased frequency, purchasing channel (before and after pandemic)
- 12 Instant noodle consumers behaviour statements about the way to enjoy instant noodle, the influence of price, and the influence of health which should be filled with Likert scale [28].

The data collected from questionnaire is computed utilizing statistical methods which are K-means for the segmentation, also descriptive statistic completed by paired T-test to analyse the change in consumers behaviour. All the statistic calculation is proceed using IBM SPSS Statistics 25 software. Afterwards, the secondary data will also be utilized to gain insight from the external factors regarding the instant noodle market and its industry. Secondary data is data that has been collected by someone other than the researcher and with another purpose [18]. In this study, the sources of secondary data are online sources (website), academic journal, and books.

Table 3. Geographic and Demographic Data of Respondents

Geography	Bekasi	10.09%
	Bogor	5.36%
	Depok	3.65%
	DKI Jakarta	65.88%
	Tangerang	15.02%
	Bekasi	10.09%
Gender	Male	35.19%
	Female	64.81%
Generation	Millennial (26 – 41 y.o)	42.49%
	Generation Z (17 – 25 y.o)	57.51%
Marital Status	Single	71.24%
	Married	27.68%
	Widow/widower	0.86%
	Divorce	0.21%
Total kids *(from non-single status)*	0	10.73%
	1	11.16%
	2	5.58%
	>2	1.28%
Education Level	Not going to school	0.21%
	Elementary school	1.93%
	Junior high school	0.86%
	Senior high school	10.73%
	Diploma	1.72%
	Bachelor degree	70.39%
	Master degree	13.73%
	Others	0.43%
Social Economy Status	Lower I / SEC D	1.93%
	Middle II / SEC C2	3.65%
	Middle I / SEC C1	14.16%
	Upper II / SEC B	26.18%
	Upper I / SEC A	54.08%

IV. FINDINGS AND DISCUSSION

A. Shifting in Consumers Behaviour Analysis

In this discussion there are 4 parts evaluated including the media time usage, instant noodle consumption frequency, instant noodle purchasing channel, and instant noodle total packages purchased.

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 05 Issue 04 April 2022
DOI: 10.47191/ijcsrr/V5-i4-38, Impact Factor: 5.995
IJCSRR @ 2022
www.ijcsrr.org

Media Time Usage

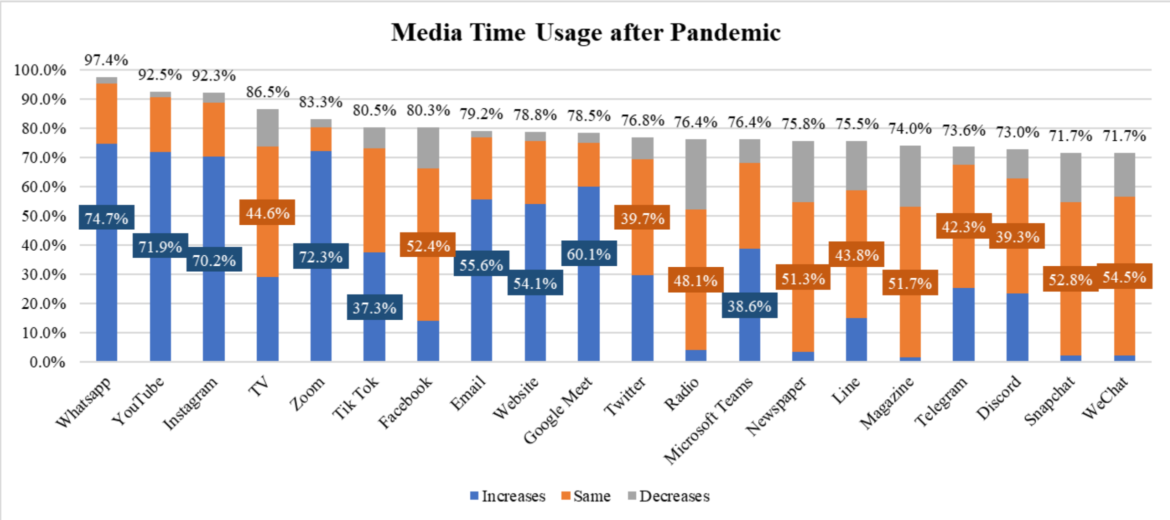

Figure 3. Respondents Media Time Usage after Pandemic

The top 5 medias that are used by the questionnaire's respondents are Whatsapp, YouTube, Instagram, TV, and Zoom. In general, the result is aligned with the survey from digital landscape of Indonesia, which Whatsapp is the social media platforms that is included in top 5 most used social media platform in Indonesia [12]. Whatsapp is a communication application that uses internet network to send messages, images, audio, video, or even document. The second rank is YouTube. YouTube is a video streaming platform that is owned by Google. The time spent using YouTube had increased its traffic as much as 19.49% y-o-y change in 2022, which even bigger than Instagram [12]. The third rank is Instagram. Instagram is a photo and video sharing application that is currently owned by Facebook. Instagram is also mentioned in the top 5 of most used social media platforms according to Indonesia Digital Landscape 2022 [12]. For the fourth rank and fifth rank, this study results TV and Zoom. For TV usage, the author is not specifying between broadcast TV and online TV/streaming. However, from another study from Visual Capitalist by Global Web Index, both Millennial and Generation Z uses online TV/streaming heavily in the age of Covid-19 compared to broadcast TV [25]. The trend of TV streaming such as Netflix, Disney+, HBO Go, and etc becomes a new favourite habit for young people. Especially during the travel restriction and most of their time is spent at home. It drives the respondents select TV as one of medias that they often use. Lastly, at the fifth rank there is Zoom. The usage of cloud meeting especially Zoom is rising during the pandemic because majority of companies implement "Work from Home". To ensure that the meeting can be conducted smoothly, they need an online meeting platform. From the Indonesia Digital Landscape, they also stated that Zoom is one of the most downloaded applications during the pandemic Covid-19 era specifically in 2020 [11]. It indicates that the users are growing rapidly.

It can be seen that the majority of social media platforms that are most used by Indonesian young people are having a rise in their time usage such as Whatsapp, YouTube, Instagram, TikTok. At the contrast the other social medias with the lesser number of users are remained the same such as Facebook, Twitter, Line, Telegram, Discord, Snapchat, and WeChat. Next, for the offline channel such as radio, newspaper, magazine are the medias that rarely used by the young people. These medias are not significantly impacted during pandemic; therefore, the time usage is similar with before the pandemic. This presents the similar trend with the social media with lesser number of users. It is interesting to note that at the past, TV can be considered as offline media indeed, but currently people can watch the online TV/video streaming from TV. As mentioned above, due to in this study there is no specification between online TV or broadcast TV, the result shows the time usage is remained the same. It may cause by the decrease or similar time usage in broadcast TV and increase in TV streaming. It is also aligned with BCG survey in 2020, that the broadcast TV time consumption is less than pre-outbreak and the streaming video consumption is more than pre-outbreak. Lastly, for the video conferencing platform such as Zoom, Google Meet, even Microsoft Teams with the least of users in cloud meeting platforms, they possess the same trend which there is a rise in the time usage. Before the pandemic, people are not familiar with this type of platform, since usually they conducted meeting by meeting face-to-face. However, during the pandemic with reduced opportunities to spend

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 05 Issue 04 April 2022
DOI: 10.47191/ijcsrr/V5-i4-38, Impact Factor: 5.995
IJCSRR @ 2022
www.ijcsrr.org

time together, this platform become a necessity not only in professional life, but also in education and daily life. The digital communication that has been driven by pandemic situation may become last even after the pandemic end [17].

Instant Noodle Consumption Frequency

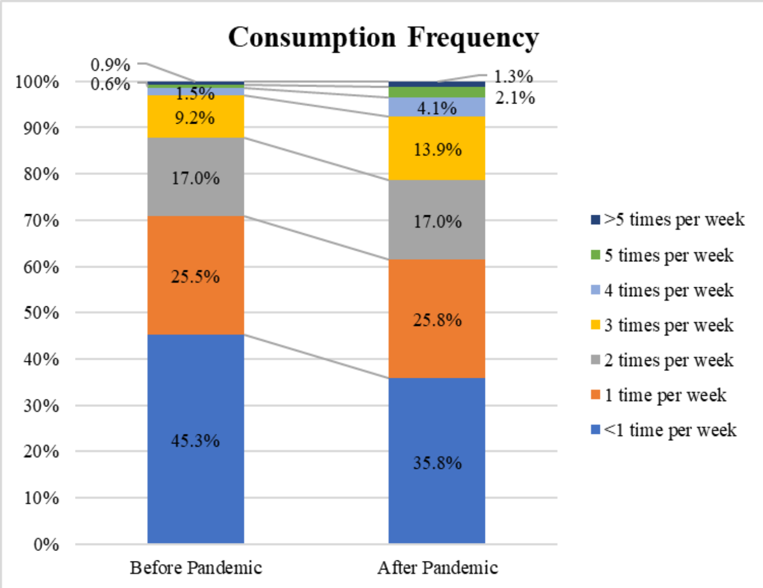

Figure 4. Respondents Instant Noodle Consumption Frequency

The data for instant noodle consumption frequency is proceed by using paired T-test. The paired T-test is used when the users want to measure the differences from the pair data. The requirement before conducting paired T-test is the data should be in normal distribution. However, due to the big sample of data, the Central Limit Theorem (CLT) can be applied. According to CLT, when the sample size is sufficiently large, the distribution of sample is approximated to normal distribution. In common practice, the statisticians and researchers use minimum sample size of 30 ($n \geq 30$) to assume the distribution of sample mean approximated to normal distribution [5]. Hence, due to this study's sample is 466 ($n = 466$), then both CLT and paired T-test method can be used.

Table 4. Paired Samples Correlations for Instant Noodle Consumption Frequency

		N	Correlation	Sig.
Pair 1	frequency_before & frequency_after	466	.700	.000

Table 5. Paired Samples Test Result for Instant Noodle Consumption Frequency

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	frequency_before - frequency_after	-.34764	1.03038	.04773	-.44144	-.25384	-7.283	465	.000

In the paired sample correlations section (Table 4), the correlation results positive number (0.7000) with significancy (sig.) 0.000. It presents there is a strong positive correlation frequency before and after pandemic, and the value is significant (0.000 < 0.050). Table 5 shows the most important result, since the purpose of the analysis is to understand if there is a rise or not in the consumption frequency of instant noodle. From the significancy in Table 5, it presents 0.000 (<0.050) which means there is a meaningful

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 05 Issue 04 April 2022
DOI: 10.47191/ijcsrr/V5-i4-38, Impact Factor: 5.995
IJCSRR @ 2022
www.ijcsrr.org

difference between consumption frequency before and after pandemic. It is also supported by the t-value from the SPSS calculation that is bigger than t-value from two tailed distribution table. By using the t-value calculator, it can be known that t-value for degree of freedom (df) of 465 and p-value of 0.05 is 1.965. Because the t-value of SPSS calculation is 7.283 (the minus can be neglect since it only presents that the mean of frequency after is bigger than before) is bigger than 1.965, it can be concluded that there is a significant difference between the two variables and it is affected by the pandemic phenomenon. In the mean paired differences, it produces -0.34674 with the range of differences between -0.44144 until - 0.25384. The minus (-) sign depicts that there is an increase in the consumption frequency (before – after). From this result, it can be known there is a small increase in frequency consumption level. From Figure 4, it can be acknowledged that before the pandemic, the respondents consume in average of <1 time per week. However, some of them have increased their consumption frequency into 1 time per week. Some of the respondents with consumption frequency of 1 time per week also has increased their frequency to 2 times per week.

Next, with the same survey from BCG 2020, they stated that packaged food consumption will rise after the pandemic strikes [2]. The statistic method says there is a significant difference in consumption frequency indeed even though the differences is small, mostly from <1 time per week to 1 time per week and 1 time per week to 2 times per week. Nevertheless, this result may seem small but can create an opportunity for instant noodle players. It should be noted that the result is on weekly period. If it is converted to annual period, the impact is more noteworthy. This result can be driven by the fact that in the pandemic era, people are trying to limit their food expenditures as the coping mechanism due to the welfare reduction during the pandemic [20]. Hence, they can prefer to buy cheaper food while instant noodle in one of the options. It is also stated by AEGIC that the limited household income in Indonesia makes them to choose instant noodle as an affordable source of calories because the retail price of instant noodle is lower than rice, which is the Indonesian main dietary [1]. Moreover, people especially in urban areas who need a "practical" food choose instant noodle as complementary food, rice substitution, or even just as snacks during their time at home in pandemic era [26].

Instant Noodle Purchasing Channel

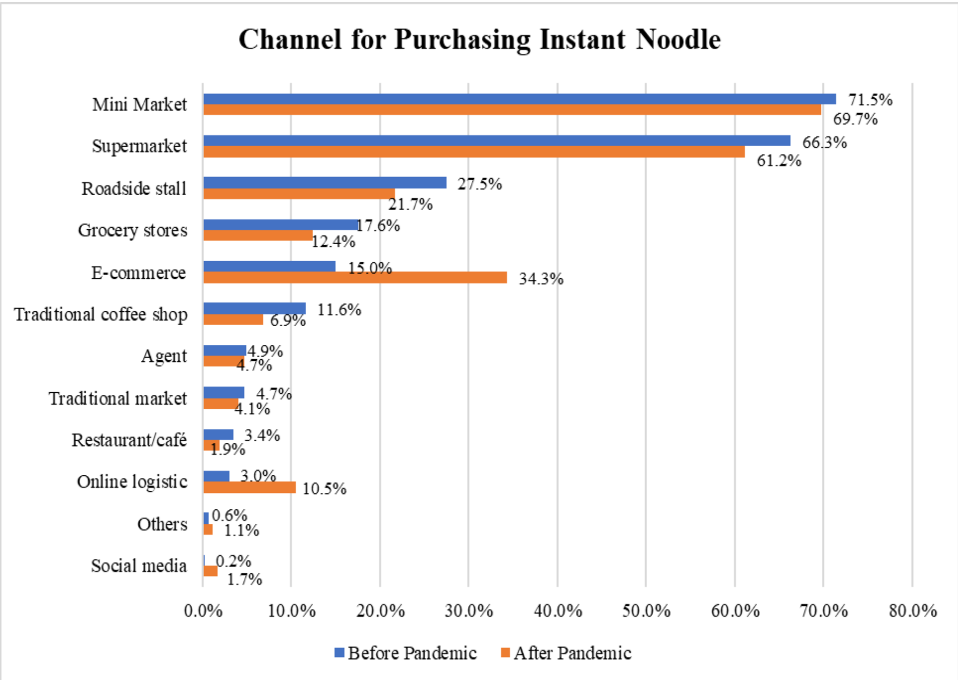

Figure 5. Respondents Instant Noodle Purchasing Channel

After the pandemic, this study shows that offline purchasing channel usage is decreased. The most impacted purchasing channel are supermarket, roadside stall, grocery stores, and traditional coffee shop (Figure 5). Specifically, the last three channels, they are significantly impacted by the mobility restriction regulation that is implemented by the Government. Due to the restriction, many

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 05 Issue 04 April 2022
DOI: 10.47191/ijcsrr/V5-i4-38, Impact Factor: 5.995
IJCSRR @ 2022
www.ijcsrr.org

roadside stalls, grocery stores, and traditional coffee shop are suffered because lack of revenue. Therefore, they still try to manage to keep open the stores or not. Some of them can't afford the operational fee because of low of customers. They are different with Supermarket and Mini Market, which are usually managed by big company, not personal. Hence, the endurance in facing the pandemic is also different. Moreover, the mobility restriction also drives people to start to shift their instant noodle purchasing channel to online channel. It can be seen that channel e-commerce shows a meaningful improvement in the total responses and also online logistic, even though the main channels are still Mini Market and Supermarket. Supermarket is affected more compared to mini market, because mini market usually placed nearby the residential area. Hence, it is more convenient for customers to go to Mini Market for just buying several groceries rather than go to Supermarket during the pandemic.

This result is aligned with the investigation by BCG study, that Gen Z and Millennials are starting to shift to e-commerce [2]. Online retailers are expected to be the winners with Gen Z and Millennials in comparison with the period before Covid-19. According to Indonesia Digital Landscape 2022, people love to shop from online channel because of free delivery, coupons and discounts, customers review, simple online check out, and the other consumers' comment [12]. This study's result is confirmed by Indonesia Digital Landscape that the e-commerce revenue growth in food sectors keeps increasing from 61% y-o-y in January 2021 and 118% y-o-y in February 2022. In the addition, the other online channel such as online logistic and social media is also can't be neglected because it also has the same trend with the e-commerce.

Instant Noodle Total Packages Purchased

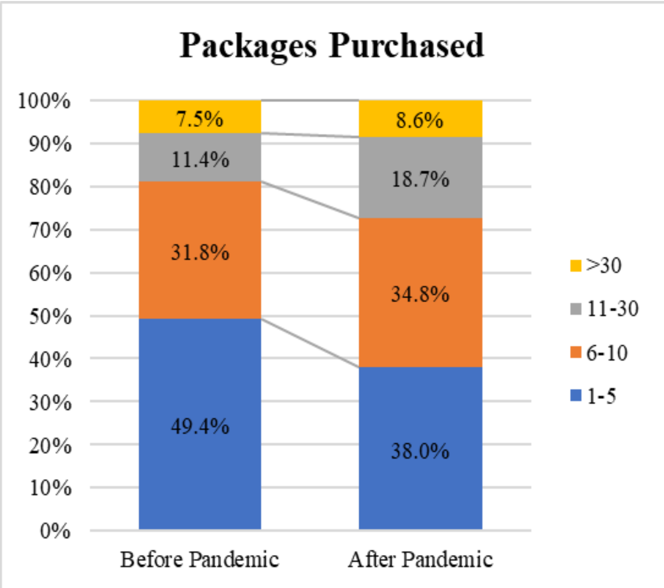

Figure 6. Respondents Instant Noodle Total Packages Purchased

Similar like the consumption frequency assessment, using the paired-T test method, the data of total packages purchased can be proceed further to determine whether there is a significant change in instant noodle total packages purchase before and after the pandemic strikes. The result of the paired-T test can be seen in figure below

Table 6. Paired Samples Correlations for Instant Noodle Total Package Purchased

		N	Correlation	Sig.
Pair 1	purchased_before & purchased_after	466	.700	.000

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 05 Issue 04 April 2022
DOI: 10.47191/ijcsrr/V5-i4-38, Impact Factor: 5.995
IJCSRR @ 2022
www.ijcsrr.org

Table 7. Paired Samples Test Result for Instant Noodle Total Package Purchased

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	purchased_before - purchased_after	-1.32639	8.69534	.40280	-2.11794	-.53485	-3.293	465	.001

Now turning to the detail, on the paired samples correlation result, the number of correlations is 0.7000 which means there is a strong positive correlation between the variable and it is significant since the significancy is below 0.050. It is also supported by the t value of 3.923. If this value is compared with two tail distribution table from t-value calculator, by using the p-value of 0.05 and degree of freedom (df) of 465, it shows the t-value 1.9651. If the t value from the calculation result (the minus in 3.923 can be neglected since the minus sign only showing the increase in the mean) is bigger than t value from table, there is a significant difference between two variables and it is impacted by the pandemic phenomenon. Lastly, on the paired samples test result, the mean difference is -1.32639, which confirms there is an improvement in the instant noodle total packages purchase with the range of differences between -2.11794 and – 0.53485. The result is also supported by data from Figure 6. It can be acknowledged that after the pandemic happened, the responses for total packages of 1-5 packages decreases significantly, indicating that people try to buy more packages of instant noodles during pandemic. At the contrast, range 6 – 10 packages and 11 – 30 packages have significantly improved. Range 1-5 is dominated by 5 packages, range 6 - 10 is dominated by 10 packages, range of 11-30 is dominated by 20 packages, and for >30 packages is dominated by 40 packages or 1 carton.

The statistical method shows there is a significant increases of instant noodle total packages purchased. The result can be driven by the covid-19 pandemic which brings uncertainties in the people's life. Instant noodle become the type of food that is convenience to be stocked since it has a longer shelf life compared to the other types of food. Moreover, keeping more instant noodles make them feel more secure especially in facing the regulation of Government that keep changing during the pandemic situation. No wonder, in the beginning of the pandemic, the panic buying was happened and people buy instant noodle with a large quantity. People are trying to increase their basket size, while they are limiting their purchase frequency during the pandemic. Nonetheless, the "new" total packages that purchased by the consumers as the result of this study will provide suggestion to the instant noodle companies for deciding the total package in their larger packages promo, which mostly people buy instant noodle have improved to 10 or 20 packages. This analysis is also supported by article in CSP Daily News with title "For Convenience Stores, Boosting Basket Sizes and Bulk Buys can Keep Profits High" [6]. In that article they stated they have found change in consumers behaviour. The buyers are looking to squeeze much more into a single trip and for balancing that, they increase the purchases. Hence, the customers have shifted their spend toward family-size SKUs.

B. Segmentation Result

After processing with statistical K-means method, it results 5 clusters of instant noodle consumers. Each cluster has their own characteristics with the detail differentiation between each cluster can be seen in table below

Table 8. Segmentation Result

Parameter	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Percentage	**14%**	**13%**	**26%**	**23%**	**25%**
Total Respondents	**63**	**59**	**122**	**106**	**116**
Demography					
Age	34 – 41 y.o	28 – 36 y.o	17 – 29 y.o	24 – 30 y.o	17 – 27 y.o
Generations	100% Millennial	100% Millennial	39% Millennial and 61% Generation Z	84% Millennial and 16% Generation Z	9% Millennial and 91% Generation Z
Marital status	Married	Married	Single	Single	Single

 *Corresponding Author: Andrea Devina

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 05 Issue 04 April 2022
DOI: 10.47191/ijcsrr/V5-i4-38, Impact Factor: 5.995
IJCSRR @ 2022
www.ijcsrr.org

Total kids	0 - 2	0 - 1	-	-	-
Occupation	Professional workers, housewife	Private company's employee	Private company's employee & students	Private company's employee, professional workers	Students
SES	Upper (AB)	Middle - Upper (ABC)	Upper (AB)	Middle – upper (ABC)	Middle – upper (ABC)
Behaviour and Psychographic - General					
Hobby	Watching TV/TV streaming/YouTube, sports	Watching TV/TV streaming/YouTube, playing game, sports	Watching TV/TV streaming/YouTube	Sports, playing game	Playing music, playing game
Behaviour and Psychographic Statement					
Education and training are very important to me	Neutral	Neutral	Agree	Agree	Agree
I cannot imagine myself without modern technology	Neutral	Neutral	Agree	Agree	Agree
I mostly shop online	Neutral	Neutral	Agree	Neutral	Neutral
The most important thing is to have fun	Disagree	Neutral	Neutral	Disagree	Neutral
I have a rich social life	Disagree	Disagree	Neutral	Disagree	Disagree
I want only the best and I am willing pay for it	Agree	Neutral	Agree	Neutral	Neutral
I make purchasing decisions after carefully considering the options	Agree	Neutral	Agree	Neutral	Agree
I always take opinion of my family before taking purchase decision	Agree	Neutral	Neutral	Neutral	Agree
It's important to have enough time for friends	Neutral	Neutral	Agree	Neutral	Agree
Behaviour – Instant Noodle					
Instant noodle brand	Indomie	Indomie	Samyang	Lemonilo	Mie Sedaap
Needs	Staple food	Staple food	• Snacks for spare time • Needs something fast and simple • No appetite to eat other foods	Staple food	• Snacks for spare time • Needs something fast and simple • No appetite to eat other foods

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 05 Issue 04 April 2022
DOI: 10.47191/ijcsrr/V5-i4-38, Impact Factor: 5.995
IJCSRR @ 2022
www.ijcsrr.org

Consumption level	Light - medium users	Medium – heavy users	Light - medium users	Light - medium users	Medium users
Considerations in buying instant noodle	1. Brand 2. Portion 3. Review 4. Promotion 5. Health factor	1. Flavour variants 2. Brand 3. Price 4. Promotion 5. Portion	1. Flavour variants 2. Brand 3. Noodle texture 4. Review 5. Availability	1. Brand 2. Health factor 3. Halal label 4. Availability	1. Flavour variants 2. Price 3. Halal label 4. Promotion
Behaviour Statement					
I buy instant noodle if it looks delicious, although I see it for the first time	Disagree	Disagree	Neutral	Neutral	Agree
I tend to accept instant noodle quickly	Neutral	Neutral	Disagree	Neutral	Neutral
I change my instant noodle preference often because I want a variety of flavours	Neutral	Neutral	Neutral	Neutral	Agree
I consider health and nutrition more than taste when I eat instant noodle	Neutral	Disagree	Disagree	Neutral	Neutral
I eat instant noodle as less as possible	Agree	Neutral	Neutral	Agree	Neutral
I check the food additives or preservatives when I buy instant noodle	Neutral	Disagree	Strongly Disagree	Neutral	Neutral
I always check the shelf life when buying instant noodle	Agree	Neutral	Neutral	Agree	Agree
I prefer to purchase discounted instant noodle	Disagree	Disagree	Strongly disagree	Neutral	Neutral
I always check the price information when I buy instant noodle	Disagree	Disagree	Disagree	Neutral	Agree
I compare the price when I buy instant noodle	Disagree	Disagree	Strongly Disagree	Neutral	Agree
I buy instant noodle only whenever I need it	Agree	Neutral	Neutral	Agree	Agree

From the result of table above, it can derive into persona. Persona refers to the image creation of a person based on a clear and specific data about real person [13]. Creating a persona help marketers to clarify their knowledge about customers and creation of common language in discussing the type of customers. The persona of each segment from can be broken down below

Table 9. Persona for Each Cluster

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 05 Issue 04 April 2022
DOI: 10.47191/ijcsrr/V5-i4-38, Impact Factor: 5.995
IJCSRR @ 2022
www.ijcsrr.org

Cluster 1 – Family Caretaker Lyvia is a 35 years old wife and a mother of two. Currently, she is a housewife who stay at home. In her free time, she loves to watch TV or doing yoga at home. At her age, education or career is not her priority anymore, but taking care of her family is her main concern. In buying the products, she ensures that she provides the best products for their family and thinks carefully before making a decision. She buys instant noodle for her family. The instant noodle is consumed for breakfast, lunch, or dinner. In other words, the instant noodle is a staple food for her family. However, she ensures that her family doesn't consume instant noodle really often, because she knows that it is not good for health, also never miss to check its shelf life. She also tends to stick with one type of instant noodle and doesn't want to take a risk by keep exploring new instant noodle.
Cluster 2 – Diner Indri is a 30 years old wife and currently she doesn't have any kids yet. Her daily activity is working at a private company. Her hobby is watching TV. She doesn't have rich social life, since she should spend her money wisely for her family. She consumes instant noodle for the source of calory while hungry or as a staple food. For her, instant noodle is a good option for replacing other foods since it is delicious. She just enjoys eat instant noodles and isn't really interested in exploring others brand. In consuming instant noodle, she doesn't really concern about the health or nutrition or try to limit her consumption.
Cluster 3 - Socialite Bella is a 23 years old girl who recently just graduated from the university. Her hobby is watching Netflix. Currently, she is trying to find a suitable job and hopefully it can provide her with a good career path. Her mobile phone is one thing that she can't leave at home and she really loves to do online shopping. She is rarely at home and spend most of her time with friends. Luckily, she is supported with a pretty wealthy family, so in finding products, price is not her main consideration. During her busy activities, she consumes instant noodle while she needs something to eat which is fast and simple. She also often eats instant noodles as snack or whenever she doesn't have any appetite to eat the "home food". She is quite selective in choosing what instant noodle that she wants to buys. In purchasing instant noodle, she will look at the quality and sometimes she will also check the review from social media. Discount or promotion won't be meaningful for her.
Cluster 4 – Health Trainer Robert is a 26 years old doctor which currently he is on the process in pursuing specialist degree while at the same time he is active in providing medical services at one of the hospitals in Jakarta. To maintain his healthy lifestyle, he is regularly going to gym. Moreover, during break time, he also takes time to play PUBG game at his cell phone. With his hectic lifestyle, he doesn't have time to spend his time with family or friends, due to most of the time is consumed at the hospital. He tries to eat instant noodle as less as possible since he acknowledges that it doesn't good for health and prefers to choose a healthier instant noodle brand. He only consumes instant noodle just when he feels hungry. He also always checks the shelf life whenever he purchases instant noodles, to ensure it is safe to eat. For him, maintaining a healthy lifestyle is a must.
Cluster 5 – Explorer Eka is an 18 years old student at one of University in Tangerang. Her hobby is singing and hanging out with her friends. To ease her parents spending, she wants to pursue a scholarship. For her, both education and social life are important. Moreover, she is very meticulous before taking a decision and very careful in managing her life spending. When she is bored while studying, she often eats instant noodle. Especially in the exam period, when she needs something practical, hence instant noodle will be the answer. She loves to explore new flavours of instant noodle and doesn't really stick with 1 brand. Moreover, to ensure her monthly budget is safe, she always try to find the most affordable one. She will always analyse the best value that she can get with the price she pays and the benefit she got.

After deeply understand the characteristic of each cluster, the emotion of each cluster can be established and presented in the colour psychological mapping (Figure 7). By using this mapping, a brand can acknowledge the psychological parts of the consumers and help them to create a positioning among the consumers. It also provides insight into the location gaps in the market and in which segments of the market that the market share can be increased [24]. Referring to NeedScope model and colour developed by Kantar, it consists of two axes which are extrovert (dynamic) -introvert (static) and social-individual which each quadrant is represented by one colour [10]. There are 5 colours that utilized to represent each psychological needs from this study (Figure 7):

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 05 Issue 04 April 2022
DOI: 10.47191/ijcsrr/V5-i4-38, Impact Factor: 5.995
IJCSRR @ 2022
www.ijcsrr.org

- Brown: It represents comfort, protection, and peace. This colour is suitable for the Family Care Taker, which represents a person that protects his/her family to consume instant noodle at least as possible due to health consideration. They are also stick with one type of noodle to minimize the risk occurred.
- Orange: It represents receptivity, passivity, and affiliation. This colour is match with the characteristic of Socialite, which represents the type of people that loves to hang out with friends and have higher social expenditure compared to the other. As mentioned above, this cluster spends most of their time with friends compared with their family at home.
- Yellow: It represents pleasure, harmony, and union. This colour is more into Explorer, which they tend to change their instant noodle preferences because they want to try the variety of flavours. They are brave to explore varieties type of noodle rather than stay with only one type. They love to eat instant noodle because it is delicious, therefore, variant of flavour will be the most important of them. They can accept more varieties of noodle type as long as it is meet their budget. They are also very active in terms of social life, especially with their friends.
- Red: It represents carefree, dynamic, independent. This colour is match with the characteristic of Diner. In terms of social orientation, this cluster is more concentrate into their own selves, even though they have family or friends. Moreover, they consume instant noodle as the source of the calory and tend to loyal with one type of noodle. They also don't really control their instant noodle consumption.
- Blue: It represents structure, order, and control. This colour is more into Health Trainer. This type of people is focus only on his/herself or individual oriented. They are very structured and ambitious in improving themselves. They also control their instant noodle consumption level as least as possible to keep their body healthy.

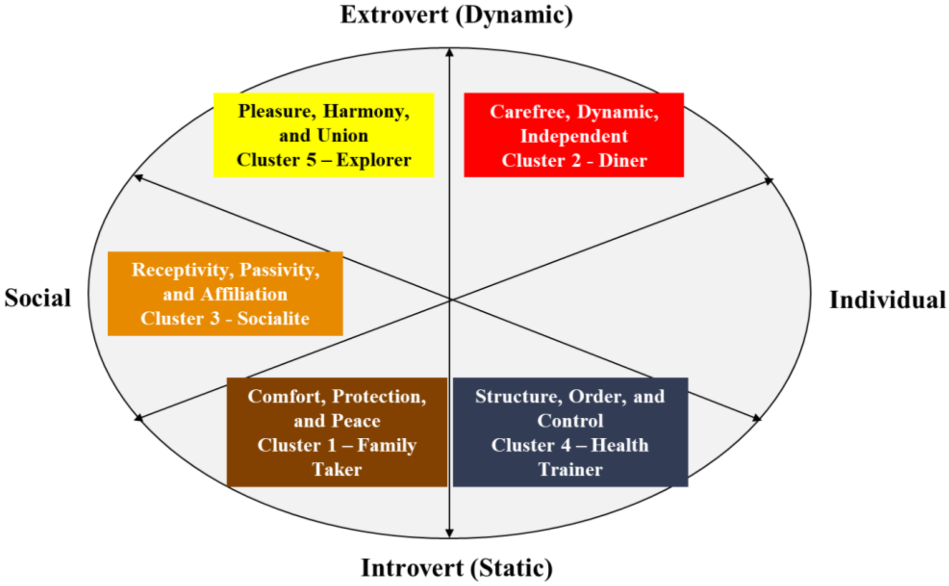

Figure 7. Psychological Mapping of Instant Noodle Segmentation

V. CONCLUSION

For consumers behaviour analysis, it can be concluded that the top 5 medias which mostly used by Millennial and Generation Z are Whatsapp, YouTube, Instagram, TV, and Zoom. In general, the time usage is increased during pandemic for medias that are frequently used by the young generations. Meanwhile for the others which are rarely used, the inclination of time usage during the pandemic is similar compared to before. Moreover, for instant noodle consumption frequency, according to statistic result, there is a significant rise in instant noodle consumption which dominated by shifting from <1 time per week to 1 time per week and 1 time per week to 2 times per week. It is driven by the limitation of food expenditures during pandemic and the consumption of instant noodle as "practical food" while spending time at home. For purchasing channel, there is a significant growth in e-commerce and online logistic purchasing channel. Meanwhile the most impacted channel due to the pandemic are supermarket, roadside stall, grocery stores, and traditional coffee shop. Lastly, the total packages purchased also increase during the pandemic which people buy instant noodle have improved to 10 or 20 packages generally. The buyers are trying to reduce the purchase frequency while they are increasing their basket size. Afterwards, for the segmentation using K-means method, there are 5 clusters resulted. There are Family Caretaker, Diner, Socialite, Health Trainer, and Explorer. Each cluster has its own characteristic that should be understood by marketers especially for choosing one of them as their target market.

VI. LIMITATIONS

The respondents for this questionnaire are located in JaBoDeTaBek (Jakarta, Bogor, Depok, Tangerang, Bekasi) areas. The author has limited access to the respondents that are located in other areas of Indonesia. Moreover, the questionnaire is distributed by online due to the pandemic situation. That is why the questionnaire can be filled mostly by respondents which familiar with the technology. It also can drive why the numbers of respondents from low social economy status are very small compare to other social economy status.

REFERENCES

1. AEGIC. (2019). *The Indonesian noodle market*. Adelaide: Australian Export Grains Innovation Center (AEGIC).
2. Bona, C., Koslow, L., Frantz, R., Nadres, B., Ratajczak, D. (2020). How Marketers Can Win with Gen Z and Millennials Post-COVID-19. Available from https://www.bcg.com/publications/2020/how-marketers-can-win-with-gen-z-millennials-post-covid [Accessed on 13 February 2022]
3. BPS. (2021). Penduduk, Laju Pertumbuhan Penduduk, Distribusi Persentase Penduduk Kepadatan Penduduk, Rasio Jenis Kelamin Penduduk Menurut Provinsi DKI Jakarta 2019-2021. Available from https://jakarta.bps.go.id/indicator/12/124/1/3-1-1-penduduk-laju-pertumbuhan-penduduk-distribusi-persentase-penduduk-kepadatan-penduduk-rasio-jenis-kelamin-penduduk-menurut-provinsi-kabupaten-kota-kecamatan.html [Accessed on 16 March 2022]
4. BPS. (2021). *The Indonesian Population Census 2020 Highlights*. Jakarta: Badan Pusat Statistik
5. Chang, H. J., Wu, C. H., Ho, J. F., & Chen, P. Y. (2008). On sample size in using central limit theorem for gamma distribution. *Information and Management Sciences*, 19(1): 153-174.
6. CSP Daily News. (2020). For Convenience Stores, Boosting Basket Sizes and Bulk Buys Can Keep Profits High. Available from https://www.cspdailynews.com/technologyservices/convenience-stores-boosting-basket-sizes-bulk-buys-can-keep-profits-high [Accessed on 5 April 2022]
7. Dabija, D. C., Bejan, B. M., & Tipi, N. (2018). Generation X versus millennials communication behaviour on social media when purchasing food versus tourist services. *E+ M Ekonomie a Management*, 21(1): 191-205.
8. Fintikasari, I., and Ardyan, E. (2018). Brand Switching Behaviour the Generation Y Empirical Studies on Smartphone Users. *Jurnal Manajemen Dan Kewirausahaan*, 20(1): 23–30.
9. Ismail, A. R., Nguyen, B., Chen, J., Melewar, T. C., & Mohamad, B. (2020). Brand engagement in self-concept (BESC), value consciousness and brand loyalty: A study of generation Z consumers in Malaysia. *Young Consumers*, 22(1): 112-130.
10. Kantar World Panel. (2020). Optimise Brand Positioning. Available from https://www.kantar.com/expertise/brand-growth/brand-purpose-and-positioning/needscope [Accessed on 28 March 2022]
11. Kemp, S. (2021). DIGITAL 2021: INDONESIA. Available from https://datareportal.com/reports/digital-2021-indonesia [Accessed on 25 February 2022]
12. Kemp, S. (2022). DIGITAL 2022: INDONESIA. Available from https://datareportal.com/reports/digital-2022-indonesia [Accessed on 25 February 2022]
13. Kikuchi, T., & Takahashi, H. (2021). Persona Design Method Based on Data Augmentation by Social Simulation. In *2021 IEEE/ACIS 20th International Fall Conference on Computer and Information Science (ICIS Fall)* (pp. 136-143). IEEE.
14. Kopřivová, V., & Bauerová, R. (2021). Marketplace behaviour: who are the Czech Millennials? *Forum Scientiae Oeconomia*, 9(3): 43-57.

15. Mamula-Nikolić, T., Perić, N., & Alimpić, S. (2021). The role and importance of value-based segmentation on the cohort of millennials: Case study Serbia. *Marketing*, 52(1): 43-57.
16. Munsch, A. (2021). Millennial and generation Z digital marketing communication and advertising effectiveness: A qualitative exploration. *Journal of Global Scholars of Marketing Science*, 31(1): 10-29.
17. Nguyen, M. H., Gruber, J., Fuchs, J., Marler, W., Hunsaker, A., & Hargittai, E. (2020). Changes in Digital Communication During the COVID-19 Global Pandemic: Implications for Digital Inequality and Future Research. *Social Media+ Society*, 6(3): 1-6
18. Panchenko, L., & Samovilova, N. (2020). Secondary data analysis in educational research: opportunities for PhD students. In *SHS Web of Conferences* (Vol. 75, p. 04005). EDP Sciences.
19. Prasad, C. J., & Reddy, D. R. (2007). A study on the role of demographic and psychographic dynamics in food and grocery retailing. *Vision*, 11(4): 21-30.
20. Smeru. (2021). Indonesia's Poverty Situation during the COVID-19 Pandemic. Available from https://smeru.or.id/en/article/indonesia%E2%80%99s-poverty-situation-during-covid-19-pandemic [Accessed on 14 February 2022]
21. Smith, K. T. (2019). Mobile advertising to Digital Natives: preferences on content, style, personalization, and functionality. *Journal of Strategic Marketing*, 27(1): 67-80.
22. Taherdoost, H. (2016). Sampling methods in research methodology; how to choose a sampling technique for research. *International Journal of Academic Research in Management (IJARM)*, 5(2): 18 - 27
23. Tosepu, R., Effendy, D. S., & Ahmad, L. O. A. I. (2020). The first confirmed cases of COVID-19 in Indonesian citizens. *Public Health of Indonesia*, 6(2): 70-71.
24. Van Hagen, M., & Dutch Railways. (2009). How to meet the needs of train passengers? A successful customer segmentation model for public transport. In *European Transport Conference-ETC.*
25. Visual Capitalist. (2020). How COVID-19 Has Impacted Media Consumption, by Generation. Available from https://www.visualcapitalist.com/media-consumption-covid-19/ [Accessed on 24 March 2022]
26. Wartaka, M., & Sumardjono, S. (2020). Analysis of consumer behaviour in buying instant noodles (case studies in the Bogor City Area). *The Management Journal of Binaniaga*, *5*(2): 115-128.
27. WINA. (2021). *Global Demand for Instant Noodles*. Osaka: World Instant Noodles Association
28. Yeo, G. E., Cho, M. S., & Oh, J. (2020). Food-related lifestyle segmentation and beverage attribute'selection: toward understanding of sugar-reduced beverages choice. *British Food Journal*, 122(12): 3663-3677