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Consumer Behaviour Towards the Reduction of Single-Use Plastic Among the Residents in Jelutong, Penang

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Abstract: Malaysia was ranked eighth out of the top 20 countries in terms of mismanaged plastic waste. High consumption of single-use plastic by consumers was the largest source of this issue. It is noticeably that consumers' behaviours play a significant role to reduce the usage of single-use plastic. Hence, this research aims to identify the consumer behaviours of using single-use plastics in daily life among the residents in Jelutong, to determine the factors that influence the behavioural intention of single-use plastics reduction among the residents in Jelutong and, to identify the most significant factor that influence the behavioural intention of single-use plastics reduction among the residents in Jelutong. This research was carry out by using the Theory of Planned Behaviour (TPB). A Quantitative method which is using online questionnaire was employed and the total samples were 382 residents in Jelutong, Penang. All of the data were analysed using descriptive analysis and regression analysis through Statistical Packages for the Social Sciences (SPSS) software. The results show a positive relationship between the variable of attitude and subjective norm. Meanwhile, attitude is the most significant factor that influence the residents' behavioural intention against lower plastic consumption. Thus, the findings of this study could provide usefulinformation that enable policymakers to implement effective strategies and address the plastic waste pollution to ensure future environmental sustainability.

Keywords: Plastic waste, single-use plastic, consumer, TPB, behavioral intention

1. Introduction

Since the 1950s, the growth of plastic production is extraordinary that has outpaced most other man-made materials. The world had generated 7.8 billion tons of plastics that more than one ton of plastic for every person alive today (Ritchie&Roser,2018). As of 2018, we produce approximately 380 million tons of plastic globally each year, up to 50% of that is for single-use purposes (Hudson, 2021). However, approximately 85% of which ends up in landfills or thrown into unregulated dump sites. As a result, single-use plastics (SUPs) account for nearly half of all plastic waste in the world (UNEP,2018). Plastic packaging is the largest end-use market segment that was accelerated the growth of SUPs products. The higher consumption of SUPs is main contribution to the accumulation of disposal plastic waste worldwide (Van et al., 2021).

SUPs are a type of disposable plastic item that are made primarily from fossil fuels-based chemical (petrochemical) (Lindwall,2020). For example, they are commonly used for plastic packaging such as bottles, cups, containers, straws, grocery bags and others. Since SUPs was designed in such way, most consumer would be disposed of right after use.

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Moreover, SUPs are commonly did not biodegrade and it takes a long time to decompose. Therefore, it usually ended up in landfills or littering the environment as marine debris, and eventually washed into the ocean which is hazard to the ecosystem.

2. Literature Review

2.1 Global Effort Against the Plastic Pollution

The global commitments against single-use plastics underline a general sentiment to act against plastic pollution. The government from different countries has implemented policy interventions at national level and local level in order to control the consumption of single-use plastics bags and Styrofoam items. There are three different tools which is regulatory instruments (Ban), economic instruments (Levy) and combination of regulatory and economic instruments. In reflection of the ever-growing number of countries and cities minimizing the use of single-use plastics, the tables below provide a summary of the countries that already announced legislation on plastic bags and Styrofoam items.

Table 1 - Summary of the countries that already announced legislation on plastic bags andStyrofoam items

Areas	Country	Year	Level	Policy	Features
Africa	Botswana	2017	National	Ban	Government is considering the introduction of a ban on plastic bags <24µ (Marumoloa, 2017).
	Nigeria	2013	National	Ban	Ban on production, importation, usage and stocking of low density smooth plastic and packaging bags (Obateru, 2016).
Central and South America	Costa Rica	2021	National	Ban	The government announced the phasing out of all kinds of disposable plastics by 2021 (UNDP, 2017).
	Jamaica	2018	National	Ban	The government is considering the introduction of a ban on non-biodegradable plastic bags below 50-gallon capacity and on Styrofoam containers (Serju, 2017).
Europe	Croatia	2017	National	Levy	Levy on consumer for lightweight carrier bags, to become effective after 31 December 2018 (Pavlic, 2017).
	Spain	2017	National	Levy	Levy on consumer for disposable plastic bags with a thickness between 15 µ and 50µ. The levy was intended to be introduced in March 2018, but was postponed. A total ban of lightweight and very lightweight non- compostable plastic carrier bags is supposed to come into effect in 2020 (All Shops, 2017; Gerrard, 2018).
Oceania	New Zealand	2017	Local	Levy	Levy on plastic bags. Almost half of the nation's mayors have signed an open letter to the Ministry of the Environment to impose a mandatory charge on plastic bags (Cann, 017). A supermarket chain launched a campaign, letting shoppers decide how much to pay (or not) for plastic

				bags (Huffadine, 2017). Another supermarket chain announced that it will phase out all plastic bags by 2018 (Clayton, 2017).
Vanuatu	2018	National	Ban	Ban on the use, manufacture and importation of single- use plastic bags (SPREP, 2018)

2.2 Current Situation and Practices of SUPs Reducing in Penang

According to a 2015 study, Malaysia ranked eighth among the top 20 countries for poor management of plastic waste (Jambeck et al., 2015). It resulted in 0.14 to 0.37 million tons of plastic waste being swept into the ocean as Marine waste, resulting in 940,000 tons of plastic waste mismanagement and severe plastic pollution. Malaysia produced 1,070,064 tonnes of post- consumer plastic trash in 2016, according to the WWF-Extended Malaysia's Producer Responsibility (EPR) Scheme Assessment for Packaging Waste report (2020). This is the equivalent to approximately 10,000 blue whales or three Empire State Buildings.

In 2011, the Ministry of Domestic Trade, Cooperatives, and Consumerism (MDTCC) launched the No Plastic Bag Campaign Day. Every Saturday, supermarkets, hypermarkets, big shops, and shopping malls will be charged A service charge of RM0.20 per plastic bag to reduce the heavy use of single-use plastic bags (Zen et al., 2013). Furthermore, through the Ministry of Energy, Technology, Science and Climate Change, the federal government implemented a "Malaysia's Roadmap Towards Zero Single-use Plastics 2018-2030." This effort anticipates that a**l** essential parties will work together to minimize SUPs on a large scale.

As early as in 2009, Penang was the first state in Malaysia to establish a state-wide initiative to reduce the consumption of plastic bag in all super and hypermarkets (Tan, 2021). Implementation of "No Free Plastic Bag Day" on every Monday leaving consumer with only two choices either pay a wage of RM0.20 for each plastic bag or bring their own reusable bags. The charges for each plastic bag are donated to the Tabung Agenda Ekonomi Saksama (AES) to eradicate the poverty. The successful of this initiative could be seen in the total fund collected decreasing from RM 1,040,750.81 in 2014 to RM881,542.25 in 2017 (Avrasan,2018). Although the total fund collected by the sales of plastic bags has contributed over RM9 million to the state's effort to combat poverty, however the large amount indicates that the willingness of paying for using plastic bags among consumers is still high.

As the Covid-19 outbreak continues, it has put a damper on the Penang government's effort of anti-single use plastic movement. In June 2021, a survey was conducted by PGC found that slightly increase in both online shopping and food delivery during the movement control order in Penang Island (TRISHA, 2022). These actions increasing the use of SUPs such as straws and plastic bags. For instance, the study indicated that the use of containers, plastic bags, eating utensils and drinking straws increased by at least 30%.

Subsequently, Penang state government took it step further by banning plastic bag from every Monday to Wednesday, and RM1 charge each plastic bag from Thursday to Sunday at supermarkets, hypermarkets, convenience stores, department stores, chain stores, fast food restaurants, pharmacies and petrolstations. At the same time, implementation of "No Plastic Straw" campaign is still on-going that all food and beverage premises will no longer to display the plastic straws to be easily obtained by the public. It will only provide to people who request it (Abdullah, 2022). These initiatives are to align with the national ambition to be SUPs free by 2030.

2.3 Theoretical Framework

Icek Ajzen proposed the Theory of Planned Behaviour (TPB) in 1991, which extended and developed the Theory of Reasoned Action (TRA) by include a new variable, perceived behavioural control. The TPB is a well-known social psychological theory that has been widely applied in a variety of domains, including sociology, psychology, and marketing. It is a phrase used to describe behavioural choices and to comprehend the psychosocial factors of social conduct in humans (Nosek et al.,2010). Human behavioural intention is the basic antecedent of conduct, according to the TPB, and it expresses how much effort people are willing to put forth to do the behaviour (De Groot, J., & Steg, L., 2007). Attitudes (positive/negative about personal beliefs), subjective norms (feeling social pressure for certain behaviors), and perceived behavioral control (people's beliefs' ability to perform behaviors) are three socio-cognitive elements that influence one's behavioural intention (Hassan et al., 2020). TPB established a comprehensive theoretical

framework for investigating the factors that influence human social behaviour. TPB is recognized as a good framework that has achieved great predictability in determining specific variables impacting human social behaviour, according to prior studies (Van et al., 2021). The TPB component, for example, has been used to predict behaviour toward environmentally friendly development. Ferdous and Das (2014) discovered that one's intention to limit plastic use influences behaviour in another investigation on the TPB and plastic usage (Ming & Mohamed, 2021). As a result, the TPB was used in this study to determine the most important factor influencing residents' intentions to reduce their usage of single-use plastics.

2.4 Hypothesis Development

The research hypothesis is formed based on the theoretical framework:

H1: There is a positive relationship between attitude and behavioral intention on the reduction ofSUPs.

The degree to which a person likes or dislikes the behavior in question is called attitude toward behavior, according to Ajzen (1991). Attitude is a psychological emotion that describes how a person feels in response to a given behaviour, both positive and bad (Sulaiman et al.,2019). Studies have proven that there is a favourable association between customers' attitudes and behavioural intentions for green purchasing of different product categories and cultures (Chen & Tung, 2014). (Kalafatis et al.,1999). For example, human behaviour intentions modified as a result of a positiveattitude toward the reduced and curtailed usage of plastic bags, according to a study by (Risqiani et al.,2019).

H2: There is a positive relationship between subjective norm and behavioral intention on the reduction of SUPs

Subjective norms are the social pressures a person feels to behave or not behave in a particular way by those who are important to him or her (Finlay et al.,1999). The subjective norm encompasses a person's feelings about the social pressure they are under when engaging in a certain behaviour. Some studies have found that an individual's purpose is influenced by subjective norm. According to UNEP (2018), increased societal pressure enhances citizens' behavioural intention to reduce plastic consumption. For example, social pressure from a positive public response led to the rapid growth of the ban on single-use plastics in Bangladesh. Sun et al., (2017) found that subjective criteria had a substantial impact on the intention to restrict plastic bag use.

H3: There is a positive relationship between PBC and behavioral intention on the reduction of SUPs.

Individuals' perceptions of ease or difficulty in carrying out a specific intention are referred to as perceived behavioural control, and this is thought to reflect previous experiences and predicted impediments (Ajzen,1991). Several international studies have found that PBC has a direct impact on people's behavioural intentions to limit single-use plastic use. Perceived behavioural control is the strongest predictor of the student's intention in modifying UPM students' behaviour toward reducing plastic consumption, according to Hasan et al. (2015) Furthermore, PBC has a substantial impact on consumers' intentions to purchase green items, leading to a reduction in the use of plastic bags (Maichum et al., 2016).

H4: There is a positive relationship between environmental awareness and behavioral intention on the reduction of SUPs.

An individual's awareness of certain things has an impact on his or her behaviour. Consumer awareness of environmental issues can be measured in terms of how individuals perceived the gravity of issues that were coming up in the future, which can include both specific and general issues (Zainudin et al., 2021). According to (Manzoor, 2017), residents in Tehsil Mendhar, India, have a low degree of environmental awareness, which implies they are unaware of circumstances such as marine pollution, dumpsite litter, waste leakage, and other serious environmental pollution causes. However, there is a major impact on consumer awareness of the negative consequences of using plastic bags.

H5: There is a positive relationship between law & regulations and behavioral intention on the reduction of SUPs.

There are 29 countries have passed some type of tax on SUPs, such as a specific environmental tax, a waste disposal fee or charge, or higher excise taxes on SUPs (UNEP, 2018). (Dauvergne, 2018) discovered that applying a penalty system on SUPs, such as taxes, penalties, and levies, has a significant impact on consumer behaviour. According to Akenji et al., (2020) strict enforcement of laws and regulations resulted in a greater reduction in plastic bag consumption. For example, there is an evidence was found that is efficient at decreasing of using plastic bags with a charge for plastic bags in Portugal (Martinho, G., Balaia, N., & Pires, A., 2017)

3. Methodology

3.1 Research Design

A quantitative research design was applied in the research which was adopted from previous study. Method of five-point Likert scale has been used as measurement of variables. The targeted population in this research is the residents who live in Jelutong, Penang. Based on City Facts, the total population in Jelutong, Penang was recorded as 60,431 persons. Hence, with regard to Krejcie and Morgan which was created in 1970, totalsample size was 382. Meanwhile, due to the constraint of time duration, a quick data collection method is needed. Therefore, convenience sampling method was selected to collect data as it will be involved the individuals who are most easily accessible to the researcher. During October to December 2022, the online survey questionnaire was distributed to reach the targeted population due to its' time-saving for data collection. Pilot test for instrument reliability and normality test has been conducted in the research. The final effective response rate was 95.50% and were processed for data analysis.

3.2 Research Instrument

In the previous study which was pertinent to this study, it was adoption of the questionnaire as the instrument. (Linh et al., 2019; Ari & Yılmaz, 2017). In this research, online questionnaire as a research instrument through Google Form that used by the researcher for data collection. The questionnaire selected in this study is divided into parts A, B, C, D, E, F, G and H. The respondents are required to respond all the questions. Section A consists of the demographic profile of the respondents. Section B is the consumer behaviour of using SUPs in their daily life which consists of five questions. Section C is the factor of attitude towards behavioural intention of single-use plastics reduction. Section D is the subjective norms factor while section E is perceived behavioral control that influence the behavioural intention of single-use plastics reduction. For section F and G is the factor of environmental awareness and law & regulations towards behavioral intention of single-use plastics reduction respectively. Lastly, section H will be the dependent variable which is intention of single-use plastics reduction. There are three questions for each section of C, D, E, F, G and H. Method of five-point Likert scale was used as measurement by researcher which is ranked from 1= "Never" to 5= "Very often" for section B. The questionnaire was measured using a five-point Likert scale (1= strongly disagree, 5= strongly agree) for both independent and dependent variables in the research.

3.3 Data Analysis

In this study, the software of data analysis will be used for analyzing the data by researcher which in accordance with the research objectives is Statistical Package for the Social Sciences (SPSS). Furthermore, Cronbach alpha will be used in this research to assure the construct's reliability that more than 0.7 (Ursachi et al.,2015). Besides that, descriptive analysis was applied to carry out the basic analysis of data. In addition, adoption of regression analysis to test hypothesis and data analysis through SPSS software.

No	Research Question	Research Objective	Analysis
1	How the behaviours of consumer in using single-use plastics in their daily life among the residents in Jelutong?	To identify the consumer behaviours of using single-use plastics in daily life among the residents in Jelutong.	Descriptive Analysis
2	What are the factors that influence the behavioural intention of single- use plastics reduction among the residents in Jelutong?	To determine the factors that influence the behavioural intention of single-use plastics reduction among the residents in Jelutong.	Regression Analysis
3	What is the most significant factorthat influence the behavioural intention of single-use plastics reduction among the residents in Jelutong?	To identify the most significant factor that influence the behavioural intention of single- use plastics reduction among the residents in Jelutong.	Regression Analysis

4. Results

4.1 Descriptive Analysis

There are 382 online questionnaires were distributed and involved in this research by using Google Form. Statistical

Packages for the Social Sciences (SPSS) Version 28 software was used to analyze the data collected from the survey questionnaires.

4.1.1 Demographic Profile of the Respondents

There are four elements in the section of demographic profile which is gender, education, age and ethnicity. For ethnicity, the Chinese respondents have the highest percentage which is 84.29%, Malay respondents are 11.52% and Indian respondents is recorded as 2.62%. Other ethnicity such as Thai, Bumiputera Sarawak and Bumiputera Sabah has the same percentage which is 0.52% only. The percentage of female respondents is 62.3% but the male respondents is only 37.7%. The respondents who are below 20 years old is 5.24%, and 87.43% of respondents are 21-25 years old. The age between 26-30 years old have 4.71% respondents while there have 2.09% is respondents who are between 31-50 years old. The least respondents are the age of 51 years old and above which is 0.52% only. For the education background, the highest percentage of respondents are undergraduates which is 82.72% and the lowest percentage of respondents are high school which is only 3.66%. The respondents from the postgraduate and undergraduate have the same percentage which is 6.81% respectively.

4.1.2 Consumer Behaviors of Using SUPs in Daily Life

Table 1 - Descriptive Results for Consumer Behaviour of Using SUPs in Daily Life

Item of variables	Mean	Std Deviation	Frequency	Rank
I buy the products in the plastic packaging.	3.70	0.973	Sometimes	1
I choose to use disposable cutlery when takeaway the food or beverage.	3.27	1.187	Sometimes	2
I buy the plastic bags instead of bringing myown reusable bag when I go shopping.	3.05	1.125	Sometimes	3
I buy disposable bottles instead of reusable bottles.	2.69	1.234	Seldom	4
I won't reuse plastic bags	2.02	1.212	Seldom	5
Average mean	2.9445		Seldom	

As you can see the table 1 which showed the ranking for different consumer behavior of using single-use plastic. The ranked number one was buying the products in plastic packaging, followed by choosing the disposable cutlery when taking away the food or beverage, buying the plastic bags instead of bringing their own reusable bags. Moreover, the ranking fourth was buying disposable bottles instead of reusable bottles and lastly was not reuse the plastic bags. The average mean value for all the variables is 2.9445. This result of descriptive test showed that most of theresidents in Jelutong is seldom use SUPs in their daily. Hence, the consumption level of single-use plastic is considered low among the residents in Jelutong, Penang.

4.1.3 Normality Test

Table 2 - Normality Statistics

Variables	Skewness Value	Kurtosis Value	Decision
Attitude	-2.108	-2.577	Normally distributed
Subjective Norm	-2.074	-1.789	Normally distributed
Perceived Behavioural Control (PBC)	-2.398	-0.446	Normally distributed
Environmental Awareness	-2.017	-1.969	Normally distributed
Law & Regulations	-1.875	-1.934	Normally distributed

Behavioural Intention	-1.653	-1.983	Normally distributed

Normality test is essential to use in a research that determining whether the data collected is normally distributed or non-normally distributed (Kapatou, 2003). There are two popular normality test in SPSS which are are the Kolmogorov-Smirnov and the Shapiro-Wilk (Anaesth, 2019). In table 2, there are five independent variables and one dependent variable. The researcher chooses Kolmogorov-Smirnov to test the normality. The result shows that skewness value and kurtosis value for each variable is less than 2.58. Therefore, the normality test of all variables are significant and the data is normally distributed.

4.1.4 Reliability Test

Table 3 - Reliability Statistics

Variables	No. of Items	Cronbach's Alpha Value
Attitude	3	0.769
Subjective Norm	3	0.793
Perceived Behavioural Control (PBC)	3	0.655
Environmental Awareness	3	0.898
Law & Regulations	3	0.726
Behavioural Intention	3	0.887

Reliability test is used to validate and determine the reliability of the data. It is used to test whether the instrument of questionnaire is reliable or not. According to Ursachi et al. (2015), the Cronbach's alpha value is between 0.6 to 0.7 is acceptable. However, the value is greater than 0.90 is considered as a not good result because it indicates the idleness. Based on the table 3, all the independent variables and dependent variable are acceptable level due to the Cronbach's alpha value is higher than 0.6 which indicating very good reliability. Hence, the instrument of questionnaire is reliable for measuring the variables in this research.

4.2 Regression Results

Table 4 - Model Summary

Model	R	R square	Adjusted Square	Std. Error of the Estimate
1	.553[a]	0.305	0.287	0.44430

Table 4 shows the result of the model summary of multiple regression analysis. The model summary indicates the value of R and R square. In this table, the value of R square is 0.305 that encompassed five independent variables (attitude, subjective norm, perceived behavioral control (PBC), environmental awareness, law & regulations) that explained the percentage of variance in the independent variable (Thompson, 1996). The coefficients of R square, 0.305 indicating that the independent variable explain 30.5% of the dependent variable. Thus, the regression model test in this research in the medium levels and quite good in practice.

Table 5 - Coefficients

Model	Unstandardized Coefficient		Standardized Coefficient	t	Sig
	B	Std. Error	Beta		
(Constant)	1.759	.302		5.833	<.001
IV1 mean	.214	.061	.257	3.504	<.001
IV2 mean	.200	.069	.239	2.895	.004
IV3 mean	.126	.053	.157	2.402	.017
IV4 mean	.054	.065	.066	.839	.402
IV5 mean	.023	.052	.031	.445	.657

Based on the table 5, it reveals the statistical significance when testing the significance of each independent variable to the dependent variable. As the table shown above, in order to determine the significant independent variables with dependent variable, this could be represented by the column of standardized coefficient (Beta), t, and Sig. To determine the significant between the independent variables and dependent variables, the p-value should not be greater than 0.05 (Thompson,1996). Hence, the result is clearly shows that attitude and subjective norm has significant effect toward reducing single-use plastic behavioural intention among residents in Jelutong. However, environmental awareness, law and regulation as well as perceived behavioural control did not significantly affect their single-use plastic reductionbehavioral intention.

4.3 Hypothesis Testing

Table 6 - Result of Hypothesis Testing

Hypothesis	*p value*	Accepted / Rejected
There is a positive relationship between attitude and behavioral intention on the reduction of SUPs.	<.001	Accepted
There is a positive relationship between subjective norm and behavioral intention on the reduction of SUPs.	<.001	Accepted
There is a positive relationship between PBC and behavioral intention on the reduction of SUPs.	.004	Rejected
There is a positive relationship between environmental awareness and behavioral intention on the reduction of SUPs.	.017	Rejected
There is a positive relationship between law & regulations and behavioral intention on the reduction of SUPs.	.402	Rejected

By using the regression analysis, the researcher was carried out the hypothesis testing of positive relationship between the factors and consumer's behavioural intention of single-use plastics reduction. As the table 6 shown above, the p value (Sig.) was less than alpha value of 0.05 for two out of five hypothesis tested, indicating that there has a positive relationship existed among variables.

5. Discussion

5.1 Objective Discussion

This section will discuss the objectives and determine whether they were achieved or not. There are three objectives: to identify the consumer behaviours of using single-use plastics in daily life among the residents in Jelutong, to determine the factors and the most significant factor that can influence their behavioral intention the behavioral intention of single-use plastics reduction.

To respond the first objective, the descriptive analysis was run to carry out the average level of single use plastic consumption and rank the consumer behaviour of using single-use plastic. Based on the table 4, buying the product in

plastic packaging is ranked number one compared to other behavior of single-use plastics consumption. However, most of the residents in Jelutong will reuse the plastic bags they buy and do not dispose it right after use. Overall, the mean value of 2.9445 showed that most of the residents in Jelutong is seldom use SUPs in their daily. Hence, the consumption level of single-use plastic is considered low among the residents in Jelutong, Penang.

Meanwhile, the regression test was showed that factor of attitude and subjective norm has a positive relationship towards the behavioral intention of single-use plastics reduction among the residents in Jelutong. Due to its p value is smaller than 0.05, these two factors has significant impact towards their behavioral intention of reducing single-use plastics among other variables. Regarding to environmental awareness, previous studies had declared that human do not have intention to take action although they are aware and possessed knowledge of environmental protection (Mei et al., 2016). For example, the idea of 'green living' is advocated by teenagers of Malaysia, however the adoption of green living rate still remains low (Rahim et al., 2012). Furthermore, the majority of residents disagree that available law and regulations could decrease the single-use plastic consumption. On the other hand, perceived behavioral control (PBC) has no significantly impact the residents' behavioral intention of single-use plastic reduction because of lacking the concept oridea pertaining to environmental knowledge in their belief.

At the same time, the most significant factor to influence the behavioural intention of reducing single-use plastics among the residents in Jelutong is factor of attitude, as it has the highest beta value and lowest p value among other variables. This result was proved by two previous studies which stated that attitudes act as an essential factor influencing the behavioural intention of engaging in reduce, reuse and recycle (3Rs) single-use plastic practice. Other than that, Ari and Yilmaz (2016) proposed that the positive attitude of human against usage of single-use plastic may assist in switching to using cloth bags. It is clearly to say that residents' attitudes toward single-use plastic reduction were crucialin motivating them to change their behaviour, which helped to reduce pollution from plastic waste and preserving the healthy environment. Therefore, the individuals held an active attitude of engaging in the campaign, seminars or activities of single-use plastic reduction actively, it will be arousing the behavioural intention of residents in reducing plastic use.

6. Conclusion

Nowadays, the severity of plastic waste or plastic pollution is continuously increasing, and it has turned into a major global crisis. Single-use plastic's non-biodegradable nature had negative consequences towardhuman health, economic and disrupted the balance of the natural environment, resulting in the death of marine organisms. This research may assist in social planning to curb the consumption of SUPs among the residents in Jelutong where is a suburb of George Town, Penang. This effort also helps to achieve the vision of Malaysia's 'Roadmap Towards Zero Single-Use Plastic' which is abolishing single-use plastic by 2030. Thus, this research focused on consumer behaviours towards the reduction of single-use plastic among the residents in Jelutong, Penang.

The three objectives of this research were attained. By adopting the descriptive analysis, the results revealed that most of the residents in Jelutong are seldom to use single-use plastic in their daily life. Although they very often to buy the products in plastic packaging, however they will reuse it again and would not throw it away directly. Moreover, there are two out of the five factors has a positive relationship towards the behavioral intention of single-use plastics reduction, which are attitude and subjective norm. Furthermore, the result of regression test indicated attitude was the most significant factor that influence residents' behavioural intention with the lowest significant level and the highest beta value among the other variables.

Hence, it can be concluded that a right attitude should be instilled among the consumer or residents in Jelutong as well as Malaysians in this study. Through this study, it may enhance the understanding level of government, policy makers, programmers, and other researchers, thereby enable implementing more effective campaigns or programs against the SUPs. As a result, behavioural shifts will be adopted by residents to jointly address the plastic waste pollution to ensure future environmental sustainability.

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