



Consumer Responses to The Plastic Bag Levy in Special Region of Yogyakarta, Indonesia

Soya Sobaya¹, Rizqi Anfanni Fahmi², Isnaini Nururrosida³

¹Department of Islamic Economics, Islamic University of Indonesia, Special Region of Yogyakarta, Indonesia.

²Department of Islamic Economics, Islamic University of Indonesia, Special Region of Yogyakarta, Indonesia.

³Isnaini Nururrosida, Student in Department of Islamic Economics, Islamic University of Indonesia Special Region of Yogyakarta, Indonesia.

Abstract

This study aims to examine the consumer responses to the plastic bag levy in Special Region Yogyakarta, Indonesia. The policy of plastic bag levy was enacted in February 2016 and revoked in October 2016. The qualitative descriptive analysis is conducted on 100 supermarket customers. The result shows that majority of the consumers reduce the plastic bag usage after the enactment of the policy. 75% of respondents use plastic bags less than before the policy enacted, while 22% use plastic bags with the same amount as before the policy enactment, and the remaining 3% decide no longer using plastic bags. But, after the revocation of the policy, 84% of respondents re-use the free plastic bags provided by the stores. It means that the policy had no impact on the plastic bag consumption in the long term. We suggest that the plastic-bag policy should be re-enacted with some notes. Firstly, the price of the plastic bag should be increased so that consumers' reconsider if they want to use the plastic bag. Secondly, the levy should be managed for social or environmental actions through CSR. Third, consumers' should be offered the non-plastic material bags but still at reasonable price.

Keywords: Plastic-Bag Levy, Policy, Consumer

Introduction

The policy of plastic bag levy was applied on 21st February 2016 in 23 regions in Indonesia. Based on the Circular Letter of the Ministry of Environment and Forestry Number S.1230/PSLB3-PS/2016 about the Price and Mechanism of plastic bag levy implementation, everyone that shops in the supermarket should pay Rp 200,00 per piece of plastic, including Value Added Tax (PPN). Sales proceeds are managed by the retail store as CSR. This policy is intended to reduce the usage of plastics bag and their hazards to the environment.

The enactment of Law No. 18 of 2008 on waste management is a government's effort to reduce and manage waste. Plastic bag levy is one of the effort. The program also marks the campaign of the "Indonesia Free Garbage 2020 Movement" initiated by the Ministry of Environment and Forestry (KLHK). Although the plastic bag levy program is well aimed, there are at least two problems that potentially hinder the achievement of its objectives. Firstly, the Waste Management Law regulates waste management but does not authorize the collection of funds to manage it. Secondly, article 21 of Law no. 18 the year 2008 states that the government gives incentives to everyone who makes waste reduction and provides disincentives to who does not. Provisions on the type, form, and procedure of granting such incentives or disincentives should be organized in a Government Regulation (PP), but it's also not explicitly set for the collection of these funds.

Based on Ministry of Environment and Forestry data, plastic bag transactions from 100 stores can produce 10,95 million pieces of plastic garbage bags per year. It is equal with 65,7 hectares of plastic bags or 60 times bigger than Football field (Novrizal, 2016). Indonesia is ranked as the big two countries that produced 187,2 million tons of plastic litter to the marine (Jambeck et al., 2015). Nevertheless, it has not been able to alert people to reduce plastic bags used for shopping. The results of the Generation Indonesia study in 2009 stated that people would bring their shopping bags when: (1) the store does not provide plastic bags anymore (33%), (2) plastic bags are not free (30%), (3) there is a 'reward' given if they bring their shopping bags (13%), (4) and others. After the enactment of that Circular Letter, it certainly increases many responses among people in Indonesia. But not even four months since the promulgation, Indonesian Retail Entrepreneurs Association (Aprindo) noted that plastic bags use in the community has been reduced by 30% since mid-February to the end of May 2016 (Purba, 2016). As a comparasion, in the United States of America, plastic bag levy program can reduce plastic bag consumption by 85% (Brittain & Rich, 2015). However, because of the debate among people in many regions about the fund management of plastic bag levy, the policy was revoked since 1st October 2016 until there's legal protection from the Minister of Environment and Forestry. This regulation can be able to set the policy of plastic bag levy in detail.

Based on Public Finance Law (Law No. 17 the year 2003), the authority which can carry out the collection of government revenues lies with the Minister of Finance as a budget user by exercising the collection of Non-Tax Government Revenue (PNBP). The regulation requires depositing such levies into the state treasury. On the other hand, regional finance official may collect local revenue based on local laws. The plastic bag levy program is a voluntary program and not either received by the central government or local government, but it's managed directly by each retail entrepreneur.

This study aims to examine the consumer responses to the plastic bag levy since the enactment of the policy and after it was revoked by the Circular Letter of the Ministry of Environment and Forestry Number S.1230/PSLB3-PS/2016. The results of this study are supposed to provide benefits to all related-parties, especially government agencies. This study is also supposed to be a consideration in the preparation of regulations aimed to reduce pollution that caused by plastic waste and also to be a reference for retail companies to have marketing strategies without using the non-organic material.

Literature review

At the beginning of the plastic bag charge program, many people complained regarding the transparency of the fund management of the sale proceeds. According to YLKI Daily Chief Executive Chairman Tulus Abadi, these resources must be managed independently or through a particular body which is used for environmental pollution control activities. Retail entrepreneurs should only be tasked to collect these funds (Prayoga, 2016).

An alternative solution to reduce waste is through the excise tax. The collected tax will be the government revenue and can be used for environmental program managed by ministries or agencies. This excise tax from the packaging or plastic bottle can be synergized with the provisions of waste management, includes the provision design to provide incentives and disincentives for changing consumer behavior. With these considerations, it is expected that environmental sustainability programs can be implemented in line with the good corporate government (Solikin, 2016).

The first country enacted the plastic bag levy was Ireland in 2002. The policy affected the plastic bag usage until 90%. (Convery, McDonnell, & Ferreira, 2007). Meanwhile, in the United Kingdom, Wales is the first country that applied a charge for a plastic bag. The Welsh population highly support the charge for plastic bag even before the enactment (Poortinga, Whitmarsh, & Suffolk, 2013).

A year later, South Africa introduced the plastic bag levy in small amounts. Thus, it has only managed to decrease plastic-bag demand in the short term (Dikgang, Leiman, & Visser, 2010) because of the accumulation of loss aversion due to an endowment effect (Dikgang, Leiman, & Visser, 2012). A study in another African country, Botswana, shows that the enactment of plastic bag levy induced a powerful impact on the plastic bag usage. It became successful partially because of the continuity of the high price on a plastic bag (Dikgang & Visser, 2010).

In developing countries such as India, plastic ban policy is likely no to be the best resolution to reduce plastic bag use. Most of the consumers are still using plastic bag although the ordinance has enacted (Gupta & Somanathan, 2011).

In Malaysia, the campaign of Plastic Bag Ban has considered the urgency of the plastic bag charge to shift the consumers' behavior of the plastic bag use (Asmuni, Hussin, Khalili, & Zain, 2015; Zen, Ahamad, & Omar, 2013). Study of Kamaruddin and Yusuf (2012) strengthen that the No Plastic Campaign has reduced the "white" pollution and increased the level of awareness of the households. The factor of reducing landfill use and the factor of spending money for charity are two critical factors that motivate families not to use the plastic bags (Afroz, Rahman, Masud, & Akhtar, 2017). People can be affected by social, moral and political motivations (Karmarkar & Bollinger, 2014).

Luís & Spínola (2010) on an earlier study in Portugal finds that a plastic bag levy doesn't cause a lapse of customers. Even the competitors do not charge for any plastic bag; the supermarket can improve the number of clients although applying a fee. A few later, Portugal enact the plastic bag levy. A study from Martinho, Balaia, and Pires (2017) shows that the implementation of the plastic bag tax in Portugal has reduced plastic bag consumption by a simultaneously 61% rise the reusable plastic bags. Even though reduction was reached, the tax did not influence the perception of marine litter or the effect of plastic bags on environment and health. It's in line with the previous study in Israel conducted by Ayalon et al. (2009) that concludes the enactment of a charge or a total plastic bag ban will not be able to generate proper waste management and or to environmental policy. The policy is not sufficient to solve plastic bag litter in open public space. Many government organizations enact plastic bag policy without considering any scientific data so Furthermore, rather than to be a problem; people may be introduced to recycle the plastic bags so that it's expected to reduce the plastic bag litters (Mantz, Mantz, & Gavriletea, 2017).

In China, the charge for plastic bags is also enacted in 2008. Using conjoint choice-experiment in Tianjin, the results indicate that a reasonable price can affect most people not to use nondegradable

plastic bags. It's a potential business opportunity to produce cloth, paper, or degradable bags to replace the non-degradable one with a lower price (Chan-Halbrendt, Fang, & Yang, 2009). The types of plastic bag substitutes that offered by the stores also affect its usage (He, 2010; Taylor & Villas-Boas, 2016). In Argentina, the plastic bag fee can increase the own-bag usage among the consumers after the policy was enacted for two months (Jakovcevic et al., 2014).

Local governments in the United States of America also conduct some policies to reduce single-use plastic that can be divided into five major classifications: bans, the introduction of charges and levies, determining minimum standard of the bag's design, educating consumers and obligating seller take-back programs. Most of the policies are bans on plastic bag which involve the compulsory charge to a plastic bag (Wagner, 2017).

A study from Rivers, Shenstone-Harris, and Young (2017) in Canada reveals that the influence of the plastic bag levy is very fickle between behavioral and demographic clusters. The plastic bag charge is vastly effective to ensure people who have used re-usable plastic bag before, but it does not affect the occasional users. The impact is only limited to those households with a high social and economic status. Likewise, He (2010) states in a study in China. The intention of consumers to use plastic bag is positively and significantly related the convenience, consumers' attitude, personal norm, and perceived behaviour control Convenience is the most robust impact one (Sun, Wang, Li, Zhao, & Fan, 2017).

Meanwhile in Indonesia, the charge of plastic bag policy issued by The Ministry of Environmental and Forestry to reduce the plastic waste problem and promote green behavior lifestyle. A study from Novianto and Kartika (2017) shows after the policy implemented, more customers are willing to bring their shopping bag and reduce using plastic bags. The price of plastic bags are still considered too cheap and should be raised. A prior study from Nawangpalupi, Pratiwi, and Herawati (2011) evaluate the process of changing consumer behavior to be more environmentally friendly. The results indicate that the respondents or students who are committed to reducing the use of plastic bags are still relatively small compared to all students who take Ecology courses (Nawangpalupi et al., 2011).

Methods

This study based on field-research by using questioner as the instrument of data collection. It aims to obtain further information about the number of respondents who are considered to represent a particular population. Qualitative descriptive is conducted to analyze data. Primary data is conducted by spreading questionnaire to respondents, and secondary data take from several related references.

Population in this research are consumers of the modern store in Yogyakarta. Modern store in this study refers to Presidential Regulation number. 112 the year 2007. Modern shop is a shop with a self-service system which providing various goods in retail such as Minimarket, Supermarket, Hypermarket or wholesaler, and Department Store. The research locations are Giant Express, Lippo Plaza Yogya, Ambarukmo Plaza, and Indomaret Jalan Kaliurang, Yogyakarta

Respondents are conducted from modern stores ever or still applying the plastic bag levy policy. The sampling technique is quota sampling, that is selecting people nonrandomly according to some fixed quota (Trochim & Donnelly, 2006, p. 57). The quota set in this study is 100 people taken from the survey locations. The data is collected and analyzed by using content analysis techniques according to Miles & Huberman.

Results and discussion

In this study, respondents are consumers who has been shopping in a supermarket which refers to Presidential Decree Number 112 the year 2007. Data collection in this study was conducted by distributing questionnaires to 100 respondents. Respondents are 51% college students, 35% private employees, 3% housewives, 7% entrepreneurs and 5% others. It shows that the majority of respondents are college students. According to current income, 12% of respondents are above Rp 2 million, 35% between Rp 1-2 million, 32% less than Rp 1 million, and 21% respondents are not designed to answer.

The result shows that respondents realize plastic is useful material but also dangerous on another hand. However, their commitment to reduce the plastic bags used for shopping is relatively high. 61% of plastic bag users know the danger of plastics to the environment, and 21% feel they still need plastic in their shopping for practical reasons while 18% still express normal responses. Practicality is still the main reason for using plastic bags. Likewise, the habit factor and the absence of plastic bags levy to be one-factor consumers still use plastic bags for shopping. Afroz et al. (2017) in their study also shows that more educated people have a better positive opinion toward plastic bag recycle than their counterparts do. It means that level of knowledge affects the motivation to use plastic bags or not. Moreover, the socioeconomic status is also affected by the motivation. Socioeconomic status is usually can be measured by the educational attainment instead of the income (Rivers et al., 2017).

Before the enactment of plastic bag levy policy, respondents who choose to use free plastic bags are 81%, and the rest prefer to use a shopping bag brought from home. Jakovcevic et al. (2014) on his study shows that before the implementation of plastic bag levy, the percentage of household that bring their shopping bag is similarly low in three different locations. Meanwhile, 44% of respondents have spending habits every day. 19% one-week shopping, 9% of respondents in a week, 9% shopping every two days, 5% shopping three times a week and 12% only shop when needed.

After the publication of Circular Letter of the Ministry of Environment and Forestry Number S.1230/PSLB3-PS/2016 about Pricing and Mechanism of Implementation of Plastic Bag Levy, various modern stores in Yogyakarta began to introduce plastic bags levy using at an average cost of Rp 200 per plastic bag and provide an alternative free cardboard box instead of plastic bag. Socialization of the policy is done massively so that almost all respondents know about the policy. As many as 81% of respondents know the policy of plastic bag levy, while 9% claim that they do not know about the policy and the remaining 2% do not answer.

There are some impacts of the plastic bag levy policy. 75% of respondents use plastic bags less than before, while 22% use plastic bags with the same amount as before the policy enactment, and the remaining 3% decide no longer using plastic bags. It means that the policy can reduce the plastic bag usage even though in the short term. Moreover, the policy still could not change the consumers' behavior significantly. It's evident just 3% of the respondents who decide not use plastic bag anymore. Novianto and Kartika (2017) argue that after the policy implemented, more customers are willing to bring their shopping bag and reduce using plastic bags. The price of plastic bags is still considered too cheap and should be raised. So as found on Chan-Halbrendt et al., (2009) and He (2010) studies that show the decreasing of plastic bag usage after the introduction of plastic bag levy policy.

Almost all supermarkets provide shopping bags, both paid and free. From the results, at least 35% of respondents use 1 piece of plastic bag every day, 27% of respondents use at least 2 pieces of plastic bags per day, 16% use 3 pieces of plastic bags, while the remaining 22% use more than 4

pieces of plastic bags each day each time they shop. However, the majority of respondents (75%) choose to save used plastic bags for reuse, while 25% prefer to throw it away immediately. It shows that consumers are cognizant of the concept of re-use plastic bags.

Re-using efforts have also been made by many consumers after the enactment of the plastic bag levy policy by using their shopping bags while shopping. It is an awareness to be more concerned about the environment through using of non-plastic shopping bags. Although 68% of respondents stated that they agree with the plastic-bag levy policy, 19% of respondents thought that the policy only benefits the seller. 8% of respondents deplore the charge of plastic bags used. 4% remaining said that they have no reluctance to the policy because the levy charged is still affordable. In contrast to ours, a study from Jakovcevic et al. (2014) shows that only 42% of the respondents concurred with the plastic bag levy, while 58% disagree with the policy. Environmental causes were the most dominant (69%) among policy supporters, whereas financial reasons were the most dominant (60%) among policy opponents. In our study, transparency of the charge management is still in doubt, while the counterpart study, the financial cost is the most prevalent. Maybe the cost of the plastic bag is too cheaper, so that not so influencing.

The plastic bags-levy policy was terminated on 1st October 2016 in line with consumer opinions regarding the effectiveness of the implementation of the policy. But the socialization of this policy revocation is not as massive as its enactment, as evident from 100 respondents, only 31% know that plastic bags are now free of charge again, while 69% still think that they are still charged for plastic bags usage.

Regardless of the pros and cons of revoking the policy, 55% of respondents state the plastic-bag levy policy is considered ineffective. Probably the charge is too cheap so that consumers pay for the levy in substitute for the plastic bag that they need for carrying their purchases as a study from Asmuni et al. (2015). Meanwhile 45% others state the policy is effective to increase consumers' awareness of plastic bags using. It's in contrast to a study from Asmuni et al. (2015) that finds the program has been 52,3% effective in making consumers dodge the use of plastic bags. The frame of charge or fee does not seem effective to change consumers' motivation to carry a reusable bag. It is likely more effective by using tax frame. If a consumer spends money for a plastic bag charge or fee, his willingness to pay is higher than spend it for tax. (Muralidharan & Sheehan, 2016).

Ari & Yilmaz (2017) argue that people awareness about the danger of plastic bag to environment and sense of social pressure could reduce the plastic bag consumption. It shows that the plastic bag policy bag must be complemented by raising the society' awareness of plastic bag dangers. A successful campaign of the plastic bag dangers can be reached through printed media, such as poster or banner when introduced the plastic bag ban on university students (Mustafa & Yusoff, 2011). Now, poster or other printed materials can be replaced by using social media campaign. We can just design a catchy poster or an appealing video then share to the social media such as Whatsapp, Instagram, Facebook, and many more. It can be viral in a few time, cheaper, and massive.

Respondents who agreed with the revocation of the policy argued that the policy was burdening the society, while 39% of respondents state that the policy would be more efficient when increasing the price of the plastic bag. According to the study from Dikgang et al.(2010), although the levy is applied comprehensively, it has failed partially so that the tax should be set adequately high to change the consumers' behavior. It's evident by a study in another African country, Botswana, that shows the enactment of the plastic bag charge led to a powerful reduction of the plastic bags consumption because of the continuous high price. Consumers pay 1.000 Botswana pulas per plastic bag. But, it should be noted the success is still partial, not comprehensively yet (Dikgang &

Visser, 2010). Not only high price of the plastic bag, but the levy should also be directed to activate the environmental reason to change consumers behavior by using a re-usable bag (Jakovcevic et al., 2014).

34% of respondents state the policy should not be changed and revoked. They also argue the need for more certain and adequate rules that aim to reduce plastic waste in the society. The reduction of plastic bags use doesn't mean that the awareness of the plastic waste management is increasing. It's indicated by studies from Martinho, Balaia, and Pires (2017) and Ayalon et al. (2009). They show that even though the reduction was achieved the levy did not influence the perception of plastic bags on environment and health. It's reinforced by a fact that after the revocation of the policy, most modern retail stores in Yogyakarta return to give no charge for the plastic bags. 84% of respondents re-utilize that facility and use free plastic bags which provided by stores.

The government's efforts to reduce the plastic bags use should not be halt only after the revocation of the plastic bag levy policy. Respondents hope that there will be improvement efforts through more concrete steps. 51% of respondents aspired the government to encourage retail companies to use shopping bags with non-plastic materials. 19% of respondents argued the need for people awareness about the dangers of plastics through educational efforts such as of counseling/workshop. 17% support that it should rule those obligate people to use reusable plastic bags. As many as 3% of respondents stated the need of re-enacting the policy of plastic bags levy at a higher price than before and the remaining 10% answered others. It needs to educate people and to campaign public awareness on the plastic bag hazards (Joseph, Kumar, Majgi, Kumar, & Prahalad, 2016; Xanthos & Walker, 2017) whilst reducing the plastic bag production, increasing resource recovery from plastic bag litter, and recompiling the plastic bag litter (Singh & Cooper, 2017; Wachira, Wairire, & Mwangi, 2014). Plastic bag ban may be not implemented entirely in Indonesia because of their ubiquitousness. Furthermore, in every household, the plastic bags can be reused for various needs, i.e. as trash bags. So, it's hardly possible to affect people not to use the plastic bags in the short term.

According to Li & Zhao (2017), the main factors influencing plastic bag regulation are sequentially: the cost of living and level of the people education, economic level, geographical location, and then the interest of the industry as the lowest. Thus, the government should consider those factors to determine the rate of plastic bag charge. In the urban area, the legislation of plastic bag levy should be easier to enact rather than the rural. In Yogyakarta, as well as known, is called by "Student City." It's similar to Mustafa & Yusoff (2011) that argue the knowledge level of students commonly good. The government may be easier to enact the plastic bag levy to the citizen because of the higher level of education. Despite those five factors, Kasidoni et al. (2015) remind us that there's no single solution to solve the plastic bag usage in all countries. It means that the answer to reduce the plastic bag consumption depends on each country due to the different culture, political system, and socio-economic situation. To have a high impact, the global campaign is also required to emerge social movements based on the International agreement. Not only social movements, the global campaign maybe press the industry to participate the reusable bag campaign (Clapp & Swanston, 2009).

Conclusion

From the discussion above can be concluded that that majority of the consumers reduce the plastic bag usage after the enactment of the policy. 75% of respondents use plastic bags less than before, while 22% use plastic bags with the same amount as before the policy enactment, and the remaining 3% decide no longer using plastic bags. But, after the revocation of the policy, 84% of respondents re-use the free plastic bags provided by stores. It means that the policy has not affected the consumers' behavior of plastic bags consumption in the long term.

Based on our study, we suggest that the policy of plastic-bag levy should be reenacted with some notes. Firstly, the price of the plastic bag should be increased so that consumers' rethink if they want to use the plastic bag. The high price of the plastic bag charge is also suggested by Kamaruddin & Yusuf (2012), Zen et al. (2013), and Gupta & Somanathan (2011). Secondly, the levy should be managed for social or environmental actions through CSR. Third, consumers' should be offered the non-plastic material bags but still at reasonable price. It's is also proposed by Chan-Halbrendt, Fang, & Yang, (2009), Taylor & Villas-Boas (2016) and He (2010).

Resources

- Afroz, R., Rahman, A., Masud, M. M., & Akhtar, R. (2017). The knowledge, awareness, attitude and motivational analysis of plastic waste and household perspective in Malaysia. *Environmental Science and Pollution Research*, 24(3), 2304–2315. <https://doi.org/10.1007/s11356-016-7942-0>
- Arı, E., & Yılmaz, V. (2017). Consumer attitudes on the use of plastic and cloth bags. *Environment, Development and Sustainability*, 19(4), 1219–1234. <https://doi.org/10.1007/s10668-016-9791-x>
- Asmuni, S., Hussin, N. B., Khalili, J. M., & Zain, Z. M. (2015). Public Participation and Effectiveness of the no Plastic Bag Day Program in Malaysia. *Procedia - Social and Behavioral Sciences*, 168, 328–340. <https://doi.org/10.1016/j.sbspro.2014.10.238>
- Ayalon, O., Goldrath, T., Rosenthal, G., & Grossman, M. (2009). Reduction of plastic carrier bag use: An analysis of alternatives in Israel. *Waste Management*, 29(7), 2025–2032. <https://doi.org/10.1016/j.wasman.2009.02.016>
- Brittain, A., & Rich, S. (2015). Is D.C.'s 5-cent fee for plastic bags actually serving its purpose? Retrieved August 8, 2017, from https://www.washingtonpost.com/investigations/nickel-by-nickel-is-the-dc-bag-fee-actually-saving-the-anacostia-river/2015/05/09/d63868d2-8a18-11e4-8ff4-fb93129c9c8b_story.html?utm_term=.c3344891cbec
- Chan-Halbrendt, C., Fang, D., & Yang, F. (2009). Trade-offs between shopping bags made of non-degradable plastics and other materials, using latent class analysis: The case of Tianjin, China. *International Food and Agribusiness Management Review*, 12(4), 179–198. Retrieved from <https://www.ifama.org/resources/Documents/v12i4/ChanHalbrendt-Fang-Yang.pdf>
- Clapp, J., & Swanston, L. (2009). Doing away with plastic shopping bags: International patterns of norm emergence and policy implementation. *Environmental Politics*, 18(3), 315–332. <https://doi.org/10.1080/09644010902823717>
- Convery, F., McDonnell, S., & Ferreira, S. (2007). The most popular tax in Europe? Lessons from the Irish plastic bags levy. *Environmental and Resource Economics*, 38(1), 1–11. <https://doi.org/10.1007/s10640-006-9059-2>
- Dikgang, J., Leiman, A., & Visser, M. (2010). *Analysis of The Plastic-Bag Levy in South Africa* (No. 18). Cape Town. Retrieved from https://econrsa.org/papers/p_papers/pp18.pdf
- Dikgang, J., Leiman, A., & Visser, M. (2012). Elasticity of demand, price and time: Lessons from South Africa's plastic-bag levy. *Applied Economics*, 44(26), 3339–3342. <https://doi.org/10.1080/00036846.2011.572859>
- Dikgang, J., & Visser, M. (2010). *Environment for Development Behavioral Response to Plastic Bag Legislation in Botswana* (Environment for Development No. 10–13). Retrieved from <http://www.rff.org/files/sharepoint/WorkImages/Download/EfD-DP-10-13.pdf>
- Gupta, K., & Somanathan, R. (2011). Consumer responses to incentives to reduce plastic bag use : Evidence from a field experiment in urban India. *South Asian Network for Development and Environmental Economics (SANDEE)*, 65(11), 1–36. Retrieved from

- https://www.isid.ac.in/~pu/conference/dec_11_conf/Papers/KanupriyaGupta.pdf
- He, H. (2010). *The Effects of an Environmental Policy on Consumers: Lessons from the Chinese Plastic Bag Regulation* (No. 453). *Working Papers In Economics*. Göteborg. Retrieved from https://gupea.ub.gu.se/bitstream/2077/22459/1/gupea_2077_22459_1.pdf
- Jakovcevic, A., Steg, L., Mazzeo, N., Caballero, R., Franco, P., Putrino, N., & Favara, J. (2014). Charges for Plastic Bags: Motivational and Behavioral Effects. *Journal of Environmental Psychology*, 40, 372–380. <https://doi.org/10.1016/j.jenvp.2014.09.004>
- Jambeck, J. R., Geyer, R., Wilcox, C., Siegler, T. R., Andrady, A., Narayan, R., & Law, K. L. (2015). Plastic waste inputs from land into the ocean. *Science*, 347(6223), 768–771. <https://doi.org/10.1017/CBO9781107415386.010>
- Joseph, N., Kumar, A., Majgi, S. M., Kumar, G. S., & Prahalad, R. B. Y. (2016). Usage of plastic bags and health hazards: A study to assess awareness level and perception about legislation among a small population of Mangalore city. *Journal of Clinical and Diagnostic Research*, 10(4), LM01–LM04. <https://doi.org/10.7860/JCDR/2016/16245.7529>
- Kamaruddin, R., & Yusuf, M. M. (2012). Selangor Government's "No plastic Bag Day" Campaign: Motivation and Acceptance Level. *Procedia - Social and Behavioral Sciences*, 42(July 2010), 205–211. <https://doi.org/10.1016/j.sbspro.2012.04.183>
- Karmarkar, U. R., & Bollinger, B. (2014). *BYOB: How Bringing Your Own Shopping Bags Leads to Treating Yourself and the Environment* (065 No. 14). Harvard. <https://doi.org/10.1509/jm.13.0228>
- Kasidoni, M., Moustakas, K., & Malamis, D. (2015). The Existing Situation and Challenges Regarding The Use of Plastic Carrier Bags in Europe. *Waste Management and Research*, 33(5), 419–428. <https://doi.org/10.1177/0734242X15577858>
- Li, Z., & Zhao, F. (2017). An analytical hierarchy process-based study on the factors affecting legislation on plastic bags in the USA. *Waste Management & Research*, 35(8), 795–809. <https://doi.org/10.1177/0734242X17705725>
- Luís, I. P., & Spínola, H. (2010). The influence of a voluntary fee in the consumption of plastic bags on supermarkets from Madeira Island (Portugal). *Journal of Environmental Planning and Management*, 53(7), 883–889. <https://doi.org/10.1080/09640568.2010.490054>
- Mantz, K., Mantz, T., & Gavriletea, M. (2017). Paper, Plastic or Reusable? It's a Mixed Bag – A Case Study of Plastic Bag Legislation in America. *Journal of Academy of Business and Economics*, 17(1), 41–46. <https://doi.org/10.18374/JABE-17-1.4>
- Martinho, G., Balaia, N., & Pires, A. (2017). The Portuguese plastic carrier bag tax: The effects on consumers' behavior. *Waste Management*, 61, 3–12. <https://doi.org/10.1016/j.wasman.2017.01.023>
- Muralidharan, S., & Sheehan, K. (2016). Tax and "fee" message frames as inhibitors of plastic bag usage among shoppers: A social marketing application of the theory of planned behavior. *Social Marketing Quarterly*, 22(3), 200–217. <https://doi.org/10.1177/1524500416631522>
- Mustafa, H., & Yusoff, R. M. (2011). Measuring the Long-Term Effectiveness of a Compulsory Approach to Behaviour Change. *Journal of Education for Sustainable Development*, 5(2), 233–244. <https://doi.org/10.1177/097340821100500213>
- Nawangpalupi, C. B., Pratiwi, L., & Herawati, Y. (2011). Evaluasi Perubahan Perilaku Dalam Penggunaan Tas Belanja Pengganti Kantong Plastik. In *Proceeding Seminar Nasional "Industrial Services"* (pp. 66–71).
- Novianti, A. I., & Kartika, L. (2017). Pengaruh Green Marketing Kebijakan Kantong Plastik Berbayar Terhadap Green Behaviour Masyarakat Kota Bogor (The Influence of Green Marketing Policy of Plastic Bags Levy against Green Behavior of the people in Bogor City). *Jurnal Riset Manajemen Dan Bisnis*, 2(1), 81–94.
- Novrizal. (2016). Menyambut Hari Peduli Sampah Nasional 2016. Retrieved August 8, 2017, from

- <http://www.menlhk.go.id/siaran-34-menyambut-hari-peduli-sampah-nasional-2016.html>
- Poortinga, W., Whitmarsh, L., & Suffolk, C. (2013). The introduction of a single-use carrier bag charge in Wales: Attitude change and behavioural spillover effects. *Journal of Environmental Psychology*, 36, 240–247. <https://doi.org/10.1016/j.jenvp.2013.09.001>
- Prayoga, R. (2016). YLKI: Kantong plastik berbayar hal rasional. Retrieved from <http://www.antaraneews.com/berita/546268/ylki-kantong-plastik-berbayar-hal-rasional>
- Purba, D. O. (2016). Penggunaan Kantong Plastik Turun 30 Persen sejak Ada Kebijakan Berbayar. Retrieved August 8, 2017, from <http://megapolitan.kompas.com/read/2016/07/13/21315181/penggunaan.kantong.plastik.turun.30.persen.sejak.ada.kebijakan.berbayar>
- Rivers, N., Shenstone-Harris, S., & Young, N. (2017). Using nudges to reduce waste? The case of Toronto's plastic bag levy. *Journal of Environmental Management*, 188, 153–162. <https://doi.org/10.1016/j.jenvman.2016.12.009>
- Singh, J., & Cooper, T. (2017). Towards a Sustainable Business Model for Plastic Shopping Bag Management in Sweden. In *Procedia CIRP* (Vol. 61, pp. 679–684). Kamakura: Elsevier B.V. <https://doi.org/10.1016/j.procir.2016.11.268>
- Solikin, A. (2016). Antara Program Kantong Plastik Berbayar dan Pengenaan Cukai Kemasan Plastik. Retrieved August 8, 2017, from <https://www.kemenkeu.go.id/Artikel/antara-program-kantong-plastik-berbayar-dan-pengenaan-cukai-kemasan-plastik>
- Sun, Y., Wang, S., Li, J., Zhao, D., & Fan, J. (2017). Understanding Consumers' Intention to Use Plastic Bags: Using An Extended Theory of Planned Behaviour Model. *Natural Hazards*, 89(3), 1327–1342. <https://doi.org/10.1007/s11069-017-3022-0>
- Taylor, R. L., & Villas-Boas, S. B. (2016). Bans vs. Fees: Disposable Carryout Bag Policies and Bag Usage. *Applied Economic Perspectives and Policy*, 38(2), 351–372. Retrieved from <http://dx.doi.org/10.1093/aep/ppv025>
- Trochim, W., & Donnelly, J. P. (2006). *Research Methods Knowledge Base*. Mason, Ohio: Atomic Dog. <https://doi.org/10.1515/9783110858372.1>
- Wachira, T. D., Wairire, G. G., & Mwangi, S. W. (2014). Socio-economic hazards of plastic paper bags litter in peri-urban centres of Kenya: a case study conducted at Ongata Rongai Township of Kajiado County. *International Journal of Scientific Research and Innovative Technology*, 1(5), 1–24.
- Wagner, T. P. (2017). Reducing single-use plastic shopping bags in the USA. *Waste Management*, 70, 3–12. <https://doi.org/10.1016/j.wasman.2017.09.003>
- Xanthos, D., & Walker, T. R. (2017). International policies to reduce plastic marine pollution from single-use plastics (plastic bags and microbeads): A review. *Marine Pollution Bulletin*, 118(1–2), 17–26. <https://doi.org/10.1016/j.marpolbul.2017.02.048>
- Zen, I. S., Ahamad, R., & Omar, W. (2013). No plastic bag campaign day in Malaysia and the policy implication. *Environment, Development and Sustainability*, 15(5), 1259–1269. <https://doi.org/10.1007/s10668-013-9437-1>