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Citizens' Opinions Regarding a Checkout Bag Tax Proposal

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The Simon Review

CITIZENS' OPINIONS REGARDING A CHECKOUT BAG TAX PROPOSAL

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ABSTRACT

The need to address single-use plastic bag damage to our environment has grown exponentially across the globe. States and communities are taking legislative action to address the harm produced through the form of taxation and/or plastic bag bans. This paper provides insight into the contradictory evidence that is cited in favor or opposition to such legislation across the globe. Further, this paper seeks to determine the positions of Illinois citizens on their willingness to support a state-wide tax or ban on all plastic shopping bags received from retail establishments through the use of public opinion polling. Finally, the impacts of such legislation on key demographic groups of citizens are provided along with the impact of the COVID-19 pandemic on plastic bag usage. This research provides a foundation for which environmental public policy can utilize citizens' opinions to inform the decision-making process.

CITIZENS' OPINIONS REGARDING PROPOSED CHECKOUT BAG TAX ACT

INTRODUCTION

In 2015, Illinois had an estimated average of 33,300 tons of plastic retail shopping bags in 27 landfills across the state (calculated from Illinois Recycling Association, 2015). While this number is low compared to other wastes found in landfills, single-use plastic bags have been the brunt of environmental concern (Homonoff, 2013; Knoblauch, Mederake, & Stein, 2018). This project asks: what is the likelihood that the proposed Checkout Bag Tax Act (SB1240) will be enacted in relation to the evaluations of the voters and their willingness to pay the tax? The proposed legislation is the first state-level taxation proposal for Illinois designed to address the problems associated with single-use plastic bags.

The first objective of this project is to identify the environmental and economic concerns that the production and consumption of single-use plastic bags entail and to compare these results to other commonly cited alternatives (e.g. paper bags, thicker durable plastic bags, and reusable canvas bags). A review of global, national, and city/state-wide initiatives will be conducted to compare the implementation challenges and methods used to address the impacts that plastic bags can create. The third objective is to identify the physical, ecological, socioeconomic, and gender-based implications, which will provide a comprehensive view of the potential results if this legislation were to be enacted. Last, through the use of public opinion polling, researchers will be able to compile responses from voters on their assessment of the proposed legislation. This project contributes to environmental policy research by providing environmental and economic motives for the passage of such legislation, and a comparison of published literature on citizen perceptions and opinions.

1 REVIEW OF LITERATURE

1.1 ENVIRONMENTAL CONTEXT

In the years following World War I the first plastic products began to be produced, and in 1959 the sandwich bag was the first commercially produced plastic bag (Miller, Benjamin, & North, 2014). Ten years later, the plastic produce bag was created, followed by grocery shopping bag production in 1977 which gained popularity by 1982 (Miller et al., 2014; Stephenson, 2018). These thin plastic bags became common practice among retailers for numerous reasons. According to Miller, Benjamin, and North (2014) since the production of these bags was cheap, retailers were willing to give them to customers for free, and the ease of loading grocery items into the bags kept labor costs down for retail stores. For the consumers, the plastic bags were strong, durable, and versatile, resulting in the consumer being able to utilize the bag multiple times for various reasons since a plastic bag weighing only five grams can carry over one-thousand times its weight (Miller et al., 2014; Stephenson, 2018).

After reported incidents of an increase in plastic bag litter and clogged infrastructures especially in developing countries, much research has gone into providing evidence for and against the use of plastic shopping bags. Societal problems such as litter and infrastructure issues will be addressed in the following sections, with the focus of this section being on the energy and product material used for plastic bags compared to the proposed alternatives.

The major alternatives proposed to be used in place of plastic shopping bags are paper bags, thick durable plastic bags, compostable plastic bags, and reusable canvas (or equivalent) shopping bags. With the rhetoric surrounding these best-practice alternatives, there are contradictions to their claimed superiority compared to plastic bags. According to Chaffe and Yaros (2014) there is currently no scientific support that banning plastic bags and urging the use

of paper bags will decrease the amount of litter, decrease the United States' reliance on oil, or reduce the amount of waste that is transported to landfills. In order to produce 100 million plastic bags, 430 thousand gallons of oil are required, which equates to 0.0043 gallons of oil per bag (Stephenson, 2018). When compared to the emissions that are produced from electricity generation or car usage, the emissions produced by plastic bag production are minute (Stephenson, 2018).

Chaffe and Yaros (2014) compiled data to formulate the life cycle assessment (LCA) which includes information regarding the manufacturing, distribution, and disposal of three common bag products: 30% recycled fiber paper bags, compostable plastic bags, and polyethylene plastic bags. It was found that the polyethylene bags when compared to the 30% recycled fiber paper bags, required less consumption of fuel for manufacturing, including less oil and water usage (Chaffe & Yaros, 2014; Miller et al., 2014). It was also found that the polyethylene plastic bags produced less global warming gases, emitted less acid rain bi-products, and overall had less solid waste produced (Chaffe & Yaros, 2014). Similar results were found when comparing the polyethylene plastic bags to the compostable plastic bags (Chaffe & Yaros, 2014). In order for thicker, more durable, plastic bags to be more carbon efficient than the thin polyethylene bags, the thicker bags would have to be used 11 times more, and reusable canvas bags would have to be used over 130 times more in order to be more carbon efficient (Stephenson, 2018; Miller et al., 2014). Many consumers believe that paper bags are more environmentally friendly than polyethylene bags, but consumers do not consider the energy and resources required for growing trees, cutting down and milling of the wood into pulp, and the increase in transportation costs for these bags since they are significantly heavier than

polyethylene bags (Stephenson, 2018). The results from these studies indicate the environmental aspects that must be considered when generating environmental policies.

1.2 ECONOMIC CONTEXT

In addition to the environmental aspects, there are economic variables that must be included in environmental policies since the overarching goal of such legislation is to alter the behavior of individuals or organizations. In the United States, the initial environmental protection initiatives were enforced through command-and-control strategies, which are direct regulations designated to meet a set goal, but there has been a recent transition into using tax-based market systems to alter consumer behavior in relation to environmental harm (Harrington & Morgenstern, 2004). In order for these taxes to promote the desired behavior of consumers, the external costs of the environmental harm must be internalized (i.e. taxed) at a rate in which the individual senses the cost to be equivalent in order to alter their behavior (Covery, McDonnell, & Ferreira, 2007; Homonoff, 2013; Homonoff, Kao, & Seybolt, 2018). Thus, the plastic bag tax must be set equal to the damage associated with each bag used (Stephenson, 2008). In order for this market strategy to be successful, there are three mechanisms noted by Homonoff, Kao, and Seybolt (2018) that must be considered. The first mechanism is the concept of reference dependence, which outlines the notion that people are loss adverse, and will react stronger to losses (in money) than to gains of the same amount. The second is salience, which notes that taxes on previously free items are noticeable, and the more apparent the tax the more drastic the change in behavior of the consumer will be. Last**,** habit formation is the mechanism which accounts for the automatic responses that individuals instill through repeated exposure to external costs (Homonoff et al., 2018). These three mechanisms, along with basic economic theory, are able to be utilized when creating and implementing environmental policies.

In a 2013 study conducted by Homonoff, the results prior to the implementation of a five cent plastic bag tax and after implementation was completed in a neighboring county of Washington D.C. Prior to the policy implementation, 82% of observed customers used at least one disposable plastic bag per trip to a retail establishment, and after the policy implementation, that number reduced to 42% (Homonoff, 2013). This was a decrease in over 18 million plastic bags used per year (Homonoff, 2013). This decrease could have been attributable to only the economic market, but this study gave rise to the mechanisms that would be further explained by Homonoff et al., (2018) that can help to deter or enhance the effects of tax-based market instruments. The customers perceived the money paid towards the tax as loss (i.e. reference dependence) and the customers were more aware of the tax after policy implementation (i.e. salience). This introduction of a tax-based policy to reduce the number of plastic bags was successful, resulting in a decrease in the number of disposable bags used by 1.26 bags per person per trip, and an increase in the number of reusable bags used by customers by 0.62 bags per customer per trip (Homonoff, 2013). These results were also found prior to and after a tax on plastic bags in Chicago, Illinois, with the likelihood of the customer using reusable bags or opting for no bag at all increasing (Homonoff et al., 2018).

While there is evidence that environmental taxes produce the altered consumer behavior requested by policy makers, there are some municipalities which have not implemented a tax, but rather a ban on plastic bags. San Francisco, California was the first city to ban plastic bags in the United States in 2007. Bags from grocery stores and pharmacies were the first to be taxed, with bags from retail establishments and a ten-cent tax on paper bags being added in 2012 (Burnett, 2013). It was found by Taylor and Willas-Boas (2015) that plastic bag bans produced unintended consumer habits that taxes do not impose. These consumer habits include the increased

consumption of paper bags, which as previously stated, consumes more energy and resources to manufacture, produce, and ship to retail establishments. These bag bans also create and maintain backlash from stakeholders who are invested in the various industries, i.e. the plastics industry and local businesses. Since 2018, there have been ten states which have set legislation in place to prevent plastic bag bans from being established in municipalities because of the presence and power of these interest groups (Homonoff et al., 2018).

2 POLICIES

2.1 GLOBAL POLICIES

It is estimated that the annual global consumption of plastic bags ranges from 500 billion to 2 trillion, with less than 5% of total plastics being recycled worldwide (Clapp & Swanston, 2009; Knoblauch et al., 2018). As of July 2018, 127 countries out of the 192 countries reviewed, had a variant of plastic bag regulatory legislation adopted; 51 countries have enacted a ban on the production, sale, or use of plastic bags; 39 countries have adopted taxes on the sale of plastic bags; and the remaining countries have enacted other approaches to regulation (see Figure 2.1; United Nations Environment Programme, 2018; Knoblauch et al., 2018). Additionally, plastic products are typically generated in one part of the world, and are consumed in another (Knoblauch et al., 2018). For example, China remains the largest generator of plastic production and waste, but the United States is the largest plastic waste generator per capita, followed by Japan and the European Union (United Nations Environment Programme, 2018).

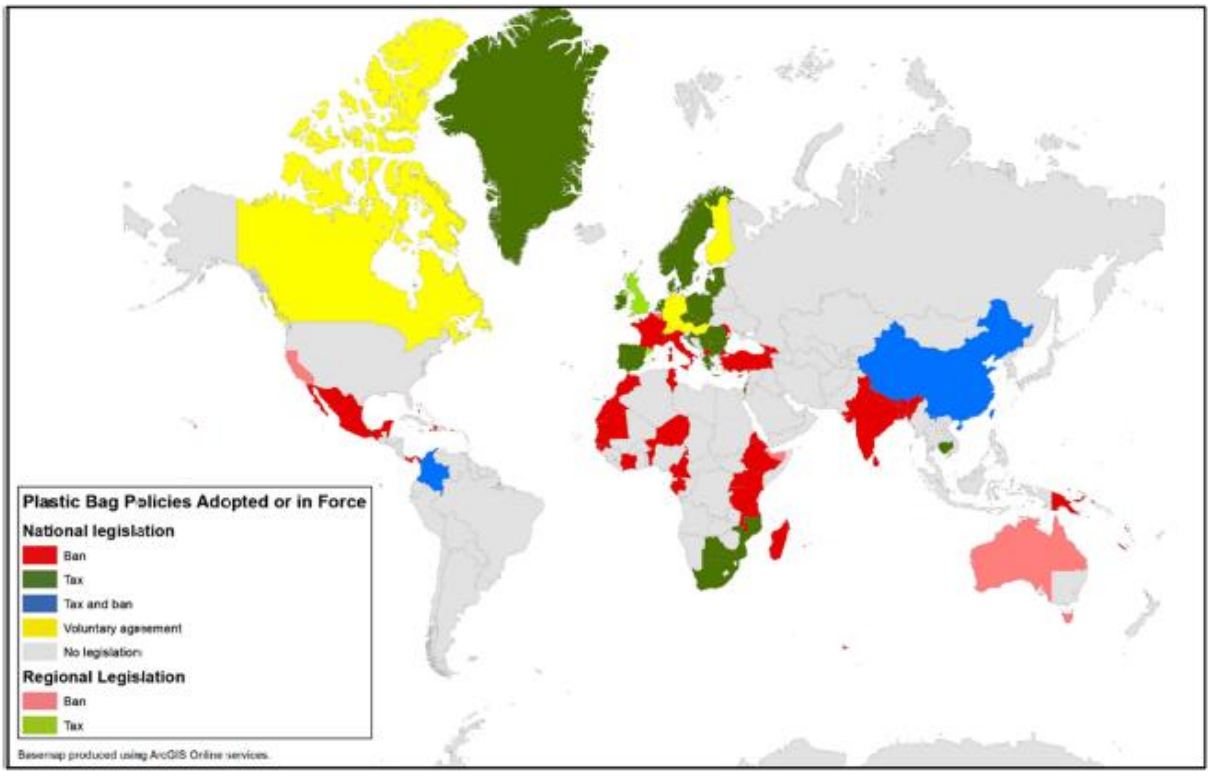

Figure 2-1 *Map of plastic bag policies as of April 2018*
Knoblauch, D., Mederake, L., & Stein, U. (2018). Developing countries in the lead—What drives the diffusion of plastic bag policies? *Sustainability, 10*. doi:10.3390/su10061994

As previously mentioned, plastic bag regulations can include restrictions on the manufacturing, distribution, and use of plastic bags, and these regulations, whether they be bans or taxes, are influenced by the norms of the region in which they are being enacted (United Nations Environmental Programme, 2018; Xanthos & Walker, 2017; Clapp & Swanston, 2009). One of the largest discrepancies in policy creation and implementation surrounding plastic bag legislation can be seen through comparing the global north and the global south. The global south was the first region to adopt legislation regarding plastic bags, specifically countries and regions such as South Asia, India, Taiwan, and South Africa (Clapp & Swanston, 2009). This regulatory push was prompted by local ad hoc events and movements by citizens that reached national exposure and concern (Clapp & Swanston, 2009; Knoblauch et al., 2018). In the global

south, the motivation for having strict regulations, such as bans on plastic bags, stem from multiple reasons. The first being the regard for human health, since plastic bags can clog infrastructures such as waste and water pipes which can increase the presence and reproduction of disease carrying mosquitoes (Clapp & Swanston, 2009; Knoblauch et al., 2018; Stephenson, 2018). The second largest concern is the presence of litter caused by plastic bags which can reduce the rate of tourism that the country receives, and ultimately influence the revenue sources for these economies (Xanthos & Walker, 2017; Knoblauch et al., 2018). In contrast, the global north has been slower to enact legislation to regulate plastic bags, and the legislation that is in place is tax-based market instruments that are less stringent than the bans of the global south (Clapp & Swanston, 2009; Knoblauch et al., 2018). The motivation for legislation in the global north mirrors that of the global south, but the national governments do not see it as a priority to enact a nation-wide policy to address the problems caused by plastic bags (Knoblauch et al., 2018). These differences can be accounted for by the roles and influential powers that various actors and stakeholders have in relation to the passage of such regulatory legislation.

The three prominent actors in the passage or prevention of plastic bag regulations are the political actors, interest groups, and citizens. The power that each of these groups has in the economy, the legal realm, and within the impacted jurisdiction can influence the outcome of the regulation (Clapp & Swanston, 2009). The relationship between politicians and interest groups has a powerful influence, specifically in relation to the politicians' motivation to not lose the plastics industry presence in their country, through which the plastics industry uses this as leverage to prevent any plastic bag regulation from being created or enacted (Clapp & Swanston, 2009; Knoblauch et al., 2018). In the United States, plastics manufacturing is the third largest manufacturing industry, which generated over $379 billion worth of goods in 2007 and employs

over one-million people (Clapp & Swanston, 2009). Additionally, the type of government that the country or jurisdiction has (i.e. democracy, autocracy, etc.) can influence the decision-making process that couples with the regulatory process (Knoblauch et al., 2018). Last, the citizens' buy-in can compromise or promote the success of regulations on plastic bags, as seen in Ireland's plastic bag tax, for example.

Covery, McDonnell, and Ferreira (2007) examine the variables that led to the success of Ireland's 2002 15 Euro cent tax on plastic shopping bags. The tax was created to alter the behaviors of consumers and to decrease the amount of plastic bag litter in rural areas through a nation-wide awareness campaign (Covery et al., 2007; Miller et al., 2014; Homonoff, 2013). The Republic of Ireland shares a border with Northern Ireland (part of the United Kingdom), where there is no regulation on plastic bags, and yet the consumers in the Republic of Ireland do not feel compelled to cross the border to shop because the tax was set at an appropriate amount for them to internalize the external cost of using plastic bags (Covery et al., 2007). The stakeholders involved in this decision ranged from citizens and retail owners to the top governmental agencies. The success of the regulatory campaign ensured that the citizens were aware of the legislation, which increased their overall approval and compliance (Covery et al., 2007).

With the accumulated differences between the global north and global south, and also differences within these regions, there has been no international or global attempt to create a policy that addresses the problem that plastic bags pose (Knoblauch et al., 2018). Responses to plastic bag legislation in the United States have been concentrated at the municipal level, but there are national standards that help guide these regulatory actions (Clapp & Swanston, 2009; United States Environmental Protection Agency, 2009).

2.2 NATIONAL POLICIES

Of the 2 trillion plastic bags used globally every year, the United States accounts for 100 billion of the total (Homonoff, 2013). In relation to the nation's annual generated waste, plastics make up 13% of the total waste (United States Environmental Protection Agency, 2018). Until 2018, the largest export for the United States was waste that was sent to East Asia, since this region had a rapidly growing economy and exhibited high demand for materials (Truelove & Katan, 2019b). The East Asian governments began to regulate and ban waste exports from the United States in 2018, which exacerbated the failures of the United States waste management processes (Truelove & Katan, 2019b). While the United States does have recycling infrastructure in place that other developing countries do not have, the country is not able to recycle all waste that is generated by its consumers. The use of incinerators and landfills is common practice across the nation. The United States' reactionary perspective, instead of a proactive perspective, has resulted in a need for a major ideological shift from creating items from new material to the need for manufacturers to create items from recycled material (Truelove & Katan, 2019b; United States Environmental Protection Agency, 2018). The United States Environmental Protection Agency (2009; 2018) created guidelines that state agencies can employ to combat the ill-effects of waste. The first recommendation is to view materials and products based on their life cycle, and not their immediate use and disposal. Second, state governments will need to increase their capacity to manage materials and waste in the future. The last recommendation is to create a space for a public dialogue in order to shift how the nation views sustainability and to place emphasis on the need to maintain a competitive economy (United States Environmental Protection Agency, 2009; 2018).

2.3 CITY/STATE POLICIES

In order to fully understand the implications of the proposed Illinois Checkout Bag Tax Act (SB1240), a review of previous city and state regulatory legislation on plastic bags will need to be considered. It is important to note that the current statewide regulatory legislation all began as local municipality-level legislation that gained popularity and then became enacted at the state-level. Examples of this municipality-level motivation resulting in statewide legislation can be found in California.

As previously mentioned, in 2007 San Francisco, California became the first city in the United States to ban the use of plastic bags in grocery stores and pharmacies, and then in 2012, the city further banned plastic bags from all retail and food establishments with an additional ten cent tax on all paper and reusable bags provided by these retail establishments (Burnett, 2013; Miller et al., 2014). San Jose, California banned plastic bags in 2011, with the main motivation being the reduction of expenses allocated for the litter collection costs for the city, but no conclusive evidence has been found to support the effectiveness of this motivation (Burnett, 2013). Finally, between 2010 and 2014, Los Angeles banned the use of plastic bags, and encouraged consumers to bring their own reusable bag(s) or else they would have to pay a ten cent tax on paper bags provided by the retailer (Burnett, 2013). In 2014, California became the first state to enact a statewide legislative ban on plastic bags provided at retail establishments (Schultz & Tyrrell, 2019).

In 2019, state lawmakers from across the country introduced over 95 bills related to the regulation of plastic bags (Schultz & Tyrrell, 2019). These bills range from creating and implementing effective recycling infrastructure, to banning plastic bags, or to taxing plastic bags (Schultz & Tyrrell, 2019). Eight states have currently enacted bans on single-use plastic bags,

these states are: California, Connecticut, Delaware, Hawaii, Maine, New York, Oregon, and Vermont (see Figure 2.2; Schultz & Tyrrell, 2019).

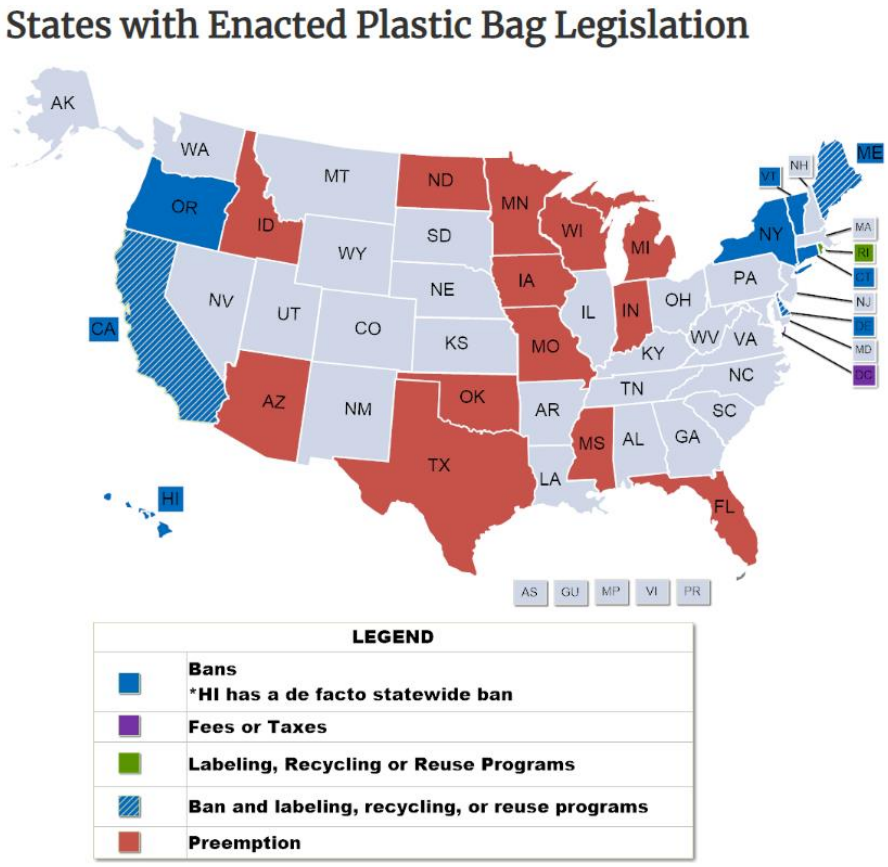

Figure 2-2 *State Plastic and Paper Bag Legislation*

Schultz, J., & Tyrrell, K. (2019). State plastic and paper bag legislation, *National Conference of State Legislators*. Retrieved from: http://www.ncsl.org/research/environment-and-natural-resources/plastic-bag-legislation.aspx

2.4 CURRENT ILLINOIS LEGISLATION

There are currently three municipalities in Illinois that have regulatory plastic bag legislation in place. A review of these three laws and a review of the proposed statewide Checkout Bag Tax Act (SB1240) will offer guidance on the implications of such legislation.

2.4.1 Chicago Checkout Bag Tax

Chapter 3-50 (2016) of the City of Chicago's municipal code outlines the creation and implementation of a seven-cent tax on all checkout bags sold or used within Chicago city limits. This tax is labeled as a separate line item on the purchasing receipt. Two cents of the tax is returned to the retail establishment, and the remaining five cents is returned to the Department of Finance for the City. Consumers who are a part of the Supplemental Nutrition Assistance Program (SNAP) are not required to pay this tax (Chapter 3-50, 2016).

2.4.2 Article 14 – Oak Park

The village of Oak Park, Illinois enacted Article 14 on January 1, 2018 in order to encourage citizens to utilize reusable bags to reduce the presence of litter within the village. The ten-cent tax on both paper and plastic bag applies to retail establishments that are five thousand square feet or larger. Like the Chicago tax, the Oak Park tax must be printed as a separate line item on the consumers' receipt. Five cents of the tax is returned to the retailer, and the remaining five cents **is** returned to the Oak Park Department of Finance. The collected funds will be utilized for future sustainability projects that the village board deems necessary. In order to create awareness for the newly enacted policy, Oak Park created free reusable bag stations within the village so that citizens could avoid having to pay the tax on bags used at retailers. The citizens of Oak Park believe that this policy will promote positive behaviors that can help mitigate harmful environmental impacts (Article 14).

2.4.3 City of Evanston

In 2014, the city of Evanston, Illinois enacted regulation on plastic bags in order to increase the health, safety, and welfare of its residents and to reduce the impacts of plastic bags on the environment (66-O-14). The city ordinance, 66-O-14, placed a ban on retail

establishments providing plastic bags for consumers. It requires all retail establishments to provide reusable bags, recyclable paper bags, compostable plastic bags, or any combination, for customers to take items from the retail establishment (66-O-14).

2.4.4 Proposed Checkout Bag Tax Act (SB1240)

The Checkout Bag Tax Act (SB1240) is a proposed regulatory legislation that will combat Illinois' single-use plastic bag usage. The bill was introduced in the Illinois Senate by Senator Terry Link on February 6, 2019. This bill would impose a seven-cent tax on each plastic bag used from a retail establishment across the state, but not for municipalities who have policies in place prior to February 1, 2018 (SB1240). These municipalities would include the City of Chicago, Oak Park, and Evanston. The tax would be listed as a separate tax item on all purchasing receipts. Two cents of the tax will be kept by the retailer; two cents will be provided to the wholesaler of the plastic bags; and the remaining three cents will be put into the Checkout Bag Tax Fund. This fund would be utilized in a joint municipality action agency in order to clean up hazardous waste, create education programs to reduce pollution, and to increase citizen participation in recycling and composting programs. Those citizens who utilize the Supplemental Nutrition Assistance Program (SNAP) will not be required to pay the tax (SB1240). Currently SB1240 (2019) is under review and has not passed the Illinois General Assembly.

2.4.5 Proposed Carryout Bag Fee Act (HB3335)

Additional plastic bag legislation was proposed in 2019, but the current research project only utilized the previous legislation in order to determine citizen opinions on the proposal. The Carryout Bag Fee Act (HB3335) was introduced to the Illinois House of Representatives by Representative Ann M. Williams on February 15, 2019 and has since gained more traction with the addition of more co-sponsors. This proposal would impose a ten-cent fee on each carryout

bag used by a customer in any retail establishment across the state, except in municipalities with a population greater than one million. Three cents would be returned to the retail establishment; four cents would be placed into the Carryout Bag Fee Fund; one cent would be given to the Prairie Research Institute of the University of Illinois; one cent would be placed into the Solid Waste Management Fund; and one cent would be placed into the Partners for Conservation Fund. Those citizens who utilize the Supplemental Nutrition Assistance Program (SNAP) will not be required to pay the tax. Additionally, it mandates that a county or municipality may not ban, place a fee or tax, or regulate in any other manner the use, disposition, content, taxation, or sale of carryout bags. This also limits the applicability of the provisions as they relate to a county or municipality that charged a fee or tax on carryout bags on February 1, 2018 (i.e. City of Chicago, Oak Park, and Evanston).

3 FINDINGS IN ILLINOIS

3.1 PUBLIC OPINION POLLING

In February of 2020, **t**he Paul Simon Public Policy Institute conducted a state-wide public opinion poll in order to gauge citizen opinions on the problem of plastic shopping bags and the proposed state legislation. **"**The margin of error for the entire sample of 1,000 voters is plus or minus 3.1 percentage points. The margin of error for the Republican sample (n=232) is 6.4 percentage points and the margin of error for Democrats (n=475) is 4.5 percentage points. Potential interviewees were screened based on whether they were registered voters and quotas based on area code and sex (<60 percent female). The sample obtained 56 percent male and 44 percent female respondents. Interviewers asked to speak to the youngest registered voter at

home at the time of the call. The entire poll can be accessed online through the Paul Simon Public Policy Institute's website" (www.paulsimoninstitute.siu.edu).

3.2 How to Address Prevalence of Plastic Bags in Landfills Across the State

The first question provided respondents with the following prompt:

> *In 2015, the State of Illinois had an estimated 33,000 tons of grocery and retail plastic bags in landfills across the state. In order to address the amount of plastic in landfills, some cities have passed a checkout plastic bag tax of 7 to 10 cents per bag. Other jurisdictions are considering banning such bags altogether. Which would you support at retail establishments in Illinois: charging a small fee for plastic bags, banning them altogether, or neither?*

Respondents could choose from four response options: Small fee; Ban plastic bags; Neither tax nor ban; or could select Other/don't know. It was found that statewide the 24% of total respondents would prefer a small fee, 45% would prefer a ban on plastic bags, 29% responded that neither tax nor ban should be implemented, and 2% selected other or don't know (see Figure 3.1).

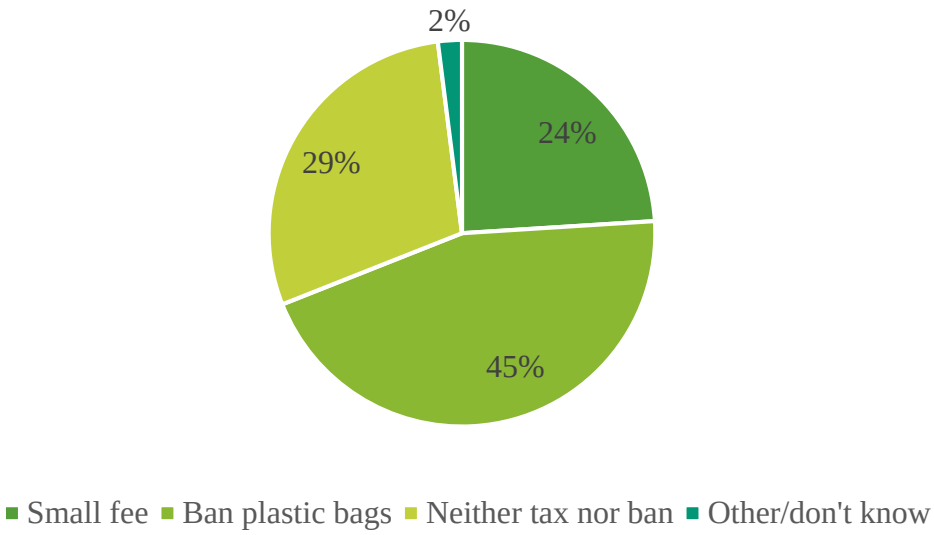

Figure 3-1 *Which would you support at retail establishments in Illinois: charging a small fee for plastic bags, banning them altogether, or neither?*

This finding indicates that a larger percentage of Illinois respondents would prefer a ban on plastic bags rather than a small fee, which is contrary to the proposed plastic bag tax legislation, i.e. Checkout Bag Tax Act (SB 1240) and Carryout Bag Fee Act (HB3335). Additionally, roughly one-third of respondents would prefer no regulation, neither fee nor ban, to address the presence of plastic bags in landfills across the state of Illinois.

Further, demographic characteristics were analyzed to determine the differences in responses to address plastic bag prevalence in landfills. The first demographic difference is in relation to political party, which is depicted in Figure 3.2. Respondents were asked to indicate their party affiliation, Democrat, Independent, or Republican. In comparing party affiliation and the responses to address plastic bags in landfills, 50% of Democrats and 49% of Independents support a ban on plastic bags. Conversely, 41% of Republicans prefer no regulation at all. Further analysis indicates that 29% of Democrats prefer a small fee on plastic bags, whereas 19% of Independents and 21% of Republicans support this option.

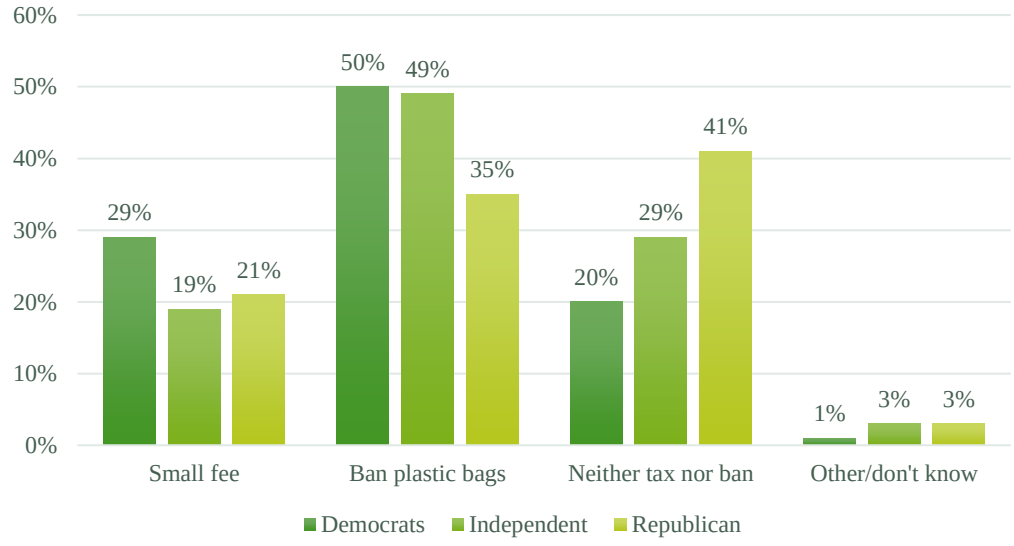

Figure 3-2 *Addressing plastic bags in landfills across the state by Party Affiliation*

This finding could provide justification for further research prior to the passage of the proposed tax-legislation, especially regarding citizens' political support.

Second, geographic locations were compared to provide a spatial representation of respondents (see Figure 3.3). The location of respondents was based on area code, and was further divided into the City of Chicago, the five surrounding suburban counties, and the rest of the state designated as "downstate". Respondents located in the city represent the highest support **(**31**%)** for a small fee to be placed on plastic bags, whereas downstate respondents represent the lowest support for a small fee (18%). There are roughly even levels of support for the ban of plastic bags (i.e. 45% for city, 44% for suburbs, and 47% for downstate). Last, 33% of downstate respondents and 31% of suburb respondents were more likely to favor neither a tax nor **a** ban on plastic bags, whereas 22% of city respondents were least likely to favor no regulations.

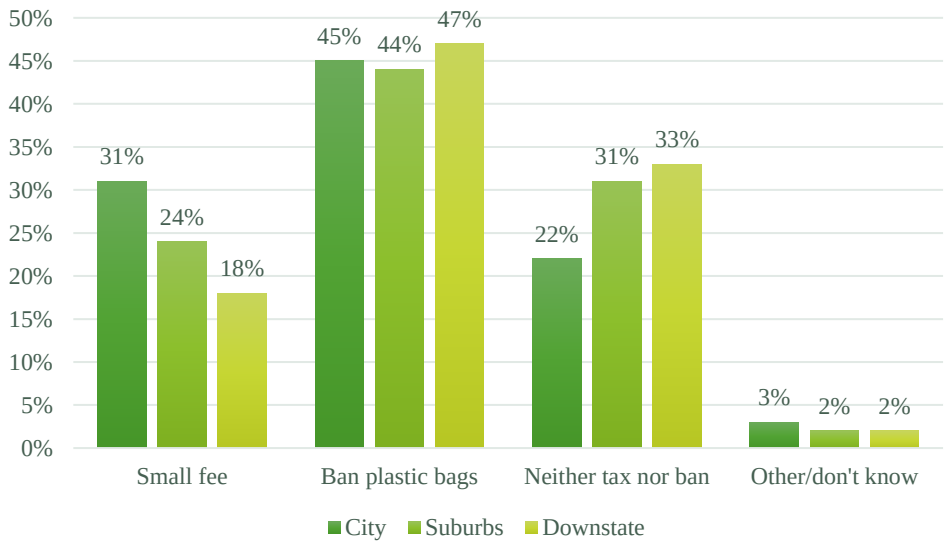

Figure 3-3 *Addressing plastic bags in landfills across the state by Geographic Region*

These findings suggest that there are geographical differences in respondents' preference to address plastic bags in landfills. It is important to note that the City of Chicago has an enacted citywide tax on plastic bags, so this could influence the rate of support for a statewide small fee

since Chicago residents currently have experiences with such a tax. Further, the higher support for neither a tax nor a ban for downstate respondents is reflective of their current situation in which no taxes or bans are currently instituted. Ultimately, as found in previous demographic comparisons, there is strong support for banning plastic bags, rather than imposing taxes or setting no regulation.

Last, gender differences in response to alleviating the problem of plastic bags in landfills across the state were analyzed (see Figure 3.4). Slight differences were found with women preferring a small fee (25%) or a ban on plastic bags (47%); whereas males were more likely to support having neither a tax nor ban (32%).

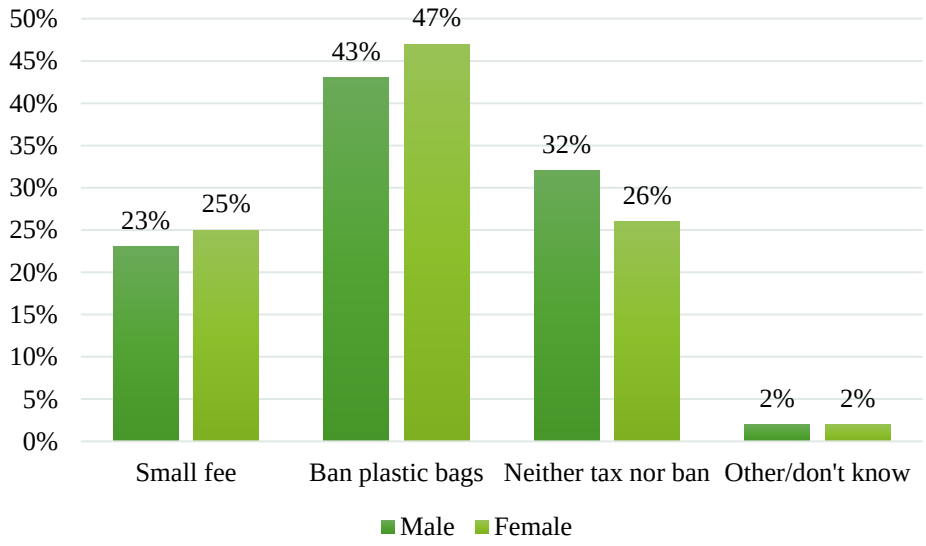

Figure 3-4 *Addressing plastic bags in landfills across the state by Gender*

3.3 FAVOR OR OPPOSE PLASTIC BAG TAX BEING IMPOSED BY THE STATE

The second question provided respondents with the following prompt:

Specifically, the proposed Checkout Bag Tax Act imposes a tax of 7 cents on each checkout bag used by a customer at a retail establishment in Illinois. Would you strongly favor, favor, oppose, or strongly oppose such a plastic bag tax being imposed by the state?

Respondents could choose from four responses: Strongly favor; Favor; Oppose; Strongly oppose; or could indicate Other/don't know. It was found that 22% of respondents strongly favor such legislation, 18% favor, 17% of respondents oppose, and 41% strongly oppose with 2% of respondents selecting other/don't know (see Figure 3.5).

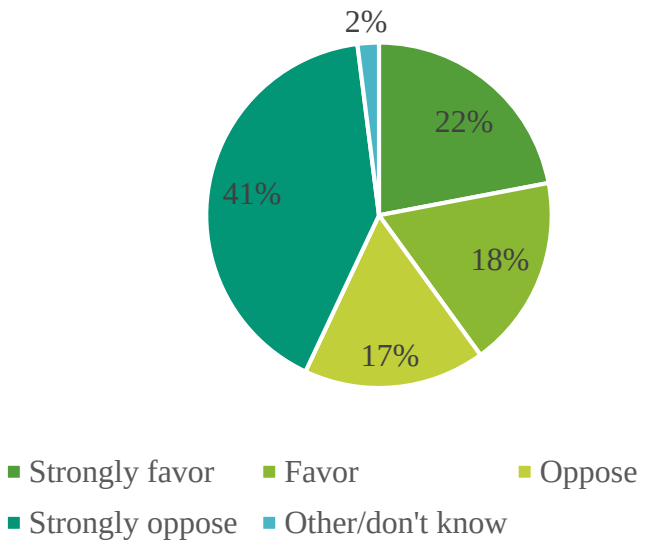

Figure 3-5 *Would you strongly favor, favor, oppose, or strongly oppose such a plastic bag tax imposed by the state?*

This finding, in conjunction with the first question, indicates that respondents overwhelming would not favor additional taxes on plastic bags and would rather have a regulatory ban. Again, this is contrary to the proposed legislation that would place a small fee on each plastic bag.

An analysis of the political party differences in the favor or opposition of a statewide tax on plastic bags can be seen in Figure 3.6. Fifty-two percent of Republican respondents indicated that they strongly opposed a statewide tax on plastic bags. Independents followed the Republicans, with 43% reporting they strongly opposed this tax. Last, 30% of Democrats were the least likely to strongly oppose a statewide tax. Democrats (29%) and Independent voters

(26%) were more likely to strongly favor the implementation of a statewide tax on plastic bags, with only 12% of Republican voters strongly favoring a tax.

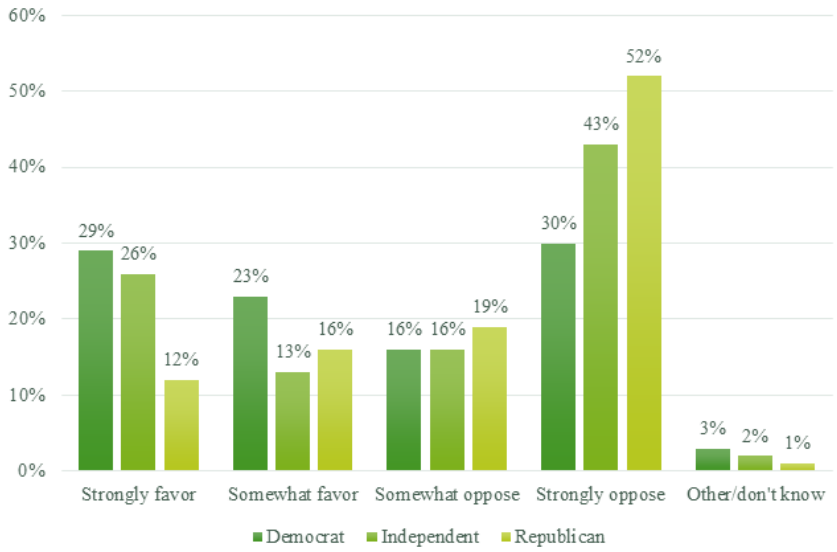

Figure 3-6 *Favor or oppose legislation by Political Party Affiliation*

These finding suggest that Republican respondents are more consistent in their opposition to an additional tax designed to address the problem of plastic bags in landfills, and that Democrats and Independents have more variation in their level of support and opposition.

The third demographic characteristic, geographical region, was compared to respondent's level of favor or opposition to a state-wide tax on plastic bags (see Figure 3.7). It was found that 45% of downstate and 43% of suburban respondents were more likely to strongly oppose a statewide tax on plastic bags, with only 32% of city voters strongly opposing such taxation. Additionally, 32% of city respondents were more likely to strongly favor a statewide tax, with 24% of suburb respondents and 14% of downstate respondents strongly favoring a statewide tax on plastic bags.

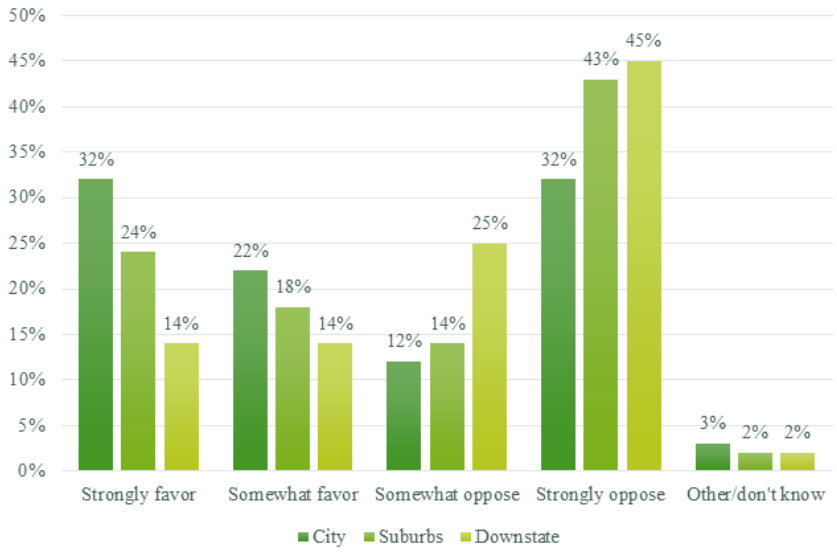

Figure 3-7 *Favor or oppose legislation compared to Geographic Region*

The variation in support or opposition from city respondents could be based on their current experience with a city-wide taxation on plastic bags, and their varying opinions about a state-wide tax that would require the remaining taxpayers of Illinois to pay. Further, the overwhelming opposition of the suburbs and downstate respondents indicate that these people are not willing to pay a statewide tax on plastic bags from retail establishments.

Finally, gender differences between respondents and their support for or opposition to a state-wide tax on plastic bags can be seen in Figure 3.8. Both men and women respondents indicated strong opposition to the passage of a statewide tax on plastic bags**;** however, men were somewhat more strongly opposed (45% men and 36% women).

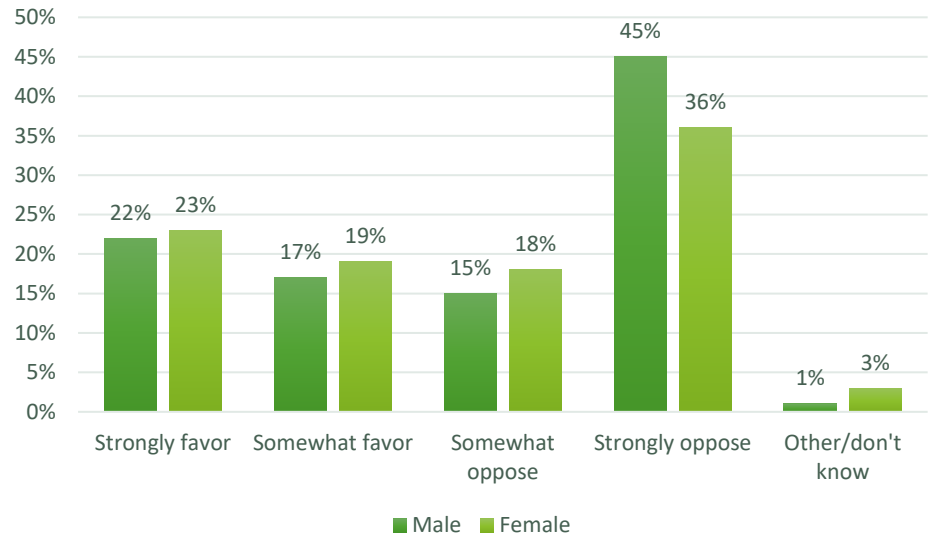

Figure 3-8 *Favor or oppose legislation by Gender*

This finding suggests that there are some limiting gender differences in the willingness to pay an additional tax on plastic bags received from a retail establishment across the state.

4 IMPLICATIONS

4.1 PHYSICAL

One of the physical implications of this research is to address the ever-growing problem of litter that a city can experience. There have been multiple international and domestic regions enacting plastic bag regulation to combat litter (Clapp & Swanston, 2009; Covery et al., 2007; Miller et al., 2014). In 2019 a volunteer shoreline clean up initiative on Lake Michigan, collected over 56 pounds of litter within two hours and plastic products comprised over 80% of the total collected litter (Briscoe, 2019). There is also consensus that plastic bags make recycling more difficult (Miller et al., 2014). Truelove and Katan (2019a) conducted a review of the current state of Illinois' recycling infrastructure. Illinois does not collect comprehensive data on the recycling it receives, but municipalities are able to provide local data which when compiled

indicates that Illinois' plastic recycling rate is low compared to the national rate of less than 5% (Truelove & Katan, 2019a). In order to increase Illinois' presence of recycling infrastructure and initiatives, Governor Pritzker signed Public Act 101-0141 in July of 2019 that allows the chemical recycling plants to be regulated as recycling facilities. These facilities, while called "recycling facilities" do not make new plastic materials from recycled plastics, but instead turn the plastics back into fossil fuel and other by-products (Briscoe, 2019). The results of this policy create a new source of harmful emissions, and increases the demand for plastic products (Briscoe, 2019).

The findings from the current research project will provide policy makers with information regarding the voters' view**s** of the proposed SB1240 (2019). With information regarding the presence of litter and lack of proper recycling facilities, the people of Illinois could vote to support the proposed legislation to prevent more plastic bags from entering the environment.

4.2 ECOLOGICAL

There are four ecological implications that should be researched with respect to the proposed Checkout Bag Tax Act (SB1240). The first ecological concern **is** the public health matter of bacteria presence on unwashed reusable canvas bags. According to a study conducted in the United Kingdom, 97% of grocery shoppers claimed to have not washed or bleached their reusable cloth/canvas bags (Wallop, 2010 as cited in Stephenson, 2018). Additionally, Miller et al. (2014) noted that the energy and water required to thoroughly wash canvas bags would be more than is required to make plastic bags.

The second ecological concern is in regard to the presence of mosquito breeding grounds that plastic bags can create. When plastic bags clog drains or other water systems, they can

increase the prevalence of mosquitos which can carry harmful, even deadly diseases (Clapp & Swanston, 2009; Knoblauch et al., 2018, United Nations Environment Programme, 2018). While this is more likely in developing nations with improper water drainage systems, the developed nations should also be cognizant of the impact that these plastic bags can create in rural societies that may not have adequate water drainage systems in place.

A commonly cited motivation for plastic bag regulation is the negative impacts the bags can have on marine life (Clapp & Swanston, 2009; Knoblauch et al., 2018; Xanthos & Walker, 2017). It is predicted that plastic litter in the oceans will outweigh the amount of fish by 2050; with the largest contributors to this problem being developing countries with coastal borders (e.g. India and China) (Briscoe, 2019; Xanthos & Walker, 2017). While this concern is dire and needs to be addressed, it is difficult to manage and remove the plastic waste that has already entered the oceans; instead new policies should focus on preventing the amount of plastic waste that could enter water sources in the future (Knoblauch et al., 2018).

Last, there has been recent concern over the accumulation of micro plastics in water systems. The current impacts of these micro plastics are still unclear, and wastewater treatment plants are not equipped to properly dispose of them (Briscoe, 2019; Clapp & Swanston, 2009). When plastics break down, they undergo a process called photodegrading, in which the plastic continues to break down into smaller and smaller pieces resulting in micro plastics (Clapp & Swanston, 2019; Knoblauch et al., 2018). This process also occurs when plastics are recycled, which results in a lower quality of plastic products being produced (Truelove & Katan, 2019b). The Chicago Department of Water Management meets both the state and federal regulations for water quality, but currently does not have the infrastructure to test for or dispose of micro plastics (Briscoe, 2019).

These ecological concerns provide areas that are required for further research prior to the enacting of SB1240 (2019). There has been no research cited in the proposed legislation that accounts for the ecological impacts that plastic bags pose or that the regulation could prevent.

4.3 SOCIOECONOMIC

The socioeconomic implications that this project can address are in regard to globalization and income discrepancies. The United States Environmental Protection Agency (2009) notes that the global population is projected to increase by 50% between the years 2000 and 2050. This increase in population will require a mirrored increase of 500% in global economic growth and an increase in 300% of energy and materials used to meet consumer demands (United States Environmental Protection Agency, 2009). These exponential increases in all aspects of global socioeconomic factors can further increase the division between those who are more affluent and those that are economically poor (Casal, 2012).

While this project does not assess the global socioeconomic implications, it does address the state- and local-implications that the citizens of Illinois face. Gauging citizen views on their willingness to pay the Checkout Bag Tax will reflect their environmental and economic perception of the impacts that plastic bags have on their society.

4.4 GENDER

The gender implications of this research project highlight the differences in attitudes and consumer behaviors that male and females typically represent in relation to environmental practices, specifically regarding plastic shopping bags. The literature surrounding the gender differences in plastic shopping bag usage varies in cultural, societal, and geographic factors. In a traditional patriarchal society, those that are typically reflective of the Global South, women

often do not have the political or social capital to provide insight on environmental problems, even though they are responsible for cooking, shopping, and the overall provisions for households; which can influence the amount of plastic shopping bag waste that is produced (Braun & Traore, 2015; Lynn, Rech, & Samwel, 2016). Further, this traditional patriarchal society can dictate the shopping patterns of women, specifically limiting the options of alternatives that the women could utilize in place of plastic shopping bags. It is seen as "modern" and "westernized" to use a plastic shopping bag as opposed to a handmade whicker or cloth shopping bag or basket (Braun & Traore, 2015). This modernization thought influences consumer behavior and can further increase the amount of waste and environmental harm that is generated in these regions.

In addition to cultural factors that can influence plastic shopping bag usage, differences in sociological and psychological factors have also been identified between men and women. Brough, Wilki, Ma, Isaac, and Gal (2016) examined the association between the concepts of "greenness" and "femininity", and found that this association is held by both men and women which further engrains the stereotypical behavior that pro-environment behaviors are typical of women and oppose the typical gender identity of men. This finding can be further applied to marketing and advertisement efforts to increase pro-environmental behaviors, such as reminders for consumers to bring their reusable bags to grocery stores. This feminization of environmentally friendly behaviors can further discourage men from adopting pro-environmental behaviors (Muralidharan & Sheehan, 2017).

Ultimately, the gender identities that men and women hold can influence their acceptability and compliance with environmental policies. The proposed Illinois legislation to combat plastic

bag usage will need to take into consideration these social and cultural factors in the legislative language that is used in order to have a high rate of success.

4.5 COVID-19

The year 2020 has brought about drastic change to the way in which individuals view plastic shopping bags in response to the global pandemic of COVID-19. Although multiple countries and states have enacted legislation that would prevent the use of plastic shopping bags, the increased prevalence of COVID-19's ability to linger on surfaces has resulted in many states lifting these bans. States such as New York and Illinois have lifted plastic bag bans to require retail establishments to bag items in store-provided plastic or paper bags. These guidelines were set by the states' respective leadership and have resulted in consumer behavior changes as well as generating leverage for competing lobbying groups.

This response to COVID-19 has provided traction for competing special interest groups such as the plastic bag industry and environmentalists. Those groups who have interest in the production and utilization of plastic bags are using the virus's ability to linger on surfaces and easy transmission to discourage reusable canvas bags from entering retail establishments (Tabuchi, 2020). Conversely, environmentalist special interest groups also state that plastic shopping bags allow the virus to linger up to three days on the surface (Tabuchi, 2020). This feud between powerful special interest groups leaves consumers to take risks and abide by the state's executive order.

While each country around the world has its own practices for battling COVID-19, the following legislative impacts have been provided for the state of Illinois. Governor J. B. Pritzker and the Illinois Retail Merchant Association (IRMA) implemented proactive measures for retail

establishments adopting best practices of health and safety for their customers and employees (Wetli, 2020). Measures such as, temporarily prohibiting reusable bags, maintaining social distance (at least six feet between individuals), plastic shield guards at checkout lanes, decrease in self-checkout usage, and an increase in curbside pickup are in place (IRMA, 2020).

While these measures were designed to decrease an individual's chance of contracting the virus while in these essential businesses, the prohibition of reusable shopping bags and influx of plastic shopping bag use has resulted in environmentalists believing that this transition could become permanent. The fear of viral contraction through reusable shopping bags can drastically alter consumer habits within the state of Illinois, specifically in the city of Chicago. As previously mentioned, the city of Chicago instituted a seven-cent tax on all plastic and paper bags received from a retail establishment in 2016 (Chapter 3-50). Under Governor Pritzker's order prohibiting reusable bags, shoppers in Chicago are required to pay the tax on all bags used from any retail establishment (Wetli, 2020; Szalinski, 2020). This drastic change in consumer behavior has resulted in retail establishments creating their own best practices for reusable shopping bag usage so customers do not have to pay the tax. Practices such as providing sanitizer for any surface that a bag touches, urging customers to keep their reusable bags on their shoulder and not on a surface or shopping cart, and washing all reusable bags to decrease the presence of the virus on surfaces (Wetli, 2020).

The outbreak of COVID-19 has prevented the Illinois General Assembly from holding sessions since early March of 2020, which resulted in multiple proposals, such as the Checkout Bag Tax Act (SB1240) and the Carryout Bag Fee Act (HB3335), being placed on hold. At this time, it is imperative for state legislators to focus on the health, safety, and wellness of citizens.

It is unknown how COVID-19 will finally impact the fate of the proposed legislation to combat plastic bag usage in Illinois.

5 CONCLUSION

The literature presented in this paper and the results of the Simon Poll suggest questions for further research. The paradoxes cited in the life cycle of plastic bags, reusable canvas bags, and paper bags are influential factors in citizens' perceptions and practices. Additionally, the proposed legislation would be the first statewide tax on plastic bags received from a retail establishment, with the majority supporting statewide legislation requiring a ban on plastic bags. The results from the Simon Poll indicate that Illinois voters would prefer a ban on plastic bags rather than an additional state tax. This finding is imperative for legislators and state officials to consider since the passage of such legislation is reliant in part on its acceptability by the people.

Further, the previously stated implications of this project provide additional factors that must be accounted for prior to the implementation of statewide tax legislation. The various physical, ecological, socioeconomic, and gender differences can influence the salience and acceptability of plastic bag legislation and provides further areas of research concern. Additionally, the global pandemic of COVID-19 has greatly influenced the current state of this movement. Prior to the wide spread of COVID-19, consumers were urged to bring reusable canvas bags to retail establishments, but now there are strong prohibitions to using these bags based on their susceptibility for the virus to linger on the surface. Furthermore, COVID-19 has disrupted the legislative sessions for the Illinois General Assembly, and therefore the proposed legislation probably will not move forward until the pandemic is under much better control and the legislature returns to a more normal calendar.

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