Sustainability: beyond recycling an exploratory study of retailers' environmental efforts in the USA

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Abstract

This paper explores the environmental efforts of retailers in the United States to reduce their impact on the planet. A sample of thirty five annual reports and corporate social responsibility reports from eight retailers were analyzed. Findings suggest that at a strategic level all sample retailers commit to integrating waste minimization goals into their operations. Target, Wal-Mart, Albertson and Safeway were the most successful. This study also suggests that specialty stores and department stores environmental commitments are more aspirational than operational.

Introduction

The importance of the retail industry in shaping the market landscape has grown over the years and is expected to continue to grow throughout the world. Today, the global value of the retail industry is estimated at $11.5 trillion dollars and is anticipated to grow to $20 trillion within the next ten years (Euromonitor 2010; Court and Narasimhan 2010). The economic impact of the retail industry is well documented via its quantitative flow to gross domestic product such as revenues generated, jobs created, interests and taxes paid. For instance, the share of the retail industry to the US economy is estimated at seven percent according to the National Retail Federation (NRF, 2009). In addition to the economic significance of retailers is the growing recognition that this industry has a unique position within the global supply chain to drive change (Jones et al., 2007).

The first significant change pioneered by retailers is the shift in production from a market push (supplier driven) to a market pull (retailers or consumers driven). Today, there exists a great new opportunity for retailers to actively participate in shaping a new and innovative sustainable supply chain. Retailers are greatly positioned to implement corporate measures that minimize the environmental impact of both their business operations and that of their suppliers on the planet. The purpose of this paper is to

explore and compare the efforts of retailers to minimize their environmental impact using the particular case study of waste from single use plastic shopping bags used at checkout in the USA.

Retailers and the environment: A background

The global nature of many of today's environmental problems such as resource depletion, climate change, global warming, and carbon dioxide emission has rendered their awareness possible only through the media (Dunlap and Jones, 2002). Pressure from the media, environmentalists and governments has raised the risk for industry in general and retailers in particular from the lack of complying with the shifts in the environmental landscape. In a recent article featured in BBC Business News, the reporter warned that "[t]he cost of the current rapid rate of degradation of the earth's natural resources will, then be borne by everyone, environmentalist or not" (Anderson, 2010). Jones et al., argue that today retailers are facing increasing pressure from the media, consumers, governments and trade unions and are expected to show 'interest' in the environment (2005).

Globally, several governments and firms have committed to making a difference for a better tomorrow by implementing strategies that reduce environmental impacts (Hawken et al., 1999). In the United States, the Department of Energy is pioneering a call to reduce energy consumption in commercial buildings by fifty percent (DOE, 2010). This shift in environmental interests is important to retailers given that in the U.S. retailers consume twenty percent of annual energy used nationally (Retail Energy Association, 2010).

Some retailers have pioneered sustainable strategies within their corporate governance and have ranked within the top most sustainable retailers either within their country or worldwide. According to the Dow Jones Sustainability World Index, out of the 2500 companies surveyed, Target ranked among the top world leaders in sustainability (SAM, 2010). The index assesses the world top ten percent retailers' social, economic and environmental efforts. For example it accounts for the fairness of wages and salaries paid, community involvement through charitable work or philanthropy, as well as the retailer' strategy to reduce its impact on the environment. The impact on the environment is commonly assessed through energy usage such as electricity consumption for lighting, heating and cooling, and non renewable resource usage, such as oil and water.

When discussing impact on the environment, research generally focuses on non-renewable resource usage and reducing pollution from production, transportation and more recently, waste. The interest in pollution from waste came to the forefront of environmental research as the spaces available for dumping shrunk due to growth in population and urban development over the years (Mustapha 1993, Hawken et al., 1999). When discussing impact of waste on the environment retail strategies usually

focus on recycling, reducing, recovering and reusing also known as the Four R's (Brown, 1993). Some environmental research centres push the envelope to include as many as ten R's (Global Development Research Center, 2010). According to the centre, "a business can carefully consider existing procurement practices in order to evaluate where the major environmental impacts lie. Methods can then be sought to integrate environmental considerations into its purchasing practices" (Para 2).

Retailers have become actively involved in environmental issues around waste and waste management. For instance, media coverage focused on retailers' new sustainable stores built out of post consumer products as well retailers that replace light bulbs by energy efficient ones (Diamond, 2009). Most recently, waste reduction by using post consumer recycled paper and plastic reduction in packaging have also been considered. In general, when discussing waste it usually means reducing waste sent to landfills. For instance, the new sustainability framework presented by the National Retail Federation waste is included in the pyramid of sustainability under "waste minimization"(National Retail Federation, 2008). In sum, when discussing waste, retailers usually advocate for the three Rs 'reduce, reuse, and recycle'.

Retailers and waste: Exploring plastic shopping bags

It is estimated that between one to four trillion plastic shopping bags are used in the retail industry worldwide (World Watch Institute 2010). The interest in waste from plastic gained momentum since the early 1990s because of its lack of degradation and was seen as hazardous, both to the environment and the people (Spokas, 2008). For instance, in countries where garbage collection is non-existent, limited or unorganized, plastic shopping bags clogged drains that caused flooding and become hosts for infectious diseases when they collect water from rain (Clapp and Swanson 2009).

In the United States, retailers faced different sets of problems raised by environmentalists since 2006. The claims made stated that single use plastic bags are responsible for the deaths of wildlife and the loss of environmental aesthetic due to the accumulation of these bags in open spaces. Environmental advocates argued that waste from these plastic bags impacted the environment on two fronts: nonrenewable resource usage and waste that lasts for up to hundreds of years undisturbed in the environment (West, 2009). In sum, in the United States, plastic carry out bags are generally associated with the problem of waste from nondegradable plastic. The annual amount of plastic in the waste stream is projected to increase to ten percent by 2010, up from one percent in 1960s (Municipal Solid Waste 2001; 2007). Similarly, it is estimated that approximately eleven million tons of plastic wastes are produced each year, which represents about twelve percent of total municipal solid waste generation (Environmental Protection Agency, 2007).

As such, plastic shopping bags are viewed as exacerbating the problem of waste from plastic, pushing retailers to take action since they are at the frontline of the supply

chain. Which leads us to the following two questions: How do retailers minimize waste from the use of plastic bags at check out? And more specifically, what strategies, if any, do they implement to align with growing interest in sustaining, protecting and preserving the planet?

Method

Data for this study are derived from content analyses of annual reports, social responsibility reports, and from information posted on the website of a sample of retail businesses. Five keywords were used to explore retailers waste management strategies: Recycle, reduce, reuse, plastic bags and waste. Eight United States retailers were chosen for this exploratory study: A convenience sample consisting of two stores in each category was selected. Wal-Mart and Target represent big box retailers and Ann Taylor and GAP represent specialty stores. Nordstrom and Macy's represent department stores and Safeway and Albertsons represent grocery stores.

Data Collection

Thirty five total reports were downloaded from the retailers' corporate websites. The analysis consisted of counting the number of times each keyword was used. Because Albertsons is a member of SUPERVALU, and therefore subject to the policies of SUPERVALU we used the annual and social responsibility report from the corporate website. We chose annual reports and social responsibility reports from 2006 to 2009 because regulations relating to the reduction of waste from plastic shopping bags were first proposed in 2006 in the USA.

Furthermore, Ann Taylor, Nordstrom and Macy's do not have social responsibility reports. However, the policy statements and strategies relating to the reduction of the use of plastic shopping bags can be found on their corporate website. Therefore, for the retailers that do not have a social responsibility report, their corporate website was examined and the information was treated the same way as the social responsibility reports. In addition, Wal-Mart, Target, GAP, Safeway, and Albertsons also have policies and statements relating to the reduction of the use of plastic shopping bags posted on their corporate websites; therefore, their corporate website was also reviewed to determine whether the same keywords were used. Although the content of these reports was examined when available, meaningful comparisons of reports between the different stores could not be made. Therefore we aggregated frequencies of usage by keyword used and did not separate by source of data for this analysis.

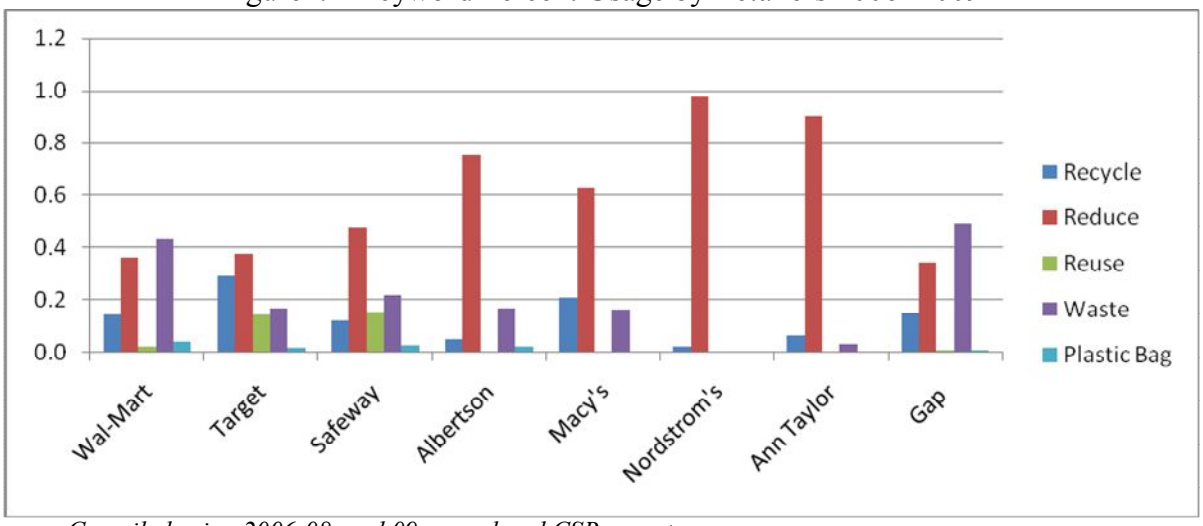
The frequency of keywords is used to identify efforts to reduce the impact of waste in the environment from plastic shopping bags in the United States. Content analysis is an appropriate method when the phenomenon to be observed is communication, rather than behavior or physical objects (Malhotra, 2003). In this study, content analysis was used to determine the frequencies of "waste reduction messages" used by retailers. Descriptive statistics were used to summarize the data for content analyses. The

categories are a simple dichotomy: 1) Yes, they do use identifiable messages and, 2) No, they do not. If they do, frequency of keywords was obtained by counting the number of times each of the following term was used: Recycle, reuse, reduce, waste and plastic bags. A total of 3135 print pages, in addition to eight websites were analyzed for this study.

Data Analysis

Reduce, was the most used keyword across all eight retailers, with Nordstrom leading with a high ninety eight percent followed by Ann Taylor with ninety percent and Albertson' with seventy five percent as shown in the following figure.

Figure1: - Keyword Percent Usage by Retailers 2006- 2009



Source: Compiled using 2006-08, and 09 annual and CSR reports

The frequency of the word *waste* is dominated by Gap with fifty percent, followed by Wal-Mart with forty percent and Safeway with twenty one percent. Target, Albertson's and Macy's have equal frequencies in the range of sixteen percent. *Recycle*, is used by all retailers, although less frequently. Target leads with a frequency close to thirty percent, followed by Macy's with twenty one percent. The word *reuse* ranks fourth out of the five keywords analyzed with Safeway leading the frequency of usage with fifteen percent, seconded by Target with fourteen percent. The least frequently used word, is *plastic bag* with Wal-Mart leading with four percent, followed by Safeway and Albertson' with more than two percent, Target and Gap with less than two percent.

Interpretations

Mounting concerns over the environmental impact of waste from plastic in general lead state and local U.S. governments to take action. The interpretation of such actions differed from state to state and from retailer to retailer as shown in the results of keyword frequencies shown in figure one. Some took measure to curb plastic shopping bags by imposing an added value tax at checkout others banned the use of these bags,

or advocated for alternative bags made of fabric or of compostable plastic. For instance, California became the first state to address this issue with the enactment of the Plastic Bag Recycling Act of 2006, which was designed to curb the use of an estimated nineteen billion bags per year in the State (Assembly Bill2449). The law requires supermarkets and large drug stores to institute plastic shopping bag recycling programs and make reusable bags available. Among other provisions, the statute requires stores to: 1) provide bins to collect used plastic shopping bags; 2) print on each bag the message "Please Return to a Participating Store for Recycling;" and, 3) maintain records documenting recycling activities for at least three years (An Overview of Carryout Bags in Los Angeles County, 2007). Since then, more than forty states, counties and cities have at least considered legislation to institute mandatory or voluntary plastic recycling programs, impose a tax on bags or ban their use (Florida Department of Environmental Protection, 2009).

In 2007, many cities in California pursued bans on plastic shopping bag. All of these measures were defeated except the one enacted by San Francisco. In April 2007, San Francisco passed a Plastic Bag Reduction Ordinance requiring all retailers with revenue over two million to offer only compostable plastic, recyclable paper or reusable bags of any material. The Plastic Bag Ordinance not only points out the concern over litter and dangers to sea animals, but also recognizes that greenhouse gas emissions associated with such petroleum based products (Plastic Bag Reduction Ordinance 81-07-106883). Oakland enacted a similar ban but it was overturned by a court ruling that the city must conduct an environmental study before moving forward with the law. Efforts to legislate bans were also defeated in the states of Hawaii, Maryland, Washington and Wisconsin. Other United States communities have or are considering similar legislation (Florida Department of Environmental Protection, 2009).

For example, Seattle attempted to impose a broad tax on the use of plastic shopping bags. Seattle Public Utilities estimates that three hundred and sixty million disposable bags are used in the city every year (Garcia, 2008). The city council enacted an ordinance imposing a twenty cent fee on all disposal shopping bags at grocery, drug and convenience stores. In this approach, retailers would receive five cents of each fee to cover administrative costs, and the balance would help fund city programs to promote reusable bags, waste reduction and recycling. The City Council Ordinance was to take effect in 2008, but it was defeated in 2009 (Ramirez, 2009). Similarly, in 2009, the Philadelphia City Council defeated a bill to ban plastic shopping bags after giving the measure preliminary approval. The measure has been two years in the making (Phillips, 2009). In the meantime, a state Senate bill banning the use of plastic shopping bags by larger retailers by 2010 was defeated in Colorado. This would have been the nation's first statewide ban on plastic shopping bags (Slevin, 2009).

Despite these many setbacks, several retailers took leadership in moving the agenda forward. In the U.S. retailers are taking proactive steps themselves and are offering

consumers small discount on their bill if they bring bags on their own. In January 2008, Whole Foods became the first supermarket in the United States to eliminate the use of disposable plastic shopping bag in their stores, and offers five to ten cents back for each reusable bag a customers uses (Mayville-Cox, 2008). A recent study by Whole Foods Market estimates that reusable bag usage increased by 300% in the year since it eliminated plastic shopping bags at all of its sores. The company estimates that one hundred and fifty million bags have been kept out of landfills over the twelve month period (Chappell, 2009). Target, the fifth-largest United States retailer announced plans to give customer a five cent discount for every reusable bag they use to pack their purchase (Gazette, 2009). The highlight of Target's reusable bag program was a nationwide giveaway of one million reusable bags for guests who made purchases when Target celebrated 2009 Earth Week. Inside each bag was a two dollar coupon for a GE compact fluorescent light bulb.

Figure 5-2 Target Reusable Bag

Figure 2 illustrates the reusable bags that were promoted during the Earth Week in 2009. The Targ Figure 2: Target as implemented on November 1, 2009 at 1,700 Target stores nationwide, and before that, a pilot study in one hundred Target stores revealed a fifty-eight percent reduction in plastic shopping bags used (Horovitz, 2009).

Figure 5-1 Wal-Mart Reusable Bag

Nationally, many retailers now offer durable, reusable bags for their customers as alternatives to single use, plastic shopping bags. In late spring 2006, when such a program was launched in IKEA, the use of plastic shopping bags dropped by ninety-five percent and purchases of the signature "Big Blue Bag" increased (Liss, 2008). On September 24, 2008, at the Clinton Global Initiative Annual Meeting, Wal-Mart announced that it would work to reduce the weight of its global plastic shopping bag waste by an average of thirty-three percent per store by 2013. It is estimated that Wal-Mart's efforts could reduce energy consumption by approximately 678,000 barrels of oil per year and reduce CO2 emissions by 290,000 metric tons per year.This is equivalent to taking more than 53,000 passenger vehicles off the road annually (Rossiter, 2008). This environmental effort is best exemplified by the shift in keywords used by Wal-Mart between 2008 and 2009. For example, by 2009 the frequency of usage of the word plastic bag dropped to zero whereas the frequency of the word waste represented 60% of total words used in the annual report and was used 118 times in the CSR report. Similarly, a new keyword was introduced in the language

of the reports and that is reusable bags. This shift is in line with the changes in the environmental and governmental landscape. In 2008, Wal-Mart announced a Zero Waste initiative, a commitment to reducing the amount of waste the retailer sends to the landfill.

The initiative also known as Sustainability 360, is a companywide slogan that signifies integrating sustainable strategies in all aspects of the retailers' operations. The company reported reducing waste from plastic by more than 182 million pounds of plastic in the United States and Asia (Wal-Mart Global Sustainability Report 2009).

Figure 5-4 Macy's Reusable Bag

Figure 4: Macy's


Figure 5-3 Nordstrom Reusable Bag

Figure 5: Nordstrom's

Similarly, in April 2008, Macy's began using recycled paper shopping bags at its stores, as well as biodegradable packaging for its online shipments.

All Macy's stores began carrying reusable tote bags made from 100% natural cotton. Figure four shows the bag promoted by Macy's 2008 Earth Week. In line with Macy's, Nordstrom announced a similar initiative by introducing environmental friendly packaging options for customers. Fully recyclable shopping bags, gift boxes and reusable shopping tote are available to customers, nation-wide (figure five).

Around the world, minimizing waste from plastic became a fashion statement as shown in figure six. Anya Hindmarch's trendy "I am Not a Plastic Bag" designer bag became enormously popular. It sold out of London stores just hours after being released.

Figure 2-2 I'm Not A Plastic Bag
Source: http://designobserver.com/images
/features/hindmarch.jpg

Figure 6: Anya's Bag

Conclusion

In their waste minimization strategies, the majority of the retailers in this study claim to be committed to a reduction in the use of plastic shopping bags. At a strategic level, these retailers essentially commit to integrating the reduction of plastic shopping bags into their business practices. At the same time, it does appear that at least some are concerned about long-term environmental improvement. Nevertheless, the information posted on the websites and the reports were in many ways "aspirational". Unfortunately, these aspirations are not always fully implemented in the everyday business practices of many retailers.

The findings from this study show that there are marked variations in the nature and content of the retailers' claims and the extent to which relevant policies are implemented. While some of the sample retailers offer comprehensive information, others provide very limited information about the efforts to reduce the use of plastic shopping bags. On one hand, some retailers such as GAP and Ann Taylor suggest that they have tried to measure the environmental impact of the use of plastic shopping bags, but there is no concrete evidence showing what has been measured and what the results are. On the other hand, Wal-Mart, Target, Safeway and Albertsons have developed clear policies and initiatives relating to a reduction in the use of plastic shopping bags and have followed through with specific practices. Whether they continue these practices will no doubt depend upon whether they find them to be cost effective.

It is important to note here, that before recommending that all retailers implement any plastic reduction strategy, in depth analysis of advantages and disadvantages of alternative bags should be developed. For instance, although canvas bags are more durable, cotton production is water intensive and typically involves large quantities of pesticides and hence, replacing plastic shopping bags by cotton bags could be interpreted as not being better for the planet. Similarly, bags made from jute are strong, but most of the fiber used to create these bags is imported and requires considerable fuel consumption to get to market. Figure seven summarizes bags used by retailers and outlines advantages and disadvantages of alternatives based on resources used.

Figure 7: Plastic Shopping Bags & Alternatives Advantages and Disadvantages

Table 2-3 Advantages and Disadvantages of Plastic Shopping Bags and Alternative bags

Type of Bags	Image	Advantages	Disadvantages
Canvas Tote		• Long life and very strong. • Could be made from post-industrial factory scraps and potentially from organically grown cotton. • Easily washed and tucked away for shopping trips.	• Industrially farmed cotton is one of the largest consumers of pesticides and fertilizers.
Paper Bag		• Can often contain a high percentage of processed chlorine-free post-consumer fibers. • Can be reused and eventually recycled.	• Materials still originate in forests.
Degradable Shopping Bag		• Made of a renewable resource (corn-based plastic) that biodegrades in a matter of weeks. • Provides an alternative to petroleum based plastic	• A product of industrial agriculture.
Plastic Shopping Bag		• Lightweight, strong, water-resistant, reusable to a point. • Relatively energy efficient processing compared to paper bag.	• Petroleum based product. • Extremely high litter factor and relatively poor public image and recycle rate. • Some countries have banned altogether or levied point-of-sale fees for the usage of disposable plastic

Source: Compiled from *Paper or Plastic: Searching for Solutions to an Overpackaged World by Linglin He*

Source: Compiled from Imhoff 2005

Similarly, before determining price points for bags, retailers should engage in a market analysis to assess which strategy influences consumers' purchasing behavior and willingness to pay. As shown in Table two, the perception of consumers surveyed was that retailers are not doing enough to minimize their impact on the environment, and only eight percent perceived that the current efforts were enough.

Table 1: Consumer Opinions on retailers environmental efforts

Retailers Are Doing…	**Percent**
Not enough	54
About the right amount	38
More than enough	8

Source: Compiled from *Stern and Ander, 2008.*

According to Stern and Ander (2008), the American Lifestyles of Health and Sustainability (LOHAS) reported that one-third of the population reported changing their purchasing behavior to visit retailers who are implementing greener practices. These consumers are estimated at a two hundred billion dollars market worldwide, nineteen percent of which is in the United States (Stern and Ander, 2008). Therefore, there exists a great incentive for retailers to go beyond the 'printed' environmental intentions and move forward a tangible application in their day-to-day strategies that reach their consumers.

Recycling programs directed to plastic shopping bags are widely discussed by the sample retailers. However, the findings show that the Grocery Stores and the Big Box Giants perform better than the Department and the Specialty Stores in terms of reducing the use of plastic shopping bags in this way. Some retailers appear to have made an effort to educate their customers about alternatives to plastic shopping bags. Safeway and Albertsons have a variety of reusable bags displayed at the registers. While many retailers are making an effort to minimize their impact on the environment, they are not doing a particularly good job of educating consumers about what they are doing and why (Stern and Ander, 2008). According to the authors, only twenty-four percent of consumers surveyed were aware of environmental strategies in retail and, out of the eight retailers studied herein, only Target and Wal-Mart made the list of the top ten retailers recalled by consumers (Idem).

In addition, the benefits of using reusable bags can be found in store posters. Although, plastic shopping bags are still the primary carry out bags for the Grocery Stores, sales associates often ask customers whether they need a plastic shopping bag when a customer is purchasing single small items. Furthermore, reusable bags can be easily purchased at registers. In contrast, Nordstrom and Macy's both have information about the reusable bags posted on their corporate websites. However, the Nordstrom reusable bag can only be purchased on-line, whereas a Macy's reusable bag can neither

be found in store or be purchased on-line. There were no reusable bags found in GAP and Ann Taylor stores or on their websites. Thus, although we can note some progress toward the development of effective policies regarding the use of plastic shopping bags, that progress is inconsistent across different types of businesses. In general, the majority of the sample retailers are implementing waste minimizing strategies related to the reduction of plastic shopping bags in their business communications with customers. However, there are still differences between what they say in principle and what they do in practice.

One might argue that without government regulatory intervention, a reduction in the use of plastic shopping bags will not be effectively implemented by retailers in the U.S. Unfortunately, there are only a few case studies showing that the use of plastic shopping bags has been significantly reduced by the retailers because of government enforcement. However, those that have been done suggest that government enforcement is probably necessary. In the United States, the San Francisco Plastic Bag Reduction Ordinance resulted in a reduction of sixty million plastic shopping bags during the first year the Ordinance was introduced.

Therefore, it appears that a true waste minimization strategy needs to be supported by the government in order to be effectively implemented in business practices. Since the sample retailers have nationwide operations, it is recommended that policy makers enforce environmental regulations that address the production of these bags before they hit the market where they create a dominos effect for retailers. Similarly, passing government regulations solely in one state may affect business practices in other states if such practices create an unfair competitive business environment for some retailers. It is very commendable to design, develop and implement a company-wide set of environmental goals and strategies, and a whole different agenda to deal with a business environment where profit margins are razor thin for retailers.

Government can help the people and the planet by implementing environmental policies that force producers to incorporate the cost of the environment and render them responsible for the management of waste created by their production. This way, retailers won't have to spend millions of dollars fixing a problem created at a different level in the supply chain. While waiting for those fair government policies, retailers can use their market position to refuse to carry products that do not comply with their environmental goals.

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