

12-2012

Wal-Mart: Going Green or Gimmick?

Andrew Childress

East Tennessee State University

Follow this and additional works at: <https://dc.etsu.edu/honors>



Part of the [Social and Behavioral Sciences Commons](#)

Recommended Citation

Childress, Andrew, "Wal-Mart: Going Green or Gimmick?" (2012). *Undergraduate Honors Theses*. Paper 139. <https://dc.etsu.edu/honors/139>

This Honors Thesis - Open Access is brought to you for free and open access by the Student Works at Digital Commons @ East Tennessee State University. It has been accepted for inclusion in Undergraduate Honors Theses by an authorized administrator of Digital Commons @ East Tennessee State University. For more information, please contact digilib@etsu.edu.

College of Business and Technology
Honors Thesis Signature Approval Form

Wal-Mart: Going Green or Gimmick?

Fall 2012, 11/29/2012

The members of the Thesis Committee
approve the Senior Honors Thesis for
Andrew Childress

Thesis Committee Chair
Dr. Doug Dotterweich

CBAT Thesis Committee Member
Dr. Jean Stead

External Thesis Committee Member
Dr. Karen Kornweibel

CBAT Honors Director
Dr. Tom W. Moore

Wal-Mart: Going Green or Gimmick?

Abstract

Sustainability is quickly becoming one of the hottest topics among green conscious consumers, as well as managers looking to capitalize on the growth of such interests. Wal-Mart, the world's largest retailer, is currently marketing itself as a pioneer in sustainability, particularly in the retail industry. With innovations such as a Sustainability Index that measures the environmental and social impacts of products stocked by Wal-Mart, the company is currently marketing their efforts as being exceptional among "big box" retailers. However, few studies have tested those claims to determine if they are accurate. The purpose of this research is to gather data about Wal-Mart's sustainability impacts and determine whether the marketed claims about sustainability programs are as far-reaching as the retailer claims.

Wal-Mart: Going Green or Gimmick?

Chapter 1: Introduction

Sustainability is becoming an increasingly important topic among modern management teams. Consumers increasingly care about sustainable businesses, with a 2009 Deloitte study showing that 63% of consumers specifically look for products labeled as “green”, and 22% eventually buy green. As incentive to market to consumers rises, businesses feel increasingly obligated to market sustainability in order to increase sales. Thus, these organizations may be propelled to “greenwash”, or embellish sustainability efforts (Dahl, 2010). Truly sustainable players are increasingly difficult to identify with this incentive in play. Consumers are increasingly choosing sustainable solutions, including discount retail stores. With a wide reaching sustainable initiative in full play, Wal-Mart is attempting to establish itself as an early innovator in sustainability in the retail arena. As Wal-Mart attempts to harness the advantages of sustainability, it may begin to leverage it as a firm core competence to differentiate itself from competitors. Wal-Mart’s sustainability claims create a need to measure if sustainability efforts cause the company to behave differently than competitors.

Literature Review

Sustainability Background

Despite being one of the fastest-growing topics in management, the term sustainability is often ill defined and poorly understood. Sustainability was first formally defined by the United Nations at the 1987 General Assembly. The World Commission on Environment and Development defined sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their own needs," (United Nations, 1987). Today, the Environmental Protection Agency (EPA) defines sustainability as activity that "creates and maintains the conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic, and other requirements of present and future generations," (EPA, 2011).

A measurement of sustainability is the triple bottom line, first defined by John Elkington in his 1997 book "Cannibals with Forks." Elkington defined this metric as the balance of "economic prosperity, environmental quality, and (...) social justice" (Elkington, 1997). The long-used financial bottom line is a comparison of an organization's revenues versus expenses and results in a final profit or loss. However, the triple bottom line includes factors formerly unmeasured in financial statements, like measurements of an organization's economic, environmental, and social performance.

Although the definition of the triple bottom line can typically be agreed upon, it is difficult to measure due to the ill-defined metrics involved (Slaper, Hall 2011). Although

economic measurements use classic profit and loss measures, the means to measure environmental and social impacts are less agreed upon. This inability to measure social and environmental capital explains why firms face difficulty in the increased use of the triple bottom line. Companies are increasing reportage of sustainability information through usage of the sustainability reports rapidly being adopted by organizations of all sizes.

With no common means for measurement of the triple bottom line, a firm's ability to generate "profit and losses" across the measurements is difficult. Full cost accounting, the process of measuring and recording these impacts, is still being developed by accountants as long term costs of pollution are still being studied and documented.

One recent innovation in sustainability measurement is being spearheaded by the hospitality industry. In 2012, 23 hotel chains joined a carbon measurement specification known as the Hotel Carbon Measurement Initiative (HCMI). This measure, supported by the World Travel & Tourism Council, is helping to standardize the measurement of a hotel's carbon footprint. (GreenBiz, 2012) This measurement is increasingly important to businesses and travelers interested in choosing sustainable travel accommodations. Increasingly, companies are considering these impacts as part of the bid process. The framework provided by the HCMI helps hotels to measure the environmental impact on a level of detail that includes measuring carbon footprint per room or meeting area.

A key differentiation exists among the measurements of sustainability. Ecological sustainability focuses upon the firm's impact on the environment and may utilize factors

such as carbon footprint or water utilization (Sutton, 2000). The social side of sustainability measures the impact of the firm on the social environment in which it operates (Hancock, 1992). Finally, economic sustainability is a measurement of the firm's ability to exist within the economy for the foreseeable future (Sustainable Directions, 2012). These three sustainability facets account for the three measurement factors of the triple bottom line.

Consumer Sustainability Attitudes

Consumers have shown increasing interest in sustainability. A 2009 Green Shopper Survey published by Deloitte provided much of the research in this area. According to the report, 95% of the consumers surveyed responded by saying that they would purchase "green" products (Deloitte, 2009). The survey also showed that 65% of consumers are proactively seeking out and looking for green products (Deloitte). An additional marketing study by Jacqueline Ottman found that 83% of all adults utilize green marketing in the decision making process (Ottman, 2010).

One of the greatest obstacles faced by sustainable consumers is avoiding companies or goods that engage in greenwashing. Because consumers are increasingly interested in choosing products they perceive as sustainable, companies are attempting to capitalize on this trend by branding their products as such. However, the green aspect of products can often become puffery and lack substance. A study in 2009 by TerraChoice showed a 79% increase in companies making "green" claims about their

products, but testing showed that 98% of these products were exaggerating the sustainability of their products (Dahl, 2010).

The consumer's interest in sustainable goods creates the need to assess the true players in sustainable retailing. Despite 95% of Deloitte respondents claiming that they would buy green, only 75% responded that they knew what green products actually were (Deloitte). Research shows that "green shoppers are still on a learning curve," lacking the understanding of environmental impacts of their purchases (Deloitte). Despite the fact that this group of consumers has an interest in sustainability, the Deloitte report showed that only 22% of those surveyed purchased a product marketed as "green" as part of the survey.

Wal-Mart Case Study

Founded in 1962, the Bentonville, Arkansas retailer accounted for \$444 billion in sales during fiscal year 2012 (Wal-Mart, 2011). The company focuses on providing goods at a lower cost and centering its operations around founder Sam Walton's vision of "saving people money to help them live better lives," (Wal-Mart, 2011). The company's logistic scale allows it to act as a cost differentiator, providing goods to every income level and forcing competitors to charge lower prices for similar goods (Ghemawat, 2006).

Despite its position as the world's top retailer, Wal-Mart has struggled to compete in the ever-shifting paradigms of retail. In the Spring of 2011, Wal-Mart reported their seventh consecutive quarterly sales decline (Cifford, 2011). This followed

the company's first ever drop in profit, recorded in the fourth quarter of 2009 (Covert, 2010).

Over the last decade, Wal-Mart has felt increasing resentment and scrutiny as the public's concern for human and social capital has risen. The company has recently come under fire for bribery issues in Mexico, further harming the company's image and decreasing its social capital (Martin, 2012). Wal-Mart has been criticized for low wages, and cutting hours to limit the employees eligible for corporate insurance programs (Krugman, 2005). Furthermore, many have felt that Wal-Mart's reputation for fostering human and social capital is substandard, as evidenced by discrimination lawsuits filed recently (Li, 2012). In 2010, the company settled a lawsuit brought forth by former employees claiming that women were denied warehouse positions and that the company withheld pay; the lawsuit was a \$12 million liability to the company (O'Reilly, 2010). The combination of these incidents has cemented Wal-Mart's social sustainability ranking as being low among retailers in the eyes of the public.

Wal-Mart Sustainability Case Study

Wal-Mart claims to be an increasingly ecologically sustainable organization, with a number of measures being implemented over the last few decades. As a full corporate initiative, Wal-Mart's sustainability programs exist in every facet of the company. The company can potentially leverage their sustainability initiatives to improve public opinion of the company and sway consumer behavior.

The most notable sustainability initiative undertaken by Wal-Mart is the development of the Sustainability Index. As a part of the index, metrics are utilized to

measure the impacts of suppliers. Surveys are used in order to build "scores" for suppliers (Wal-Mart, 2011). Wal-Mart claims that they will increasingly utilize suppliers who score higher on this index to increase sustainability throughout the value chain. Development began in 2009 and currently reaches more than 70 suppliers (Wal-Mart, 2011).

Additionally, one of the most important aspects of the sustainability initiative is the life cycle analysis database. Measuring the ecological impacts of a product from beginning to finish and including the end of life environmental impact is an essential part of the life cycle analysis of a product (Stead & Stead, 2004). The company claims that the database fuels the choices that the company makes in choosing sustainable suppliers.

Finally, a key to the success of the sustainability index is customer-facing toolkits for understanding the sustainability impact of the products that they consume. Although still in the development phase, the company intends to create information that will be visible to consumers (Wal-Mart, 2011). Each product will be labeled with information informing consumers of the impact of the product. The company will simultaneously satisfy consumers who are already seeking sustainable product offerings, as well as increase the visibility of product impacts to consumers currently unaware of sustainability initiatives.

These sustainability initiatives include significant renovations with an eye toward sustainable building practices. Redesigning stores to use less energy and increasing consumer sustainability awareness are examples of the company attempts to show

consumers sustainability and reduce costs in the process. The redesign impacted the company's earnings in the short run, perhaps demonstrating the commitment to sacrificing short-term profits for long-term sustainability gains (Birchall, 2010).

Potential Contributions

Sustainability is difficult to evaluate due to a wide variety of factors. Due to the threats of greenwashing and poorly defined metrics to measure the sustainability impact, the truly players are difficult to discern from the competition.

Studying Wal-Mart's true sustainability impact is necessary in order to empower green consumers with the information they need to choose sustainable businesses. Despite a great deal of marketing about the company's sustainable programs, little research exists that tests the extent of these programs. Measuring these initiatives and comparing them to their competition is necessary to evaluate Wal-Mart's standing among retailers. This study will provide recommendations to consumers about Wal-Mart's true sustainable behaviors and determine if a marketed commitment to sustainability represents a commitment to a sustainable strategic management differentiation strategy (Stead & Stead, 2004).

Consumers are increasingly interested in the sustainability of suppliers and retailers. Wal-Mart has become an essential retailer to millions of consumers globally, and if sustainable-conscious buyers are interested in choosing a sustainable retailer, research is needed to evaluate whether the company's behaviors are in accordance with their marketed values. Sustainability minded consumers are the target audience due to

their increased commitment to choosing sustainable market offerings, thus affording Wal-Mart the ability to differentiate.

Wal-Mart: Going Green or Gimmick?

Chapter 2 – Methodology

Carbon Footprint as a Measure of Environmental Impact

In attempting to research Wal-Mart's sustainability initiatives, defining the metrics upon which to measure sustainability was a challenge in meeting the research objective. As stated in chapter one, the metrics used to measure sustainability are varied and still under development, and the available data led research to focus upon ecological sustainability. Differences in measurements reported creates issues when attempting to compare businesses.

Among the available data, it was determined that a company's **carbon footprint** was the best data source for measuring the company's sustainability impact. The carbon footprint statistic is a measurement defined as the "total amount of greenhouse gases produced to directly and indirectly support human activities, usually expressed in equivalent tons of carbon dioxide" (Time For Change). Greenhouse gases such as carbon dioxide are widely believed to contribute to climate change by increasing the amount of radiation absorbed from the sun (EPA, 2011). The study of carbon emissions has been aided by movements such as the Carbon Disclosure Project, an independent not-for-profit that works with organizations to ensure proper measurement and reportage of ecological impacts (CDP, 2012).

A company's "carbon footprint" is an ideal source for measuring environmental impact because many companies readily provide this data. These statistics are often one of the few available for calculating the sustainability levels of a company. This carbon

footprint measurement is expressed in metric tons of carbon dioxide emitted. Given that these gases are believed to contribute to climate change – a major concern of the sustainability movement – the carbon footprint is often utilized as a measurement of a company's environmental impact and can be used to exemplify an organization's interest in sustainability. Due to the availability of this data, the focus of research is examining the firm's ecological sustainability impact.

Standardization of Measurement

In testing and standardizing Wal-Mart's sustainability impacts, it was necessary to identify the company's competitors. Although the world's largest "big-box" retailer is unrivaled in many senses, consumers may choose one retailer that differentiates itself, either using cost or product differentiations. Target and Costco were selected as statistically comparable retailers, based on similarity in retail presence and availability of relevant data. Although the companies differ somewhat in their positioning due to price and product offerings, American consumers may still view them as competing retailers that vie for their business. All three of these companies offer the essentials that consumers need at low prices with wide selections and thus are comparable.

However, there are differences in these retailers, due to size and strategy differences. Target reports that as of fiscal year 2011, there are 1,763 stores (Target, 2012) while Wal-Mart has nearly ten times as many stores worldwide (Wal-Mart, 2012). Wal-Mart's retail operation is on a much greater scale than its competitors, and adjustments were needed to normalize the data. The stores differ, to some degree, in product selection and cost, but their positions in the market and the fact that consumers

may choose one retailer versus another led the researcher to conclude that the retailers are comparable.

Due to the differences in scale and operations, there was a need to standardize measurements. Data limitations in data left few, but for all three retailers, the commonly available statistic was carbon dioxide emissions for 2009, as well as sales statistics. For this test, net sales figures were aggregated utilizing the respective company's SEC 10-K annual filings, in which the companies are required to report financial figures. Net sales figures from 2009 were selected, and then compared to carbon emissions.

Dollar Net Sales Per Metric Ton of Carbon Emissions

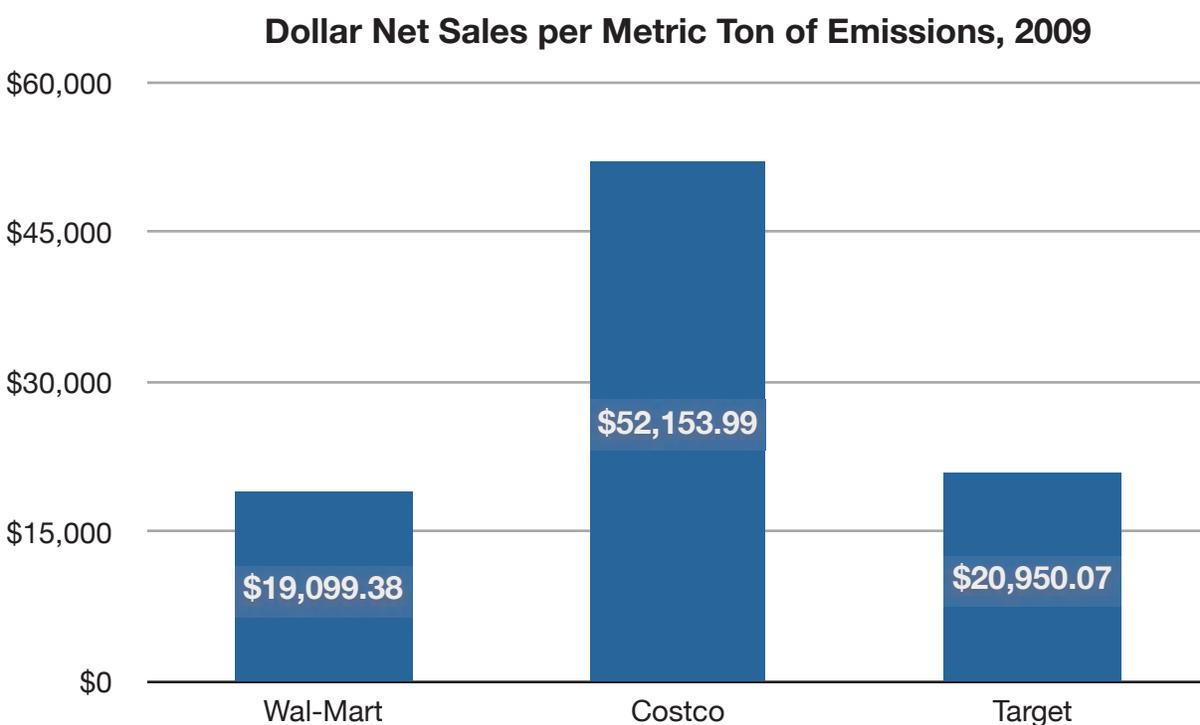
A measurement termed "dollar net sales per metric ton of emissions" was established to measure a company's value relative to carbon emissions. By dividing the net sales amount by the carbon dioxide emissions for a given year, the figure was calculated. A higher value demonstrates better return per ton of emissions. This approach enabled a meaningful comparison of the sustainability impacts of the three retailers.

Research Design

Ultimately, the research objective was to test Wal-Mart's ecological sustainability initiatives across two dimensions. The first of these measures was Wal-Mart's sustainability initiative against its competitors. A second measure was to test the

company's sustainability program against itself, charting emissions data across four years.

For the initial statistical analysis, carbon footprint data for the year 2009, the most recent available data, was gathered and compared across the three retailers: Wal-Mart, Target, and Costco. This cross-section of one year of data was the best available measure for comparing the sustainability impact of the three selected retailers.



Source:

Wal-Mart 10-K Form, 2011 (<http://investing.businessweek.com/research/stocks/financials/secfilings.asp?ticker=WMT:US>)

Costco 10-K Form, 2011 (<http://investing.businessweek.com/research/stocks/financials/secfilings.asp?ticker=COST:US>)

Target 10-K Form, 2011 (<http://investing.businessweek.com/research/stocks/financials/secfilings.asp?ticker=TGT:US>)

EcoDesk – Target (<http://www.ecodesk.com/sustainability/target-corporation>)

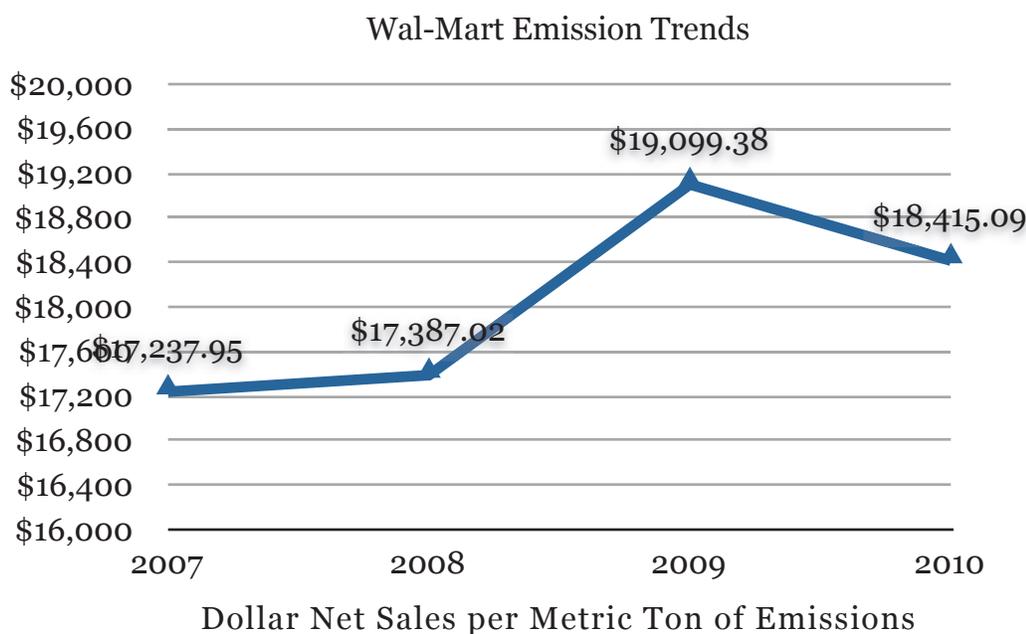
EcoDesk – Costco (<http://www.ecodesk.com/sustainability/costco-wholesale>)

EcoDesk – Wal-Mart (<http://www.ecodesk.com/sustainability/walmart>)

Wal-Mart's Sustainability Trend

An additional test was constructed to determine if Wal-Mart was truly “increasingly” committed to sustainability. The purpose of this test was to analyze carbon footprint trends for the company, and determine if Wal-Mart is moving toward being more or less sustainable than it has been in the past.

For this test, carbon emission statistics were collected for the years ranging 2007-2010. These statistics were readily available and provided by Wal-Mart but not its competition. For this test, the carbon emissions were compared to the company's net sales for the corresponding year.



Source:

Wal-Mart 10-K Form, 2011 (<http://investing.businessweek.com/research/stocks/financials/secfilings.asp?ticker=WMT:US>)

Wal-Mart: Going Green or Gimmick?

Chapter 3 - Results

As stated in Chapter 2, testing the research objective centered around two types of analysis. The first test was designed to chart a single year carbon dioxide emission impact of Wal-Mart versus its competitors, while the second test was designed to study the emission trend for Wal-Mart across four years of data.

Sustainability Versus Competition

For the initial statistical test, data was gathered and hypotheses were formed to test Wal-Mart's ecological sustainability versus other retailers. Figures were adjusted and normalized by dividing emissions by dollars of net sales so that figures and statistics would be comparable among the retailers.

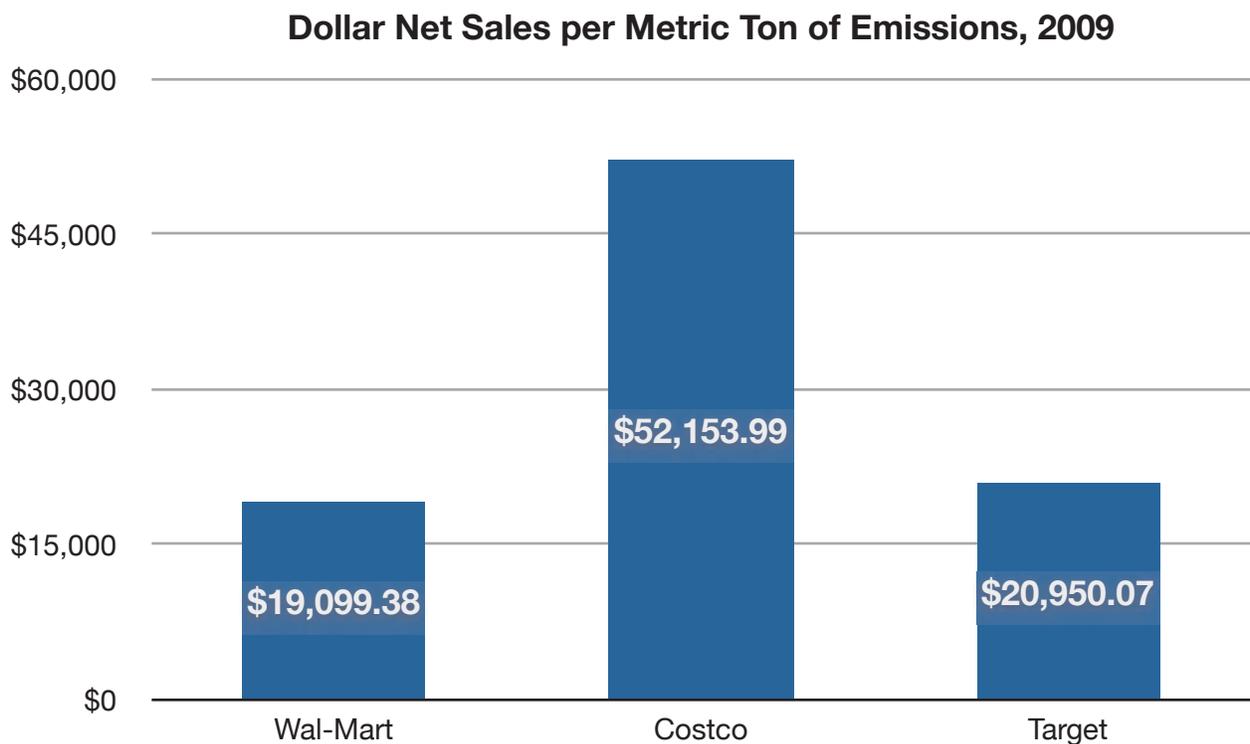


Chart Source:

Wal-Mart 10-K Form, 2011 (<http://investing.businessweek.com/research/stocks/financials/secfilings.asp?ticker=WMT:US>)

Costco 10-K Form, 2011 (<http://investing.businessweek.com/research/stocks/financials/secfilings.asp?ticker=COST:US>)

Target 10-K Form, 2011 (<http://investing.businessweek.com/research/stocks/financials/secfilings.asp?ticker=TGT:US>)

EcoDesk – Target (<http://www.ecodesk.com/sustainability/target-corporation>)

EcoDesk – Costco (<http://www.ecodesk.com/sustainability/costco-wholesale>)

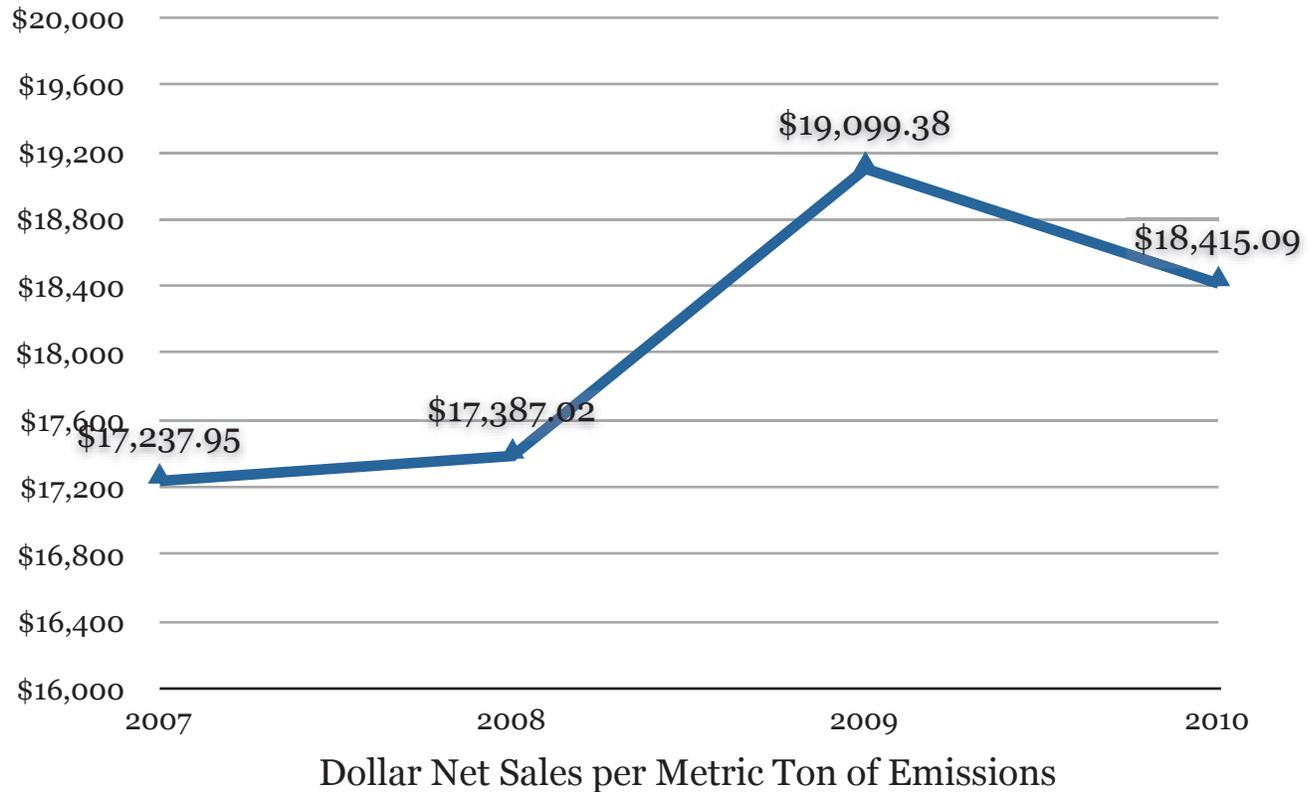
EcoDesk – Wal-Mart (<http://www.ecodesk.com/sustainability/walmart>)

Charting the statistical findings allowed the researcher to realize that Wal-Mart's carbon emissions sustainability impact trails that of its competitors. In reality, Wal-Mart reported the lowest amount of dollar net sales per metric ton of emissions for the , among the three retailers for the year 2009, this indicates that Wal-Mart trails its competition in terms of ecological sustainability impact, given the limited data available. By producing the lowest amount of dollar net sales per metric ton of emissions, the claim that Wal-Mart is a more sustainable retailer seems is not substantiated by this data. Although carbon emissions are just one factor of sustainability measurement, this data represents the best available data.

Wal-Mart versus Itself - Findings 2007-2010

In the second test, data was collected and compared over a period of time to determine the overall trend of Wal-Mart's sustainability initiative. The same dollar net sales per metric ton of emission was used to control for sales trends comparable across a four year span, thus accounting for trends in sales. Data was collected and charted to determine a trend:

Wal-Mart Emission Trends



Source:

Wal-Mart 10-K Form, 2011 (<http://investing.businessweek.com/research/stocks/financials/secfilings.asp?ticker=WMT:US>)

EcoDesk - Wal-Mart (<http://www.ecodesk.com/sustainability/walmart>)

The data was divided into two groups, comparing the dollar net sales per metric ton of emissions of 2007 / 2008 to 2009 / 2010 statistics. First, the equality of variances was tested using the f-test. The hypotheses for this f-test were as follows:

H₀: ($\sigma_1 = \sigma_2$) The variances of the two populations are equal.

H₁: ($\sigma_1 \neq \sigma_2$) The variances of the two populations are unequal.

The resulting F value was calculated and found to be 21.07172. Comparing that to the referenced critical value of 19.00, we thus reject the null hypothesis.

The resulting chosen methodology for testing the emission trends is to use a one tailed *t*-test for separate variances. Hypotheses were formed to test the statistical findings of this test:

H₀: ($\mu_n \geq \mu_o$) Wal-Mart's increasing commitment to sustainability causes the company to produce amounts of dollar net sales per metric ton of emissions greater than or equal to past years

H₁: ($\mu_n < \mu_o$) Wal-Mart's increasing commitment to sustainability causes the company to produce amounts of dollar net sales per metric ton of emissions less than past years

The *t*-test was run with 1 degree of freedom and a .05 level of significance. The *t* statistic was found to be 4.127 using Welch's *t*-test. Using the tail area for *t*-curves chart, the *p*-value was approximately 0.075. Therefore, we fail to reject the null hypothesis. The data seems to suggest that Wal-Mart may be increasingly sustainable. However, given the small data set, there exists a sensitivity to the alpha level that if modified, could alter the outcome of the tests.

Wal-Mart: Going Green or Gimmick?

Chapter 4 – Conclusions & Recommendations

Conclusions

Following the statistical tests utilized to test the research objective, several conclusions can be made about Wal-Mart's sustainability initiative. The carbon emissions data seems to suggest that Wal-Mart may be an increasingly ecologically sustainable organization, they are not an exceedingly sustainable company when compared to other big box retailers. Over the four years of data for carbon emissions, it is possible that Wal-Mart is making headway toward reducing the emissions. However, the attempts by Wal-Mart to market itself as a highly sustainable organization is not supported for their emissions compared to other retailers, when adjusted for size. Wal-Mart's target goals of 100% usage of renewable energy, creating zero waste, and selling products that sustain the environment appear to be far from being realized.

Audience

Sustainability is of interest to a number of parties related to Wal-Mart. Consumers are interested in choosing sustainable products and the impact on their shopping experience, while retailers are interested in how to plan and prepare for an increasingly sustainable group of consumers.

Consumer Usage

Research shows that although consumers are increasingly interested in the idea of sustainability and choosing products that contribute to sustainable growth, there is presently little data available to verify which businesses are sustainable. A great deal of sustainability puffery exists in the form of greenwashing and it is increasingly difficult to differentiate among organizations. Consumers may find the study of Wal-Mart's sustainability programs helpful in choosing a retailer. Understanding whether Wal-Mart qualifies as a leading sustainable retailer could impact consumers wanting to ensure that their buying decisions align with their sustainability values.

Management Usage

Internally, Wal-Mart may find it useful to consider how sustainability efforts are being marketed to consumers. Managing perception is essential to capitalizing on sustainability marketing, and this study could assist Wal-Mart in understanding the true extent of their sustainability initiatives. As sustainability continues to grow within the organization, the company has the opportunity to capitalize by marketing such programs.

However, management should also be interested because of the threat to the business model that Wal-Mart has become so well-known for; sustainability is of interest because offering more environmentally responsible products could come at the cost of the "Always Low Prices" moniker. Complex strategies of cost and environmental

sustainability could be difficult to implement, but could differentiate Wal-Mart from retail competitors.

Recommendations for Future Research

The lack of available data to measure sustainability encouraged research to determine possible sources of data for ideal testing metrics. Multiple factors were considered to determine possible future sources to reassess an organization's sustainability initiative.

Sustainability Measurements

In future research, it is increasingly important to ensure that measurements of an organization's sustainability be made. One common measurement of sustainability discussed is an organization's "triple bottom line" – a metric that measures a company's impact in the following ways:

- **Economic impacts** - classic measurements of how the company makes its impacts economically, with measurements such as revenue and expenses helping to create scores
- **Social impacts** - social impacts are measured in the way that the organization impacts human capital, such as the happiness and satisfaction of the employees and how the company contributes to social capital

- **Environmental impacts** - finally, an important dimension of the triple bottom line is to measure the environmental impact of an organization, such as emissions, pollution, and water usage.

Potential Data Sources

In future research, the growth and availability of new data will heavily impact the quality of findings. Research on Wal-Mart's sustainability reach will depend upon increasing amounts of data available to researchers.

Water Usage

One way to strengthen the quality of environmental research is by studying water usage. The conservation of fresh, clean water is rapidly increasing as developing countries struggle to provide affordable and usable water to their citizens . According to the World Health Organization (WHO), "Water scarcity affects one in three people on every continent of the globe." Being that Wal-Mart and many other retailers are huge importers of goods from developing countries, it would be ideal to measure some of the water usage involved in an organization's supply chain.

Employee Impacts

Although economic measures are readily available and environmental measurements are becoming more in vogue, the measurement of social impacts is virtually unexplored. In the future, it will become more relevant to measure an organization's impact upon the social climate in which it operates. Companies such as

Wal-Mart, which employees 1% of the entire United States (Business Insider, 2010) should be tested to determine the impact of the wages and incentives offered to employees to determine if Wal-Mart is creating generally positive or negative social changes.

Furthermore, statistics such as employee turnover rates could be examined and compared in order to determine job satisfaction. Turnover and constant job shift creates problems for employees, and businesses should strive to reduce this. This rate could be compared to the competition to measure the social capital built by Wal-Mart, and contribute to the measurement of social sustainability.

Consumer Goals

A key goal set forth by Wal-Mart as a part of the Sustainability Index is giving consumers the ability to make purchasing decisions based upon the sustainability impact of the products consumed. Putting the power of sustainability in the consumer's hands is considered to be an important step toward pushing sustainability into the mainstream.

One way that Wal-Mart has attempted to do this is with the establishment of the Sustainability Index, as well as the annual Global Responsibility Report. These two statistical publications are the early editions of how Wal-Mart is beginning to arm consumers with the sustainability decision-making tools that some consumers are demanding. Right now, basic statistics such as carbon emissions are reported, but that data will continue to evolve alongside the metrics used to calculate it.

Most importantly, researchers should continue to observe the use of the Sustainability Index to determine if and how these sustainability scores are implemented. Wal-Mart has released very few details about the implementation of such a score, and given that no other retailer has attempted such a metric, this will serve as a highly interesting metric to monitor.

Perhaps more interesting will be the consumer's reaction to such an index. Will consumers choose products that are labeled as having higher sustainability scores? The literature review shows that consumers are interested in sustainable products, but often don't know how such products differ from traditional counterparts. What if products that are more sustainable cost more than standard offerings? Will consumers be willing to pay the extra amount to consume a more sustainable product, or will the Wal-Mart mentality of "Always Low Prices" continue to win out?

A chance exists that consumers are willing to pay a marginally greater amount for sustainable goods, but until data exists, it is hard to know how much greater an amount that the average consumer is willing to spend. In the last decade, eco and social labels such as "organic" foods and "fair trade coffee" have risen to prominence as consumer demands have changed. "Sustainable" could be another social label that products begin to gain and rise in popularity among consumers that are concerned with sustainability. Although Wal-Mart is generally labeled as being socially unsustainable, Wal-Mart could hedge against this negative label by offering products with the ecologically sustainable products and increase its aggregate sustainability level.

All of these questions are research objectives that have been impossible to study in the past due to the lack of data, but the emergence of sustainably labeled products

could finally give researchers the opportunity to examine consumer buying behaviors when weighing substitute products. Studying these buying behaviors across demographics could also serve as a great opportunity for retailers to begin to understand how to market offerings to different consumers.

Of great interest to sustainability researchers is the recently established Hotel Carbon Measurement Initiative, or HCMI. The partnership between 23 hotel chains started in 2012 and aims to standardize the measurements for sustainability impacts across the hotel chains. This is a valuable step toward proper measurement of sustainability impacts, and the comparability of the data is paramount to its success. Future research should continue monitoring this effort and consider the factors being utilized by the HCMI. As this index progresses, Wal-Mart could similarly spearhead the movement in the retail sector.

Oversight & Comparability

With all of the excitement regarding sustainability growth in organizations, the threat of falsification of such claims has never been greater. Moving forward, the need to establish measurements and fact-checking procedures is essential to the study of sustainability. One idea that could greatly establish comparability is the creation of an operational definition of “sustainability.” These definitions are helpful to researchers because they establish parameters and standards across which tests can be created. Without an operational definition for the term “sustainability”, research into these sustainability claims will be difficult and less comparable. Establishing an operational

definition for what a sustainable organization does, or what a sustainable product is will help to make future research far more usable.

Furthermore, research could be conducted in order to determine if oversight is necessary to monitor sustainability claims. One idea is to establish an organization that could be responsible for auditing such claims. Whether this board is a governmental agency or voluntary partnership, the board could assist in testing the sustainability claims of each organization and ensuring that statistics are measured fairly and consistently. The Federal Trade Commission has begun to increase its involvement in advising businesses on how to market sustainability claims, such as advising organizations to not market products as “green” (Greenbiz, 2012). The use of a sustainability audit could play a large role in establishing the comparability and standardized metrics that have thus far made it difficult to assess an organization’s true sustainability impact.

A voluntary partnership, similar to the one entered into by the hotels as part of the HCMI, could be undertaken by retail partners. With a partnership that seeks to standardize reporting, consumers and researchers alike have much to gain on the route to sustainability. Until there are standardized measurements, consumers will be at the mercy of retailers as to the verifiability of statistics and data reported. This partnership is essential to increasing the quality and comparability of data. Oversight boards such as these can aid retailers in determining what factors to track, while also ensuring that data is provided accurately to consumers. Initiatives such as the Global Reporting Initiative (GRI) and Dow Jones Sustainability Index have begun to increase the level of reporting, but widespread reportage specific to the retail industry has not matured.

Business Impact

Finally, researchers can study how Wal-Mart's increase in sustainability impacts the business model Wal-Mart utilizes. The Wal-Mart slogan has been to give consumers "Always Low Prices", and it is intriguing to study if this value proposition remains constant or differs as sustainable products are offered in greater frequency. Will consumers be receptive to the purchase of such products, or will it be lost upon a group of consumers that so highly values low-cost goods? More importantly, will Wal-Mart realize that with proper strategy, that it is in fact possible to offer both sustainable initiatives **and** preserve the low-cost goods that American consumers value?

Beyond the consumer interest and impact, how will management learn to handle the progression to sustainability? Again, managing the "Always Low Prices" vision for the business will require diversification of product lines and careful supply chain management if sustainability is to become a part of the equation. Will the newly sustainable attitude become the core of the organization, or will it be an offering limited to a selection of products? Future research can serve to monitor the way that offerings by the company evolve and the balance struck between sustainable and low-cost.

Conclusion

As Wal-Mart continues to emphasize usage of the internally developed Sustainability Index, researchers should continue to monitor the metrics involved by the company and be mindful of the annual Global Responsibility Report. Special attention

should be paid to how Wal-Mart evaluates the factors that it deems important to include as part of the Global Responsibility Report, and how these measures evolve over time. Exact future research objectives are not easily defined due to the rapidly changing measurements of sustainability. Metrics utilized in the future may not yet exist. The feasibility of future research hinges upon the retailers' initiative in releasing various types of data, as well as establishing figures that are comparable and easy to verify and understand.

Ultimately, research into Wal-Mart's sustainability efforts leads to the recommendation of the creation of a voluntary oversight board. With the growth of this board, retailers can begin to take part in standardizing sustainability measurements. As the metrics are developed and standardized, more retailers can take steps to increase their sustainability impacts, while fairly reporting the statistics to the consumers interested in the sustainability movement.

Wal-Mart: Going Green or Gimmick?

Appendices

Appendix A - Sales vs Emissions

Chart shows carbon dioxide emissions and net sales for the year 2009 for three leading retailers. Net sales were divided by metric tons of carbon dioxide emitted to find a measurement known as “dollar net sales per metric ton of emissions.”

Sales vs Emissions		
Retailer	2009 Co2 (metric tons)	2009 Net Sales
Wal-Mart	21,000,000	\$401,087,000,000
Costco	1,340,051	\$69,889,000,000
Target	3,027,914	\$63,435,000,000
Dollar Net Sales per Metric Ton, 2009		
Wal-Mart	\$19,099.38	
Costco	\$52,153.99	
Target	\$20,950.07	

Source:

Wal-Mart 10-K Form, 2011 (<http://investing.businessweek.com/research/stocks/financials/secfilings.asp?ticker=WMT:US>)

Costco 10-K Form, 2011 (<http://investing.businessweek.com/research/stocks/financials/secfilings.asp?ticker=COST:US>)

Target 10-K Form, 2011 (<http://investing.businessweek.com/research/stocks/financials/secfilings.asp?ticker=TGT:US>)

EcoDesk – Target (<http://www.ecodesk.com/sustainability/target-corporation>)

EcoDesk – Costco (<http://www.ecodesk.com/sustainability/costco-wholesale>)

EcoDesk – Wal-Mart (<http://www.ecodesk.com/sustainability/walmart>)

Appendix B

Chart shows carbon dioxide emissions and net sales for four years of carbon dioxide emission data for Wal-Mart. Net sales were divided by metric tons of carbon dioxide emitted to find a measurement known as “dollar net sales per metric ton of emissions.”

Year	2009 Co2 (metric tons)	Net Sales	Dollar Net Sales per Metric Ton
2007	20,000,000	\$344,759,000,000	\$17,237.95
2008	21,500,000	\$373,821,000,000	\$17,387.02
2009	21,000,000	\$401,087,000,000	\$19,099.38
2010	22,000,000	\$405,132,000,000	\$18,415.09

Source:

Wal-Mart 10-K Form, 2011 (<http://investing.businessweek.com/research/stocks/financials/secfilings.asp?ticker=WMT:US>)

Costco 10-K Form, 2011 (<http://investing.businessweek.com/research/stocks/financials/secfilings.asp?ticker=COST:US>)

Target 10-K Form, 2011 (<http://investing.businessweek.com/research/stocks/financials/secfilings.asp?ticker=TGT:US>)

EcoDesk – Target (<http://www.ecodesk.com/sustainability/target-corporation>)

EcoDesk – Costco (<http://www.ecodesk.com/sustainability/costco-wholesale>)

EcoDesk – Wal-Mart (<http://www.ecodesk.com/sustainability/walmart>)

Wal-Mart: Going Green or Gimmick?

Bibliography

Birchall, J. (2010, Aug 18). Walmart sales hit by revamp of stores. *Financial Times*, pp. 17. Retrieved from <https://login.ezproxy.etsu.edu:3443/login?url=http://search.proquest.com/docview/744519054?accountid=10771>

Carbon disclosure project. (2009). Retrieved from <https://www.cdproject.net/en-US/Pages/HomePage.aspx>

Clifford. (2011, Feb 22). U.s. sales at wal-mart show decline. Retrieved from <http://www.nytimes.com/2011/02/23/business/economy/23shop.html>

Covert, J. (2010, February 19). Wal-Mart posts first profit drop. *New York Post*. Retrieved from http://www.nypost.com/p/news/business/wal_mart_posts_first_profit_drop_bBZenrpQuEu0Z92pQWHrmK

Dahl, R. (2010). Green washing: do you know what you're buying?. *Environmental Health Perspectives*, 118(6), 246-252.

Dacey, M, Ghadessey, S., & Wang, J. (2009). Finding the green in today's shoppers sustainability trends and new shopper insights. Retrieved from http://www.greenbiz.com/sites/default/files/document/US_CP_GMADeloitteGreenShopperStudy_2009.pdf

Elkington, J. (1987). *Cannibals with forks*. Hoboken, New Jersey: Wiley.

Ghemawat, P. (2005, August 03). *The price is right*. *The New York Times*. Retrieved from http://www.nytimes.com/2005/08/03/opinion/03ghemawat.html?_r=0

Hancock, T. (1993). *Newcity*. Retrieved from http://newcity.ca/Pages/social_sustainability.html

Krugman P. (2005, May 13). *Always low wages. always*. *New York Times*. Retrieved from <http://www.nytimes.com/2005/05/13/opinion/13krugman.html>

Li, S. (2012, February 2). *Female Wal-Mart employees file sex-discrimination claims*. *LA Times*. Retrieved from <http://www.latimes.com/business/money/la-fi-mo-walmart-women-suit-20120202,0,3263110.story>

Martin, A. (2004, April 24). *New york times*. Retrieved from <http://www.nytimes.com/2012/04/25/business/wal-mart-says-it-is-tightening-internal-controls.html>

Moodie, Allison. "Hilton, Hyatt make room for carbon footprint standard." *GreenBiz*. N.p., 20 2012. Web. Web. 10 Aug 2012. <<http://www.greenbiz.com/blog/2012/06/20/hilton-hyatt-carbon-footprint-standard>>.

O'Reilly, K. (2010, March 3). *Wal-Mart settles gender suit for \$12 million*. *NBC New York*. Retrieved from

<http://www.nbcnewyork.com/blogs/threadny/THREAD-Wal-Mart-Settles-Gender-Suit-for-12-Million-86248187.html>

Ottman, J. (2011). *The new rules of green marketing, strategies, tools, and inspiration for sustainable branding*. San Francisco, CA: Berrett-Koehler Publishers.

Slaper, T., & Hall, T. (2011). *The triple bottom line: what is it and how does it work?*

<http://www.ibrc.indiana.edu/ibr/2011/spring/article2.html>. Unpublished manuscript, *Indiana Business Review*, Indiana University, Bloomington, Indiana. Retrieved from <http://www.ibrc.indiana.edu/ibr/2011/spring/article2.html>

Sustainable Directions (2012, November 12). *Economic sustainability*. Retrieved from <http://www.sustainabledirections.com.au/Economic-Sustainability/>

Target. "Environmental Sustainability." Web. 12 Jun 2012. <<https://corporate.target.com/corporate-responsibility/environment>>.

Time for change. 2012. "What is a carbon footprint - definition." <<http://timeforchange.org/what-is-a-carbon-footprint-definition>>.

Stead, W. E. Stead, J. G. (2004). *Sustainable Strategic Management*. M.E. Sharpe Inc.

Sutton, P. (2000, August 7). *Ecological sustainability*. Retrieved from

<http://www.green-innovations.asn.au/ecolsust.htm>

United Nations Brundtland Report (1987). "Towards Sustainable Development" in Our Common Future.

United States. EPA. Sustainability Basic Information; Retrieved 18 February 2012 from the EPA Web site: <http://www.epa.gov/sustainability/basicinfo.htm>

Wal-Mart Inc. Wal-Mart history (2011). Retrieved from <http://walmartstores.com/aboutus/7603.aspx>