CREATING VALUE THROUGH SUPPLY CHAIN ENGAGEMENT: AN ANALYSIS OF THREE CONSUMER PRODUCTS COMPANIES

Nancy Van Way

The Leonard N. Stern School of Business
Glucksman Institute for Research in Securities Markets
Faculty Advisor: Lawrence White
April 3, 2017

I. Introduction

A supply-chain manager at an international consumer products company recently commented to me that 'food and beverage companies would be nothing without their suppliers.' This bold statement on the importance of high-quality suppliers to the success of a business is corroborated by many business scholars, including those at Accenture that authored a recent study estimating that within manufacturing companies, the supply chain accounts for between 50 to 70 percent of total costs, and manufacturers spend about half of total revenues on raw materials and packaging.[1]

It is therefore no surprise that manufacturing companies have long been paying close attention to their supply chains in an effort to manage these costs and gain strategic advantage over competitors. One example of the power of innovative supply chain management is the development of just-in-time manufacturing in the 1960's, which has revolutionized industries. Within the auto industry, Toyota's development of just-in-time supply chain management significantly cut costs and led the company to dominate the auto industry for decades, while late adopters fell behind, were acquired, or went bankrupt.

Today, the approach to supply chain is shifting away from simple cost reduction. Historically, supply chain managers have kept in mind what Andrew Winston, author of Green to Gold, calls a "narrow range of demands." He identifies these demands as those to: "stay on the right side of the law, keep operations within regulatory levels of air and water pollution, avoid child labor, and so on."[2] However, with a changing climate and increasingly larger companies doing business around the world, this narrow range has started to expand as companies increasingly look to the supply chain as a potential source of competitive advantage.

---

[1] Hanifan, Gary, Aditya Sharma, and Paras Mehta. *Accenture Outlook*.
[2] Winston, Andrew. *Harvard Business Review*.

In today's globalizing world, companies are manufacturing products in the farthest corners of every continent, and risks to complex supply chains have never been more apparent. Effects of a changing climate, population shifts towards cities, water availability, increasing air and water pollution, and poor labor conditions in many parts of the world are a few factors that pose various threats to the stability of global supply chains and the companies that depend on them. A revelation of child labor in the supply chain, new regulations limiting water use, or a severe drought threatening a crop are a few situations that could bring a functioning supply chain to an abrupt halt. A McKinsey study reported that up to 70% of EBITDA can be put at stake due to sustainability issues.[3] An article published in the Harvard Business Review cautioned businesses that in the long term, underestimating the likelihood of a disruptive event is far more expensive than overestimating the likelihood of such an event, pointing to such debilitating events as Toyota's gas pedal recall of the 2010s which was caused by a strong reliance on one faulty supplier or the fire in a Philips Electronics plant that subsequently cost Nokia $100 million in sales in just one month.[4]

Over the past few decades, senior managers in the food and beverage and consumer products industries have been paying closer attention to the potential for disruption in their supply chains. With their reliance on raw materials that often require significant labor inputs, these companies are particularly susceptible to product shortages or price increases due to environmental or social factors in the communities where they source. It has become the industry norm for food and beverage and consumer products companies to invest heavily in supply chain risk mitigation tactics. Some of the most common efforts in this area include diversifying the supply chain, monitoring of growing conditions in sourcing regions, building out

[3] Whelan, Tensie and Carly Fink. *Harvard Business Review*.
[4] Chopra, Sunil and ManMohan Sodhi. *MIT Sloan Management Review*.

the compliance team that can respond to changing regulation and continuing to search for cheaper and less risky sources of raw materials.

Even with such precautions in place, there are several recent examples of consumer products companies facing major costs in the wake of supply chain disruption. A few of these include: the agribusiness giant, Bunge, suffering a $56 million quarterly loss in its sugar and bioenergy businesses due to drought in 2010; the textile industry seeing global price increases of 28 percent following the 2011 flooding in Thailand; and Coca-Cola shuttering operations at one of its most productive Indian plants in 2004 following a water shortage.[5,6] In addition to material shortages threatening business continuity, the misfortunes of businesses are increasingly becoming public knowledge as society utilizes the internet and social media to broadcast news and changing public opinion around the world.

With the increasing prevalence of these reputational and operational risks, there has been a shift in supply chain management in recent years towards even greater engagement with supply chain stakeholders. Leading companies and researchers have started to recognize a correlation between development of strength and resiliency within supply chains and long-term financial success of the companies that depend on them. This resiliency can often be measured by the overall sustainability of the communities where supply chains originate.[7] A recent study conducted by Ernst and Young and the UN Global Compact of 100 supply chain, procurement and sustainability executives from 70 companies corroborated this, showing that that improving supply chain performance through the lens of sustainability can "enhance processes, save costs,

[5] Whelan, Tensie and Carly Fink. *Harvard Business Review*.
[6] Fuller, Thomas. *The New York Times*.
[7] Clark, Gordon, Andreas Feiner, and Michael Viehs. University of Oxford, Arabesque Partners.

increase labor productivity, uncover product innovation, achieve market differentiation and have a significant impact on society."[8]

The prioritizing of sustainability metrics in supply chain management falls into a broader trend in the financial services industry where investors are increasingly using measurements of corporate sustainability -- most commonly characterized as either environmental, social or governance (ESG) performance -- to predict long-term economic sustainability and risk exposure. Strong ESG performance has been shown in several studies to lower a company's cost of capital, result in better operational performance and correlate with positive stock price performance over time.[9] Much of this operational improvement is found in the supply chain side of the business.

In this paper I will introduce and discuss all potential areas where food and beverage and/or consumer products companies might create long-term value through supply chain engagement. I will also focus on the supply chain engagement activities of three large, multi-national food and beverage and/or consumer products companies: Unilever, Proctor & Gamble (P&G), and Coca-Cola. I will explore the supply chain engagement and sustainability strategy of each company and evaluate how these strategies and subsequent actions have been received by industry analysts.

The three companies that I will be discussing in depth can be summarized as follows:

I.1 Unilever: Unilever is a global food and beverage and consumer products company co-headquartered in Rotterdam, Netherlands and London, United Kingdom. Unilever is the world's third largest consumer products company as measured in revenues, behind P&G and Nestle. Unilever sells products in 190 countries and has over 400 brands, including 13 brands with

[8] Ivanova, Velislava and Lauren Rogge. *Ernst and Young*.
[9] Clark, Gordon, Andreas Feiner, and Michael Viehs. University of Oxford, Arabesque Partners.

annual sales of at least $1 billion. 2015 revenues were about $57 billion. Unilever has a large variety of products and as such relies on a diverse array of raw materials in its supply chain. From cocoa to sugar to corn, the continuity of Unilever's products depends on the reliable, affordable production of crops around the world. As a result of this dependence, and following the lead of a management team committed to sustainability through their widely publicized Sustainable Living Plan, Unilever has emerged as a supply chain and sustainability leader in the past decade, topping the consulting firm SustainAbility's list of global sustainability leaders in 2016, for the sixth year in a row.

I.2 Coca-Cola: Based in Atlanta, Georgia, Coca-Cola is one of the world's largest food and beverage companies, with 2015 revenues at about $45 billion. In addition to its flagship Coca-Cola soft drink, the company's brands include a variety of carbonated beverages, fruit juices, flavored waters, coffees and teas. Coca-Cola relies on its bottlers, located throughout the world, to produce the majority of its products on-site, and has had historical issues with preserving clean water in the communities where its bottlers operate. As a result, Coca-Cola has done extensive work to understand and reduce the company's water footprint. Coca-Cola has also led the industry in understanding and reducing its packaging footprint. Still, Coca-Cola strongly relies on raw materials in crafting its products, and its supply chain is therefore at risk from climate change, poor labor conditions, and other factors in the communities where it sources ingredients and bottle their products.

I.3 Proctor and Gamble: P&G is a global consumer products company with a focus on home care and personal care goods. The company is based in Cincinnati, Ohio, and in 2015 had revenues of about $71 billion. This was after a restructuring in 2014 whereby P&G dropped or divested about 100 brands and streamlined operations with a focus on 65 core brands. Prior to this restructuring P&G's revenues in 2013 were about $74 billion. P&G sells its products around the world, on all continents and sources raw materials from cotton to chemicals to oils. While P&G has not been viewed as a leader in transparency or sustainability in the past, the company has begun to join industry groups working to enhance supply chain sustainability. Some of these efforts were likely motivated by controversy surrounding palm oil sourcing, which gained notoriety when it was discovered that unsustainable practices were becoming the norm in harvesting this essential raw material.

In my analysis of the supply chain efforts of these three companies I plan to show how investors have responded to a sustainability leader that has integrated ESG metrics into all operations (Unilever); a long-time leader in supply chain efficiency that has kept sustainability at an arm's length from core operations (P&G); and a prior sustainability leader in that's efforts are waning in supply chain engagement (Coca-Cola).

II. Potential Areas of Value Creation as a Result of Supply Chain Engagement

Scholars and researchers within in the business community have increasingly been identifying ways in which engaging with the supply chain can lead to value creation through both top- and bottom-line growth. In the past several years in particular, new research has shown how companies are engaging with their suppliers and subcontractors to realize value. McKinsey, Ernst & Young and Deloitte have each published white papers articulating the importance of supply chain engagement for CEOs and laying out steps to better achieve it. Business journals such as the Harvard Business Review, MIT Press and others have additionally published multiple research papers outlining value creation opportunities associated with enhanced supply chain engagement.

The new approach to supply chain management conveyed in these reports and articles states that traditional, short-term thinking about the supply chain as a cost to be minimized has led companies away from opportunities to create value. These opportunities are associated with engaging in the long-term with supply chain stakeholders to develop an understanding of significant risks and opportunities, implement ways to mitigate these risks/capitalize on opportunities, and to develop suppliers into partners in innovation and growth.

In my review of recent works, supply chain engagement in a few key areas has been shown to improve the long-term sustainability of society while simultaneously strengthening company financial and operational performance. In the section to follow I will discuss how value is created in each of these areas and provide several examples of how companies have successfully captured value through these types of projects.

II.1 Increased efficiency and cost minimization

Researchers Ram Nidumolu, CK Prahalad, and MR Rangaswani, in their Harvard

Business Review article, “Why Sustainability is Now the Key Driver of Innovation,” state that companies can reduce costs by reducing manufacturing waste. They point out that “vendors consume as much as 80% of the energy, water, and other resources used by a supply chain,” contributing substantially to overall product cost. [10] While waste-reduction may have been viewed in the past as an initiative for the corporate social responsibility or public relations teams, the article asserts that working with suppliers to become “environment-friendly lowers costs because companies end up reducing the inputs they use.” With vendors and suppliers requiring such a large percentage of total resource requirements, reductions in these requirements may help companies realize significant savings.

Tensie Whelan and Carly Fink, in their Harvard Business Review article “The Comprehensive Business Case for Sustainability” provide an illustration of this concept in the example of Dow Chemical. Since 1994, Dow has invested about $2 billion in improving resource efficiency in their manufacturing processes and supply chain. Through these efforts they have saved $9.8 billion in reduced energy and wastewater costs.

In the food and beverage industry in particular, suppliers are often the largest contributors to the overall resource needs of the final product. One example of an expensive input far upstream in the food and beverage supply chain is fertilizer use in farming. Life-cycle assessment, a tool used to identify and quantify all resource inputs required in the manufacturing a product, has found that fertilizers can make up more than a quarter of an agricultural product’s cost. Employing modern farming techniques like precision agriculture can significantly reduce fertilizer costs, improve farm sustainability, and reduce the overall cost of raw materials.[11]

The National Resources Defense Council states that use of precision agriculture technology, such as guidance systems to ensure that farm inputs are applied in the right place, on

[10] Winston, Andrew and Shiela Bonini. *The Sustainability Consortium*.
[11] Winston, Andrew and Shiela Bonini. *The Sustainability Consortium*.

ten percent of planted land in the US could reduce fuel use by 16 million gallons per year, herbicide use by 2 million quarts per year, and insecticide use by 4 million pounds per year.[12] These drastic resource reductions and associated savings have led many agricultural products companies, from Unilever to ABInBev, to engage with suppliers in improving production methods and significantly reducing the amount and cost of supply chain inputs.

A second area where value has also been consistently created for companies is greenhouse gas ("GHG") emission reduction programs. In a 2011 study, Accenture collaborated with the Carbon Disclosure Project ("CDP") to survey the impacts of GHG reduction programs and found that 40 percent of CDP members have realized net savings as a result of carbon reduction. Furthermore, more than a third of companies have benefitted from either new revenue streams as a result of carbon reduction programs or have benefitted from the carbon reduction efforts of their suppliers. Whelan and Fink state that "companies experience an average internal rate of return of 27% to 80% on their low carbon investments."

II.2 Increased quality

Another widely-discussed benefit to engaging with the supply chain is an increase in product quality. Through the use of tools such as policy and standards development, supplier training, workplace monitoring and improvement, and enhanced health and safety requirements, companies can improve the well-being and capability of workers in their supply chain. Workers with strong overall well-being in turn deliver a superior product than would lower-cost alternatives.

In the food and beverage sector, engagement with farmers around growing practices can significantly improve the quality of the final product. In 2010, Unilever recognized that sub-par

[12] "Conservation Practices that Save…" National Resources Conservation Service.

growing practices were resulting in low tea quality and low yields, threatening the long-term viability of their popular tea brands. Unilever decided to address this issue by committing to sourcing 100 percent of their tea from certified sources by 2020. They partnered with organizations like the Rainforest Alliance to deliver training on growing practices and environmental sustainability to tea growers around the world.

After delivering training and implementing sustainable practices, the output per acre at each Unilever plantation was significantly higher than averages in the countries where the plantations operated. In some cases, the plantation output was double the country average. Farmers that worked small plots of land that received certification saw their outputs rise significantly as well, and their average income increased by 10 to 15 percent. In the long-run, Unilever's certification paid off in terms of increased quality and output, while also giving its tea farmers tools to deal with large fluctuations in the climate that may result from climate change, such as drought, increasing Unilever's supply chain resiliency.[13]

A myriad of other crops such as cacao, coffee and palm oil, suffer from similar issues of low-quality in their supply chain. Leading companies have realized that this issue not only threatens the livelihood of farmers that grow these products, but threatens their future margin and bottom line. As companies realize that future demand cannot be met with the current supply chain capacity, many have begun engaging with supply chain stakeholders to address systemic issues of low-quality production. For example, many companies that rely on palm oil, including Unilever, P&G, and Coca-Cola, have made public commitments around sustainable sourcing, each requiring a majority percentage of their supply to come from certified sustainable, higher-quality sources.

[13] Whelan, Tensie and Carly Fink. *Harvard Business Review*.

II.3 Risk reduction from reputational damage

One of the largest historical drivers of sustainability program development has been reputation protection. Most large companies have in-house communications or public relations teams working to understand consumer sentiment and protect against the risk of negative press. This is done for good reason. A study done by Brayden King of Northwestern University analyzing the most high-profile boycotts from 1990 to 2005 found that for every day that each boycott was in the news, the boycotted company's stock price fell on average. Interestingly, in almost no case did sales revenue fall. Just the threat of potential long-term reputation damage has been enough to instill fear in the minds of investors. Additionally, in over a third of these high-profile boycott cases, even though revenues were largely unaffected, action was taken by the company to remedy the protested issue.

The Ernst & Young study, "Building Sustainable Supply Chains," which interviewed representatives from 70 international companies, reports that "for three out of every four interviewees, avoiding reputational damage is [a] key driver" for implementing sustainability programs. Company representatives state that these events, when they do occur, are major drivers for substantial changes in their respective industries. One recent example of this includes the 2013 Rana Plaza factory collapse, which led leading apparel companies to form The Accord on Fire and Building Safety in Bangladesh and The Alliance for Bangladesh Worker Safety, now considered table-stakes for participation in the apparel industry. Through these organizations, companies now have insight into the working conditions of every participating factory in Bangladesh and can require changes before any further disasters occur.

In the wake of these reputational disasters, companies seek to ensure that they will not happen again. During the high-profile boycott of Nike in the 1990's when the public demanded that Nike eliminate sweatshop conditions in their supply chain, the company suffered a significant loss in sales and was forced to lay off employees. Since then, Nike has changed its business model to incorporate elements of sustainability into the sourcing process. Today, Nike publishes comprehensive reports on the location and performance of all its suppliers' factories. The company is now considered a sustainability leader in the apparel industry and has not since been attacked for factory conditions in its supply chain.

II.4 Product differentiation

In addition to preventing large-scale reputational disasters, some companies also realize that proactive sustainability efforts can differentiate their product. In a study released early in 2017, Unilever found that among 20,000 adults surveyed in the UK, US, Brazil, Turkey and India, customer-stated sustainability preferences correlate with actual buying habits. This study reveals the increasing competitive advantage that sustainable products can have in the marketplace, with 21 percent of respondents stating that they would choose a brand based on a belief that it was produced responsibly. The study also shows that the greatest shift towards purchasing sustainable products is in emerging markets, where food and beverage and consumer products industries are seeing the greatest potential for future growth. 88 percent of shoppers in India and 85 percent in Turkey and Brazil say that they personally feel better when they purchase sustainable products, versus 53 percent in the UK and 78 percent in the US.[14]

II.5 Reduction of supply disruption risk and adaptability to disruption

As the supply chains of global companies grow ever more complex, and as scientists continue to uncover new risks posed by a changing climate, company leaders are exposing

[14] "Report Shows a Third of Customers..." Unilever.

themselves to a new set of risks that are not yet well understood. Ernst & Young, through extensive interviews, has found that the practice of building resiliency into supply chain operations “has not kept pace with the continually rising complexity of supply chains and the increased frequency of risk events.” Companies that engage with their supply chain gain knowledge and foresight that will help as they navigate these risks.

Tensie Whelan and Carly Fink state in “The Comprehensive Business Case for Sustainability” that through “regular dialogue with stakeholders and continual iteration, a company with a sustainability agenda is better positioned to anticipate and react to economic, social, environmental, and regulatory changes as they arise.” “Sustainability as a Key Driver of Innovation” points out that companies that have a stronger understanding of the underlying conditions impacting supply chains “gain more time to experiment with materials, technologies, and processes” as they navigate change.

Whelan and Fink point to a study of the gold-mining industry showing that stakeholder groups have heavily influenced the outcomes of many decisions around land permitting, taxation and regulation in the countries where gold-mining companies operate. More engaged companies have therefore been better able to shape such regulation to favor their company.

“Sustainability as a Key Driver of Innovation” references Hewlett Packard’s supply chain work in the early 1990s that led to their realization that lead would soon be banned in consumer electronics. In going back to the early stages of the design process with user and environmental safety in mind, HP designed a compliant product in advance of new regulations.

> “[HP realized] that because lead is toxic, governments would one day ban lead solders. Over the following decade it experimented with alternatives, and by 2006 the company had created solders that are an amalgam of tin, silver, and copper. […] Thus HP was able to comply with the European Union’s Restriction of Hazardous Substances Directive, which regulates the use of lead in electronics products, as soon as it took effect, in July 2006.”

HP, by examining at their supply chain through the lens of sustainability, was able to move more quickly than competitors in adapting to a major regulatory shift in the industry.

Awareness of potential risks in the supply chain may also prepare companies for environmental changes due to climate change. Tensie Whelan and Carly Fink cite a study of 8,000 supplier companies in which "72% said that climate change presents risks that could significantly impact their operations, revenue, or expenditures." In the agriculture, food, and beverage sector, the impacts of climate change have the potential to alter growing conditions and seasons, increase pests and disease, and ultimately decrease crop yields. Disruptions in the supply chain may significantly affect production processes that depend on currently unpriced natural capital assets such as biodiversity, groundwater, clean air, and climate.[15] An awareness of these risks may help a company plan how to navigate potential climate disasters.

II.6 Increased innovation

A company's ability to adapt quickly to change is closely tied to its capacity for innovation. Many companies have seen that sustainability programs and supply chain engagement have led to often unexpected innovation. Ram Nidumolu, CK Prahalad, and MR Rangaswani, in "Why Sustainability is Now the Driver of Innovation" state that a desire to create a more sustainable business pushes decision-makers to develop alternatives to the current state of business that they would not have otherwise considered in business-as-usual.

Nidumolu, Prahalad and Rangaswani point to the examples of Cargill and Unilever, in responding to consumer pressure around deforestation, identifying agricultural innovations. In working with farmers to ensure that they were not cutting down any new land, these companies discovered better ways to farm existing land, increasing overall yields and product quality.

[15] Whelan, Tensie and Carly Fink. *Harvard Business Review*.

An Ernst & Young study[16] looks at innovation through the lens of diversity. They state that investing in engagement with a geographically and otherwise diverse set of suppliers forces companies to work within a variety of regulatory and social frameworks. As a result, they explore many approaches to doing business, allowing them to identify new opportunities for innovation and process improvement.

II.7 Increased capability for technology integration

As technology makes it easier for companies and consumers to gather data about product supply chains, consumers are demanding more and more information about the origins of their products. Companies with robust supply chain engagement programs will be better positioned to respond to these consumer requests. “The Transparent Supply Chain” talks about the “new norm” in which customers will demand that companies fully understand their supply chains and provide detailed information about the origins and life-cycle of all products. The article predicts that brands will not be able to gain the trust of their customers without providing this information, stating that “revealing origins will become an essential part of […] securing reputation.” In the food and beverage industry, transparent information about every ingredient included in a product will be expected. The article describes ways in which many industries already integrate technology into supply chain management processes. This technology allows them access to infinitely more data about the history and origins of what goes into manufacturing their own products.

> Product labeling has been transformed by microscopic electronic devices, genetic markers for agricultural products, and a new generation of bar codes that can be read with standard mobile phones. Combine these developments with the reach of the internet and virtually unlimited data storage, and firms can now contemplate more-sophisticated ways to track—and to reveal—the manufacturing trajectory of their products. New generations of tags— such as

[16] Ivanova, Velislava and Lauren Rogge. *Ernst and Young*.

> Hitachi's sand-grain-size mu-chip—can be used, for instance, to label jewelry inconspicuously. It can even be embedded in paper and plastic, making the product's provenance data part of the material itself. And smaller-scale tags—labeled exotically as "radio dust"—are in development.

In addition to sophisticated tracking data, firms are increasingly becoming more transparent about conditions in their manufacturing facilities and are sharing that information in real-time. Asda, the UK arm of Wal-Mart, runs live feeds on its website from webcams at a few of its food and apparel suppliers. Swiss textile company Switcher labels each of its products with a code that consumers can enter at the website Respect-code.org to retrieve information about the firms and factories along the supply chain. Another apparel company, Anvil, uses a system called TrackMyT.com to provide multimedia information about the route of its products from raw materials to finished item. These technologies can be used to assure customers that the product was produced responsibly and can help companies and consumers identify potentially risky behavior in the supply chain.

II.8 Improved company culture

Companies are learning that increasing employee engagement is a major factor for company success, but few know exactly what that means or how to increase it. A study conducted by Cone Communications has identified that sustainability may be a big influencer for company cultures and employee engagement across all sectors.[17] The study found that 74 percent of employees say their job is more fulfilling when they are provided with opportunities to make a positive impact on social and environmental issues – and 70 percent would be more loyal to a company that helps them contribute to efforts in corporate social responsibility. 77 percent said that they felt it was important that their companies provide them with hands-on sustainability activities over less-involved activities like financial donations. As the majority of most

[17] 2016 Cone Communications Employee Engagement Study.

companies' social and environmental footprint comes from their supply chain, especially in the food and beverage industry, the supply chain is the first place that companies look to engage in meaningful sustainability-related activities.

The study goes on to show that choices made by millennials in choosing which company to work for also incorporate sustainability. 64 percent of millennials (versus a 51 percent US average) will not work for a company that does not have social and environmental commitment. Additionally, 75 percent of millennials (versus a 55 percent US average) would choose to work for a socially responsible company, even if their salary was lower than other companies.

Sustainability and stakeholder engagement programs can therefore lead to better overall employee relations and employee well-being, as the company is attracting motivated candidates that care about their work and impacts of company operations. As reported in "From the Stockholder to the Stakeholder," stronger employee relations can lead to a lower cost of equity and improved operational performance. Higher employee well-being can reduce a firm's borrowing costs. Furthermore, a study done by Alex Edmans of the University of Pennsylvania found that a portfolio of the '100 Best Companies to Work For' earned an annual alpha of 3.5% in excess of the risk-free rate from 1984 to 2009 and 2.1% above industry benchmarks.[18]

[18] Clark, Gordon, Andreas Feiner, and Michael Viehs. University of Oxford, Arabesque Partners.

III. Critical supply chain engagement issues at Unilever, Coca-Cola and P&G

The list provided in the prior section is not exhaustive. Business leaders are constantly discovering new ways that they can provide for their companies and society at the same time while driving revenue growth, margin growth and innovation for the company.

The below charts show supply chain issues that are currently critical to the business models of Unilever, Coca-Cola and P&G. These companies all provide consumer products and therefore face similar critical issues. However, each company takes a different approach to addressing the risks posed by these issues, from Unilever engaging with suppliers to find the root cause of issues to P&G removing suppliers that do not meet a specific set of criteria.

Table 1. Critical supply chain issues at Coca-Cola

Coca-Cola reports on their sustainability and supply chain performance through an annual sustainability report. Their report is prepared in accordance with Global Reporting Initiative (GRI) standards, the United Nations Global Compact LEAD Program Advanced Criteria for reporting, the United Nations Guiding Principles Reporting Framework and the Sustainable Development Goals. It meets the requirements of the United Nations Global Compact Communication on Progress. The reports are not third party audited or assured.

Issue	Reporting on Issue	Engagement on Issue	Activist or Public Pressure
Water: Scarcity	Yes	Partnerships and programs with bottlers, suppliers	High
Water: Pollution	Some	Continual monitoring and local partnerships	High
Ingredient Sourcing (sugar, fruits, tea, oil)	Some	Some certification commitments	Some
Human Rights Abuses (bottlers, suppliers)	Some	Guidelines for suppliers, auditing	Some
Energy Use	Yes	Guidelines, auditing	No
Product Quality/Safety	Yes	Guidelines, auditing	Some

Table 2. Critical supply chain issues at P&G

P&G reports on their sustainability and supply chain performance through an annual sustainability report. Their report is prepared in accordance with Global Reporting Initiative (GRI) standards. Their report is not third-party audited or assured.

Issue	Reporting on Issue	Engagement on Issue	Activist or Public Pressure
Water Use	Yes	Directive for suppliers to improve	Some
Palm Oil Sourcing	Yes	Certification commitment	High
Pulp and Paper Sourcing	Some	Some certification commitments	Some
Human Rights Abuses (suppliers)	Some	Supplier guidelines and audits	No
Energy Use and Emissions	Yes	Supplier guidelines and audits	No
Product Quality/Safety	Yes	Supplier guidelines and audits	No

Table 3. Critical supply chain issues at Unilever

Unilever reports on their sustainability and supply chain performance through an annual sustainability report which is fully embedded in the company's annual financial reporting. Therefore, their sustainability report and financial reports are released simultaneously. Their report is prepared in accordance with Global Reporting Initiative (GRI) standards and is third-party audited and assured.

Issue	Reporting on Issue	Supplier Engagement on Issue	Activist or Public Pressure
Water Use	Yes	Partnerships with suppliers, reporting	No
Palm Oil Sourcing and deforestation	Yes	Certification commitments, partnerships with suppliers	High
Other ingredient sourcing	Yes	Certification commitments in cocoa, tea, sugar; partnerships	Some
Human Rights Abuses (suppliers)	Yes	Certification commitments in partnership with NGOs	Some
Energy Use	Yes	Developing new renewables, reporting on carbon negative target	No
Product Quality/Safety	Yes	Sustainability embedded in design process, certification commitments	No

III.1 Degrees of supply chain engagement

The degree to which a company can engage with their supply chain can vary significantly. I have broken out the level of potential supply chain engagement into the following characterizations of low, medium and high. A firm with low engagement has little understanding of risk associated with their supply chain or sustainability issues that they face. It does not report on either type of issue. A firm with medium engagement understands that it faces risks in its supply chain around sustainability issues. It publishes reports that discuss its strategy in addressing these issues and reports its performance in accordance with guidelines that are accepted by the industry (such as the Global Reporting Initiative which is a widely accepted standard for sustainability reporting). A firm with high engagement treats its suppliers as full partners in achieving business targets. It engages with suppliers through company directed programs and partnerships to provide training and research and facilitate conversation. It has established targets around supplier performance, reports regularly on progress toward these targets and has incorporated these targets into all business processes.

Exhibit 1. Levels of supply chain engagement from low to high

Low Engagement

- Publishes little to no information about sources of their raw materials used
- Gathers minimal information about suppliers, has little understanding of risks
- Vulnerable to changes in supply chain, not highly adaptable

Medium Engagement

- Publishes externally-verified sustainability report with key sustainability indicators
- Collects data on sustainablity performance of suppliers, eliminates poor performers
- Vulnerable to major shifts in supply chain, less vulnerable to activist campaigns

High Engagement

- Incorporates sustainability into design process, treats suppliers as business partners
- Works with suppliers to identify issue root causes and develop remediation plans
- Low vulnerability to changes in supply chain, high resiliency to change

IV. Unilever

Unilever is quickly establishing itself as a leader in supply chain engagement in the private sector. The company has won accolades from a wide variety of credible sustainability-focused organizations. The Sustainability Consortium, a leading sustainability research and consulting firm, labeled Unilever as one of six global companies that is leading the way in sustainability.[19] GlobeScan, a leading public opinion consulting firm, deemed Unilever as having "the most comprehensive strategy of enlightened capitalism of any global firm."[20] Oxfam International recently named Unilever as a best-in-class company for agricultural sourcing practices and the Dow Jones Sustainability Index named Unilever the world's leading food and beverage company in sustainability performance.[21] Unilever's formal plan for supply chain engagement and sustainability, the Unilever Sustainable Living Plan ("USLP"), creates value for Unilever in several of the ways outlined in section two of this paper.

The USLP was developed by the current Unilever CEO Paul Polman, who joined as CEO in 2009. The USLP states that Unilever will double its business by 2020 while halving its environmental impact from the present-day baseline and improving social impact when measured against the same baseline. Polman believes that "businesses that are responsible and actually make contributing to society a part of their business model will be successful."[22]

As the majority of Unilever's environmental impacts do not come from the company's own operations, rather from its supply chain (21%) and customers (70%),[23] Polman's goals are strongly tying supply chain engagement to value creation for the company. This association is

[19] Winston, Andrew and Shiela Bonini. *The Sustainability Consortium*.
[20] "In Search of the Good Business." *The Economist*.
[21] Vanham, Peter. *Business Insider.*
[22] Bartlett, Christopher A. *Harvard Business School Case*.
[23] Bartlett, Christopher A. *Harvard Business School Case*.

not typical of most company leaders, who may subscribe to the belief that the impacts of their supply chain and customers is beyond their control and not their responsibility.

With the USLP goals in place, Unilever is shining a spotlight on its operations and betting that customers will respond well to details about the origins and manufacturing of Unilever products. It is also betting on the abilities of workers in its supply chain and in their drive to create shared value for themselves and Unilever's stakeholders.

The USLP sets three goals: to help a billion people improve their health and well-being; to halve the environmental footprint of making and using Unilever products; and to enhance the livelihoods of those in its value chain. These three broad goals were broken into seven commitments; and these were broken out into 50 specific, measurable, defined goals. Each of these goals was not the responsibility of a separate sustainability department, rather they became Unilever's core strategy. Keith Weed, the new head of Unilever's sustainability program, described this new strategy as applying to "every brand, every market. No exceptions."[24] The company set about incorporating the achievement of these goals into every company department and every operational procedure. Achievement of these goals became the job of every employee at Unilever.

Unilever reports its progress on these goals in its annual sustainability report, which is fully integrated into the company's annual financial reporting and is released at the same time. The company's sustainability reporting is done in accordance with the guidelines laid out by the Global Reporting Initiative, the current industry standard for sustainability reporting, and results in most areas are audited and verified by third parties, such as the auditing firm, PricewaterhouseCoopers.

[24] Walt, Vivienne. *Fortune*

The initial reaction of the media and investors to the USLP was far from one of immediate acceptance, and investors have continued to struggle with understanding how the plan will provide them with returns. When the plan was announced, an article in Marketing Week called the new strategy "high risk" and said that there were "inherent contradictions between the conventional marketing objectives and the sustainability targets," nervous that Unilever was taking the marketing future of the company in an entirely new direction.[25] Journalists at the Financial Times expressed confusion around how this new, untested strategy would translate to bottom line growth. They asked questions like "Where are the figures on cost savings?" and "Where were the promises about results flowing to the bottom line?" In 2014, Jefferies analyst Martin Deboo commented that "Unilever has built a strong niche position with investors who focus on environmental [matters]. But for mainstream investors it is a modest positive at most, and then only so long as it does not cost much."[26]

However, against headwinds of doubt and criticism from members of the financial community and media, Unilever's new strategy has delivered unquestionable financial wins for the company. An Economist article profiling the SLP in late 2014 points out that Unilever shares had risen by 40 percent since the announcement of the plan in late 2010, in stark contrast to the poor performance of P&G over the same time period.[27] Business Insider, in an article highlighting stock price increases coupled with emissions reductions, points out in 2016 that since Polman assumed the role of CEO, Unilever's stock price doubled.[28] An analyst at Stewart Investors points out that "investors in Unilever's London-listed shares have been rewarded with a return of just under 13 per cent a year over the past decade, versus a little over 5 per cent a year

[25] Bartlett, Christopher A. *Harvard Business School Case*.
[26] "In Search of the Good Business." *The Economist*.
[27] "In Search of the Good Business." *The Economist*.
[28] Vanham, Peter. *Business Insider*.

in the FTSE 100. Sustained for 10 years, this has meant a 230 per cent return versus 66 per cent for the index. This is a company that has delivered handsomely for its shareholders."[29]

In 2014, Polman announced that Unilever was growing faster than its competitors, even in the slowing global market for consumer products. Unilever's margins were increasing, up to 14.5 percent from 13.6 percent in 2009. Investors had seen an 18 percent rise in total shareholder return. In 2015, when assessing progress at the five-year mark, Unilever announced that its "Sustainable Living Brands," 11 of its top 30 brands and those that directly contributed to one or more of the 50 USLP goals, accounted for half of Unilever's growth and had grown at twice the rate of the rest of the business.[30]

Employee engagement has also been on a sharp upswing. Job satisfaction was reported at 75 percent, up from 63 percent in 2009. In 2014 Unilever earned third place in LinkedIn's Most In-Demand Employers, behind Google and Apple. Employees at Unilever reported that the new strategy "helped instill a growth mentality within the company,"[31] encouraging employees to constantly seek innovative answers to challenges faced by the business. Today, a company of 172,000 employees, Unilever receives 1.8 million job applications each year.[32]

In addition to financial returns, Unilever has also achieved strong social returns in the communities where it operates. Unilever has reduced its reported environmental footprint and audits of certified agricultural project sourcing by organizations such as the Rainforest Alliance and the Roundtable for Sustainable Palm Oil show that the company sources significantly more raw materials from certified sustainable sources. Unilever's efforts to hit its initial 50 USLP

---

[29] Nelson, Jack. *Financial Times*.
[30] Bartlett, Christopher A. *Harvard Business School Case*.
[31] Walt, Vivienne. *Fortune*.
[32] Walt, Vivienne. *Fortune*.

targets was largely seen as successful, and in 2014 only five were publicly listed as "off-target."[33]

Unilever's performance also won it international recognition and often a spot at the regulating table. Polman was asked by UN Secretary General Ban Ki-moon to sit on the board of the UN Global Compact, a global group that formulates recommendations for global businesses to commit to social and human rights benchmarks. The UN Secretary General also asked Polman to represent the entire private sector among a group of 27 global leaders who would develop the follow-up strategy to the UN's Millennium Development Goals that expired in 2015. The group developed the UN Sustainable Development Goals ("SDGs"), a framework that has been widely adopted in sustainable reporting by the private sector. Many companies now map their own sustainability goals against the SDG framework in addition to other commonly accepted frameworks such as the Global Reporting Initiative. With a seat at the table to develop these goals, Polman had advance notice of what this framework would be and had extra time to prepare the Unilever response. He also may have been able to influence the development of the goals so that they would be in accordance with Unilever's own goals and priorities.[34]

Unilever has won this recognition as a sustainability and supply chain leader even as they have been at the center of several supply chain scandals. In 2015 the BBC announced that they had conducted an investigation into Unilever's Rainforest Alliance-certified tea suppliers in India and found that many of the certified tea plantations were operating in blatant violation of Rainforest Alliance standards. The BBC found that workers on these tea plantations were given broken safety equipment and were paid a wage far below the government-required minimum. They also found rampant child labor, malnutrition, illness, and generally unsanitary conditions. Harrod's, one of the UK's largest department stores stopped selling several Unilever tea brands

[33] Bartlett, Christopher A. *Harvard Business School Case*.
[34] Bartlett, Christopher A. *Harvard Business School Case*.

after these allegations came to light. Unilever, in response, acknowledged that there was still work to be done in ensuring sustainability and safe conditions in the tea supply chain.[35]

In addition, in late 2016, Amnesty International listed Unilever, along with P&G, as one of several multi-national companies sourcing palm oil from Wilmar, the world's largest palm oil manufacturer, that was accused of employing child labor in its plantations. Amnesty encouraged the public to wage a social media campaign, via twitter, against Unilever, demanding the company to stop sourcing palm oil from any controversial sources. Unilever has continued to respond to these allegations by citing their commitment to work towards 100 percent certified sustainable palm oil in its products.[36]

Even as Unilever continues to face challenges in meeting their SLP goals, the company has unquestionably made strides in integrating sustainable practices into its supply chain and have delivered superior returns for shareholders along the way. However, even with the many successes at Unilever that have been attributed to the SLP, much of the financial community has exhibited skepticism about the new strategy. An article in the Wall Street Journal mentions that a month after becoming CEO in 2009, Polman scrapped the long-time practice of releasing quarterly earnings calls and providing financial targets in favor of a longer-term approach. The authors state that this "rankled" some investors.[37] Over the course of the past two annual earnings calls, even while every Unilever presenter has described their results within the framework of the USLP, not a single investor on the call has asked for more information about the plan. Jefferies analyst Martin Deboo again commented in early 2017 "A minority of investors I speak to give two hoots about Unilever's Sustainable Living Plan."[38]

---

[35] Rowlatt, Justin and Jane Deith. *BBC News*.
[36] Utroske, Deanna, *Cosmetics Design*.
[37] Chaudhuri, Saabira. *The Wall Street Journal*.
[38] Murray, Alan. *Fortune*.

Uncertainty around the SLP was made even more apparent in February, 2017 when Kraft Heinz made a bid to buy Unilever, citing low margins as a major motivator for the bid. Kraft Heinz is owned in large part by 3G Capital, an investment firm that is notorious for slashing costs and increasing margins in the short-term. 3G Capital's investors look to these cost reductions for dramatic financial gains, and have often achieved them through some of the largest acquisitions in history. Undoubtedly, some investors and shareholders perceive the costs of long-term supply chain engagement programs and the USLP as costs that, when cut, could bump up margins in the short-term.

While the takeover bid was dropped a few days later, the future of Unilever's supply chain engagement programs was put into question as a result of the bid. Paul Polman has since reported that a review of business operations will immediately be done. He has also announced that Unilever will be moving towards a policy of zero-based budgeting, under which every dollar spent will have to be justified during each budgeting cycle. Investors responded favorably to these initiatives, as the Unilever stock price rose nearly six percent in the days after these announcements. The future of Polman's tenure as CEO has also been called into question, with some saying that his strong focus on doing well while doing good has decreased potential financial returns.

However, some investors and the media credited the SLP and Polman's long-term strategy as a key factor in fending off the Kraft Heinz takeover. Unilever shareholders definitively rejected the price offered by Kraft Heinz, stating that Unilever is poised to deliver long-term value that far surpasses any gains from shorter-term cost-reductions. An analyst from Royal London Asset Management stated in the Financial Times that "There is no way either Unilever's management or shareholders can accept an offer at this level. For a lower quality business it would be unacceptable, but for a business of Unilever's quality it is nowhere near the right price."[39] One investor from Steward Investors, writing in the Financial Tmes specifically cited the SLP, supply chain engagement work, and Unilever's impact on society as justification, on top of their superior financial returns over the past decade, for why Unilever is indeed a "quality" company. He states that "through its so-called sustainable living plan, Unilever is strengthening the agricultural practices of 600,000 farmers in its supply chains. It has reduced the water intensity of its factories nearly 40 per cent. It is helping reduce child mortality by educating more than 300m consumers in developing countries to use soap. No company is perfect. But these are not the achievements of a struggling organization in need of a shake-up."[40]

Reporters from the New York Times, Financial Times, Bloomberg and others also cited a major culture clash as a key reason for why Unilever shareholders felt that a Kraft Heinz takeover could not be successful. The Wall Street Journal reported that "while price remained key, Mr. Polman […] wanted to protect Unilever's reputation for promoting sustainability initiatives, including environmental and human-rights efforts, according to people familiar with the matter." The article mentioned that many of Unilever's shareholders were in fact aligned with this vision. These shareholders including a worker representative group in the Netherlands that could have triggered closer scrutiny by the government, an investor group largely made up of the Dutch government that controls eight percent of the Unilever vote, and a research-focused charity and trust that controls five percent of the Unilever UK vote.[41] In a New York Times article, the CEO of Ceres, a consulting firm, mentioned that "Kraft Heinz doesn't even release a sustainability report, which in the year 2017 is shocking for a multinational company." The

---

[39] Massoudi, Arash, Bryce Elder and James Fontanella-Khan. *Financial Times*.
[40] Nelson, Jack. *Financial Times*.
[41] Chaudhuri, Saabira, and Ben Dummett. *The Wall Street Journal*.

Ceres CEO stated that this was a huge contrast to Unilever, “the most transparent and open company there is about sustainability being part of their mission.”[42]

In the weeks following its failed takeover bid, Kraft Heinz announced that it would be dedicating $200M in the coming years to new sustainability efforts. While it is difficult to pinpoint the exact motivation for this commitment, Bloomberg cited the cultural concerns surrounding the takeover bid as one potential motivator. The article states that “a major point of concern [about the takeover bid], particularly in Europe, was whether the Anglo-Dutch consumer-products giant’s focus on “brands with purpose” would survive the relentless cost cutting that is the hallmark of 3G Capital, the private equity firm that manages Kraft Heinz.” With this new commitment, Kraft Heinz may be positioning itself so that a future bid may be received more warmly by shareholders interested in Polman’s long-term vision.[43]

As Unilever reacts to these latest events, the value of supply chain engagement will be thrust into the spotlight even more than it has since the introduction of the SLP. Polman will increasingly have to defend the long-term value that he is creating through his plan and convince investors that sustainability and supply-chain engagement is the best, most profitable path forward for Unilever.

[42] Gelles, David. *The New York Times*.
[43] Giammona, Craig. *Bloomberg*.

V. Coca-Cola

Like Unilever, Coca-Cola has periodically found itself in headlines around the world for issues related to sustainability and supply chain engagement. Coca-Cola's widely recognized brand makes the company a target for activist protests and it have been the focus of several campaigns in recent decades. However, over the course of Coca-Cola's 130-year history, the company has substantially improved operational sustainability and has made industry breakthroughs in areas like recycling, product packaging and water use. The main supply chain engagement issues that the company is addressing today center around water use and raw materials sourcing.

Since the early 2000s, Coca-Cola has faced severe water shortages at several of its plants located around the world, particularly in India. For Coca-Cola's India operations, water rights and water scarcity issues have led to revoked permits, community protests, country-wide boycotts, and plant shutdowns. In 2004, a Coca-Cola bottling plant was shut down in southern India after the company fought a long legal battle with the local community. Community members argued that the bottling plant had dried up water reserves for the entire town. Coca-Cola was protested in the region, leading the company to abandon plans to open future bottling plants in parts of southern India. In 2005, several universities in the US, including the University of Michigan, refused to serve Coca-Cola products on their campuses in response to these water-related allegations.

In 2014, after investing in a bottling plant expansion in India, the company was ordered to temporarily and eventually to permanently close the plant after local officials found that the plant was depleting local water resources. In both 2016 and 2017 charges were filed against the company by several Indian communities, accusing Coca-Cola of permanently contaminating their water supplies.[44] Finally in early 2017, two Indian states announced that they were boycotting all Coca-Cola and Pepsi products in response to reports of water depletion in communities where these companies had operations and bottling facilities.[45]

As a result of these water use issues and of Coca-Cola's strong dependence on water (it is the 24th largest industrial consumer of water), the company has spent $2 billion on investments intended to reduce water use and improve the quality of water in communities where the company operates.[46] In addition, Coca-Cola has committed to a company-wide goal of becoming water positive, or achieving a better than 1:1 ratio for the water that it consumes to the product that it produces. The company announced that it was able to meet this goal for the first time in early 2017 after many years of reporting steady improvement. Going forward, Coca-Cola will be forced to engage closely with its many bottlers in regions around the world as it attempts to maintain this water ratio and develop new water-reduction techniques.

In reaching their recent sustainability goal, Coca-Cola invested heavily in supply chain engagement. The company states that it currently has 248 community water partnership projects active in 71 countries.[47] This includes a significant effort in India where Coca-Cola states that it has been working closely with government agencies, communities where it operates, water agencies, NGOs and its bottling facilities to reduce water use. Each bottling facility is required to develop a Source Water Protection Plan. In developing this plan, the facility must engage closely with local stakeholders and those within its community.[48]

In late 2009, Coca-Cola also founded the 2030 Water Resources Group, housed within the International Finance Corporation, to engage with organizations around the world that are

---

[44] Kumar, Anand. *Scroll.In*.
[45] Sanjai, P.R., and Anto Antony. *Bloomberg*.
[46] Whelan, Tensie and Carly Fink. *Harvard Business Review*.
[47] Allison, David. *Atlanta Business Chronicle*.
[48] Coca-Cola Sustainability Report 2014-2015

working to understand and protect water through policy development. The Water Resources Group assists countries in identifying water scarcity issues and assists with testing and remedying issues as they arise. The group also engages directly with country governments in understanding issues and setting policy. Coca-Cola, as the largest consumer of water in many of the communities where it operates, has placed itself in a significant position of power with respect to understanding and regulating water, an ingredient key to its long-term success and business continuity.

Coca-Cola has clearly begun prioritizing supply chain engagement in its efforts to address the controversial issues of water use. However, stronger stakeholder engagement programs established earlier on may have helped Coca-Cola avoid these issues in India, a market that Coca-Cola sees as becoming its fifth largest market, and save billions of dollars. Instead of simply looking to minimize costs at its bottling factories, empowering employees to identify key, local issues and risks may have helped Coca-Cola catch supply chain risk early on. Instead, Coca-Cola has been criticized by activists as “sucking vulnerable communities dry” in its “pursuit of profit.”[49]

In addition to the massive issue of water use in the communities where it operates, Coca-Cola is working to ensure access to a steady supply of quality agricultural inputs for its products. These include cane sugar, beet sugar, corn syrup, tea, coffee, palm oil, soy, oranges, lemons, grapes, apples, mangoes and wood fiber for packaging. The company has set the goal to sustainably source 100 percent of its ingredients by 2020. In its latest sustainability report, Coca-Cola states that it plans to achieve this goal by “embedding sustainability into ingredient-procurement decisions, launching crop-specific and regional workshops and trainings, engaging

[49] Murphy, Sara. *The Motley Fool*.

with bottling facilities around sourcing sugarcane, and tracking and gathering data on their sugar supply and all ingredients used."

The company has also developed an in-depth "Supplier Engagement Program", in which it plans to enroll every Coca-Cola supplier. The Program provides assistance to some suppliers by proving training on better agriculture practices, called Coca-Cola's Agriculture Guiding Principles. Coca-Cola announced that it led 14 workshops in eight countries around the world to introduce this program. Coca-Cola is also working to increase transparency around agricultural ingredient sourcing. In late 2016 it published a global ingredient sourcing map showing where it sources every one of its ingredients.

A similar program, Coca-Cola's Supplier Guiding Principles provides guidelines to suppliers on expected human rights performance. Coca-Cola conducts rigorous testing and auditing for any violations of its human rights policies, and provides training on issues as necessary. In its most recent sustainability report, the company reported that 89 percent of its direct suppliers achieved compliance with the Supplier Guiding Principles around human rights. The company did not report human rights performance among indirect suppliers.

In India in 2007, Coca-Cola had achieved only six percent compliance with the Supplier Guiding Principles and decided to launch a program deemed "Supplier Engagement." This approach, a "multipronged strategy including top-level management engagement, industry engagement, internal compliance scorecards, supplier training, supplier capacity building and a supplier awards system," had a remarkable effect. In 2014, the same population had a 98 percent compliance performance with the Supplier Guiding Principles.[50] This effort, which appears to truly engage the Coca-Cola supply chain, may be an appropriate model for the company to follow if it hopes to see further strong results in other areas of its supply chain.

[50] Coca-Cola 2014-2015 Sustainability Report

While the company is showing a clear interest in gathering more information around its supply chain, many of its programs don't truly engage with suppliers. Its training programs show potential for supply chain engagement, but even with its broad reach, Coca-Cola was only able to report 200 program participants, a drop in the bucket of its vast supply chain. The Supplier Engagement Program and Supplier Guiding Principles are largely geared towards identifying potential supply chain risks and eliminating them, not understanding and addressing them. Its approach to lay out requirements and audit them largely serves to shift accountability away from Coca-Cola and towards suppliers. It does not necessarily create a system of engagement.

The company has also led programs around specific crops, like a project with Cargill in China to assist farmers with increasing yields and reducing fertilizer and water usage, work in the US to assist with sustainable corn production, and training for about 3,000 women mango farmers in India. The reported participation in this program still does not cover the majority of suppliers in their supply chain, but is a promising step in engaging a critical mass of farmers in working to develop an improved system.

As supply chain sustainability issues have not been at the forefront of news about Coca-Cola, investors in the company have largely avoided discussing any sustainability or supply chain engagement efforts. In the past two years of annual earnings calls, sustainability and supply chain issues have not been mentioned by either Coca-Cola representatives or by investors participating on the call.

The financial media however, has given some attention to water issues at Coca-Cola. In 2005, <u>The Economist</u> profiled Coca-Cola's dependency on water and highlighted the university boycotts of Coca-Cola that were inspired by reports of high water usage in vulnerable communities. In 2014, the <u>Financial Times</u> covered the closure of a bottling plant in India following water disputes. The article called into question the feasibility of Coca-Cola's assertion that India would become one of the company's largest markets and that it was worth significant additional investment. The article also called into question the ease of doing business in India for Coca-Cola.[51] An additional Financial Times article on the closure stated that "drought" may be responsible for the closure in India, and that protracted drought and water supply problems are "taking a financial toll on some of the world's biggest food and drinks companies."[52] In 2017, Bloomberg covered the boycott of Coca-Cola products by some states in India, but provided no comment from Coca-Cola or information about the company's plans to address the risks faced with its water footprint.

Much of Coca-Cola's work around water was initially inspired by a 2007 activist campaign by the group War on Want. During the War on Want's campaign against Coca-Cola, the company was the target of a boycott and public demonstrations. The campaign highlighted water shortages that had been caused by Coca-Cola around the world, especially in communities in India. The War on Want's campaign received widespread press coverage throughout the UK and the US. The campaign brought Coca-Cola's water issues to the front of the public's mind, and led Coca-Cola to establish commitments to reduce its water usage.

Coca-Cola is in a position to increase its supply chain engagement and in the process decrease risk exposure and realize long-term value for the company. Business Day, in an article in early 2017, makes the case that the private sector could be a powerful global force if the companies were well engaged with their supply chains. They provide the example of Coca-Cola leveraging its vast distribution network to bring medication to isolated, rural communities through their Cola Life partnership, a partnership that has provided a new market and business

[51] Chilkoti, Avantika. *Financial Times*.
[52] Clark, Pilita. *Financial Times*.

model for Coca-Cola while improving quality of life for the rural poor.[53] Coca-Cola has been a leader in developing sustainability solutions in the past, and while they are starting to set ambitious goals around sustainability performance again, have not yet proven that they are clearly invested in becoming a leader once again.

[53] Madsen, Kathrine. *Business Day*.

VI. Proctor and Gamble (P&G)

P&G is well-known as a master of supply chain efficiency. The company's mission statement emphasizes shareholder value creation and the company highlights cost reduction in its strategy, with two of their four public focus areas to: streamline and strengthen the product portfolio; and improve productivity and cost structure.[54] These focus areas highlight a preference for value-creation through efficiency and cost reduction.

Similar to Coca-Cola, P&G's approach to supplier sustainability and engagement is largely one of setting policies for suppliers and mandating their adoption through rigorous auditing. P&G developed the Sustainability Guidelines for External Business Partners in 2010 as a way to measure the performance of its suppliers against specific sustainability criteria. The Guidelines were launched together with a scorecard tool, called the Supplier Environmental Sustainability Scorecard, which rated suppliers on a scale of sustainability established by the company. When the Guidelines and Scorecard were announced, they were industry-leading. P&G made the Scorecard publicly available and several manufacturing companies began defaulting to its standards and measurements in reporting their own sustainability performance. Shortly after the launch of the Scorecard, The Street reported that P&G was able to use the tool to identify priority areas for cost-cutting in the supply chain.[55]

P&G has been utilizing the Guidelines and Scorecard since the launch of both to gather data about supplier performance. P&G's current supply chain engagement and sustainability priorities include: decreasing water use in operations, sustainably sourcing controversial raw materials such as palm oil and wood fiber for paper products, and increasing the diversity of its supplier base to drive innovation.

[54] P&G 2016 Citizenship Report
[55] "P&G Shares Data…" *The Street*.

In P&G's most recent sustainability report, it notes that it conducted a study that found 30 percent of its manufacturing sites are located in areas experiencing high water stress. This led P&G to engage further, and it is now asking managers at 40 priority sites to provide information on actions they are taking to reduce their risk exposure to water scarcity and to work with P&G to decrease this risk exposure. P&G reports that this directive has driven its suppliers to explore innovative ways to reduce water usage. The company also reports that this directive has inspired P&G manufacturing sites around the globe to collaborate on strategies for water stewardship and convene internal workshops to share best practices. These high-risk areas have also begun reporting against a common water-use scorecard. P&G spends considerable time evaluating the efforts of its suppliers in reducing water usage, but the company has not publicly committed to any water reduction investments nor have they incorporated water-manufacturing reduction into the product development process.

P&G has also done work focusing on palm oil, a controversial crop that has been the target of activist protest in recent years. P&G uses palm kernel oil, the oil pressed from the palm fruit seed, in many of its home care and beauty products. Many activist and environmental groups have accused palm oil manufacturers of causing widespread deforestation throughout Southeast Asia. Palm oil production practices, such as land-clearing with fire and clearing of biologically sensitive land has led to massive increases in global greenhouse gas emissions and the endangering or extinction of several species. Activist organizations, including Greenpeace, have specifically targeted P&G for its unsustainable palm oil sourcing practices.

Public pressure from activist organizations led P&G to join the Roundtable on Sustainable Palm Oil ("RSPO"), a collaborative industry group that provides sustainability certification and training for palm farmers while creating a forum for best-practices sharing. P&G committed to 100% RSPO certification by 2020, specifically committing to a deforestation-free palm kernel oil supply chain in the same timeframe. P&G also announced a partnership with several environmental groups to implement a traceability tool, called KnownSources, that will help it identify sources of palm oil in its supply chain and potential risks associated with these sources. The company also announced support for the Traceability Working Group and the High Carbon Stock Approach Steering Group in developing methods of tracking palm products to its source and monitoring changes in forest density. At the time of its most recent sustainability report, P&G reported that 76 percent of its sourced palm products were RSPO certified.

P&G's RSPO commitment is in addition to the commitment that 100 percent of its palm suppliers will be in compliance with the P&G Sustainability Guidelines for External Business Partners. These guidelines commit to respecting human rights in the treatment of all suppliers, including the land rights of indigenous peoples, often the inhabitants of palm-growing areas. P&G states that it will suspend or remove any supplier found to be in violation of its guidelines and that does not take the appropriate steps to remedy their violations. Reinstatement would require a "documented action plan," and the supplier would be required to "demonstrate meaningful progress to be considered for reinstating supply agreements."

While these industry partnerships and auditing systems provide P&G with insight into challenges in palm oil farming, the company is largely placing the burden for action on its suppliers, with contract termination threatened in cases of non-compliance. This incentive may force suppliers to behave in accordance with public standards of sustainability and legality, but does not address the root problems that lead to deforestation or human rights abuses.

As a company that provides many paper-based or paper-packaged products, P&G has also engaged in efforts to ensure that the wood fiber it uses is from sustainable sources. P&G states that it prefers to use fiber that is certified sustainable and the company supports several types of wood fiber certification, including Forest Stewardship Council (FSC), Sustainable Forest Initiative (SFI), and Programme for the Endosesment of Forest Certification (PEFC). P&G touts its Charmin products as 100 percent FSC-certified. However, P&G also states that its use of certified fiber for all paper-based products is based on market availability and the company does not ensure that all of the wood fiber used in its products comes from responsible sources. P&G has not engaged with tree farmers to further develop the supply of certified sustainable wood fiber.[56]

Finally, P&G has made significant investments to promote diversity in its supply chain. The company states in its most recent sustainability report that it has come to view diversity as “a driver of value creation and continuous innovation.” P&G is a member of the “Billion Dollar Roundtable — a forum of companies that spend more than $1 billion a year with diverse suppliers — that has only 22 members.” P&G has exceeded this significant investment commitment by spending $2 billion a year from 2007 – 2016 with diverse suppliers. P&G credits its diverse supplier base, which includes “thousands of minority, women, military veteran and LGBT-owned businesses” with increasing P&G’s capacity for developing innovative products.[57]

P&G has derived significant value from this ability to deliver innovative, competitive products. Through an initiative to enhance water efficiency in communities where they operate, P&G developed its water purification packets. This product is a small sachet that can, in 30 minutes, purify 10 liters of water, kill bacteria and viruses, remove parasites, arsenic and dirt.[58] The company states that this product has delivered more than 10 billion liters of clean water in 85 countries. P&G also points to the example of a program during which it asked Indian

[56] P&G 2016 Citizenship Report
[57] P&G 2016 Citizenship Report
[58] P&G 2016 Citizenship Report

suppliers to propose ideas to reduce plastic usage. Its suppliers proposed ideas and innovations for P&G's Hair Care sachets and Fabric Care packaging that reduced plastic usage by 16 percent and reduced raw material and transportation costs. P&G's most recent sustainability report credits supplier collaboration with "developing improved solutions for bio-alternative materials, sustainable packaging, renewable energy, and logistics setups."

Despite P&G's leadership in several areas, it still largely follows a command and control model, which it calls its "risk-based audit program," to deliver on its promise of shareholder return through efficiency and cost reduction. P&G's widespread use of scorecards and auditing is an example of how this mindset is put into practice. P&G sets a standard of operation that works within its traditional framework and seeks suppliers that can comply with these standards. P&G seeks to build a supply chain that operates to the beat of the P&G drum, but the company has done no work to identify root causes for issues in their supply chain or to engage suppliers in programs to change business processes in a way that benefits both the suppliers and the company. This may leave potential value-creation on the table in the form of shared value from increased supply chain engagement.

Investor responses to P&G's supply chain engagement work has been minimal, as P&G has not done significant supply chain engagement work outside of CSR and philanthropic activity. On the past two annual earnings calls, sustainability has been mentioned only once, by a P&G company representative mentioning that customers are demanding more sustainable attributes in home care products.

P&G has received some mainstream media attention around environmental and human rights abuses in their supply chain, which most recently includes palm kernel oil sourcing. In early 2014, Greenpeace activists scaled the P&G headquarters and unfurled massive banners on the building that read "100 % Rainforest Destruction." This protest came after Greenpeace had conducted a year-long investigation into P&G's palm kernel oil practices. It was shortly after this protest that P&G announced that it would be joining the Roundtable on Sustainable Palm Oil and was committing to sourcing 100 percent of their palm kernel oil from sustainable sources by 2020. This commitment was widely covered in mainstream media outlets such as USA Today and CBS, but did not gain much traction in financial media outlets.

In November of 2016, one of largest palm oil product manufacturers, and a P&G supplier, Wilmar, was found by Amnesty International to have child labor in its farmer network. Fortune Magazine, among many other news agencies, reported on this and specifically called out P&G among several other brands. After this report was released, several large consumer products companies, such as Nestle, Unilever and Kellogg, were pressured to stop accepting palm products from Wilmar. While these companies continue to source palm oil products from Wilmar, there is increasing scrutiny on the manufacturing practices for all palm oil.

P&G also received some media attention for the release of its supplier sustainability scorecard. Media largely applauded the scorecard, as P&G positioned the scorecard as one that would be used to drive continuous improvement and cost reduction in energy use, water use, and waste costs.[59] The release of the scorecard did not seem to lead to any significant attention from investors or any change in the P&G stock price.

Overall, P&G is medium performer for sustainability as it relates to supply chain engagement. The company responds to major risks as they arise and reports on issues of concern as identified by activist groups for major players in the consumer products industry. P&G has a robust CSR function and publishes annual sustainability reports that conform to industry standards. Still, the company is not a leader in engagement and, besides driving an increase in

[59] "P&G Launches Supplier Sustainability." P&G.

data collection according to its standards, has done little to drive real change and innovation in the underlying forces that dictate industry supply chain practices and processes.

VII. Conclusion

The case studies of Unilever, Coca-Cola, and P&G each demonstrate circumstances in which supply chain engagement programs can create clear value for the company. New product development, cost reduction, and improved raw material quality are a few of the outcomes that we have seen from partnership and engagement with suppliers. These outcomes are sometimes easily measured, for example in the case of increased crop yields in Unilever's supply chain, or they can be harder to measure, for example in the case of P&G's long-term innovation capability.

Researchers in the business world are increasingly recognizing the value of supply chain engagement. Many recent studies were cited in the first section of this paper that supported the value of supply chain engagement. This includes the research led by Arabesque Partners and published in the report "From Stockholder to Stakeholder," which reviewed over 100 studies on the correlation between sustainability or ESG performance and financial performance. This research showed an overwhelming consensus that high sustainability performance correlates with lower cost of capital, improved operational performance and increased stock price.[60]

These insights are not new. John Butman, in a 2002 article in the Harvard Business Review, provides an early study of the value of engaging with the supply chain. He points to a research study of 100 consumer goods manufacturers and retailers, conducted jointly by Stanford University and Accenture in 1998, which found that "those companies that shared information extensively with their supply chain partners enjoyed higher-than-average profit margins."[61]

Business leaders and investors are also starting to see that supply chain engagement, sustainability, and ESG performance, should be a priority. In a 2010 study, Accenture asked 700

[60] Clark, Gordon, Andreas Feiner, and Michael Viehs. University of Oxford, Arabesque Partners.
[61] Butman, John. *Harvard Business Review*.

members of the United Nations Global Compact about sustainability priorities, and 88 percent of CEOs at the world's largest companies stated that supply chain sustainability is a particular area of importance, with nearly all CEOs stating that sustainability should be integrated into all strategy and operations for the company.

A recent white paper published by the BlackRock Institute in late 2016 encouraged investors to "incorporate climate change awareness into their investment processes."[62] In 2009, Bloomberg added an option to view company ESG performance in the Bloomberg Terminal system and since then the number of customers using this information has grown from about 1500 in its first year to over 12,000.[63] A joint MIT and BCG study conducted recently on global sustainability also suggested that the top investors are starting to look more closely at ESG performance. They suggest that they are looking at the way that strong ESG performance can decrease the cost of capital, improve operations and innovation, and point to effective management.[64] The recent Kraft Heinz takeover bid of Unilever, and subsequent speculation that strong ESG performance may have contributed to the rejection of an unacceptably low offer is an interesting example of how sustainability is becoming a priority.

This research and the many case studies that prove the value of supply chain engagement may lead business leaders to wonder why most mainstream investors don't usually give much attention to supply chain engagement and sustainability programs. Questions about sustainability don't come up in earnings calls. Sustainability or supply chain issues are only discussed in financial media when a company is forced to address a major crisis.

There are a few reasons why investors may not prioritize sustainability performance despite the research and case studies showing the clear value these programs can deliver. Firstly,

---

[62] Wishel, Deborah, and Philipp Hildebrand. *BlackRock Investment Institute*.
[63] ESG Data Usage. *Bloomberg*.
[64] Unruh, Gregory and authors. *MIT Sloan Management Review*.

it may be difficult for investors to understand which issues a company should be paying attention to, or which are material to its success. A recent study by Ernst and Young notes that there is no easy, off-the-shelf solution for delivering value from sustainability programs. Suppliers from different industries should be approached and managed differently and should be asked to consider different priorities and metrics for measuring success. A variety of organizations, including the Global Reporting Initiative and the Sustainability Accounting Standards Board have released reports that begin to define which issues may be material for companies in specific sectors.

Investors also may have established stereotypes of sustainability programs as costly and unrelated to business operations, such as is seen in investors skepticism around the cost of Unilever's SLP. When Paul Polman first announced the Unilever Sustainable Living Plan to the public, a Financial Times columnist responded by asking "Where were the figures on cost savings? Where were the promises about results flowing to the bottom line?" The columnist concluded, "Mr. Polman's appeal to shareholders to take the long view is admirable, but I felt nervous about his own long-term prospects. Even the most patient investor eventually needs a decent return." An investor from Stewart Investments, speaking after the failed Kraft Heinz takeover bid commented that "these investments in the business involve Unilever making a choice to defer some of today's profits in order to realize greater gains tomorrow. In many cases they may take years — not a few quarters — to bear fruit. And they cannot be captured properly by spreadsheets and financial models. It should come as no surprise, then, that many investors do not see much value in such initiatives." Without well-developed models showing the value of ESG investments, investors may be quick to assume that these types of investments are not dollars well-spent.

There is also a history of investors ignoring major factors that contribute to a firm's success, such as the performance of key customers. Lauren Cohen of the Yale School of Management and Andrea Frazzini of The University of Chicago note in their paper "Economic Links and Predictable Returns" that investors are likely to ignore customer performance when evaluating the value of a company. The paper gives the example of a company losing a customer that accounted for 50% of sales, with no subsequent change noted in the company's stock price. The company lost value in both the short and long term with the loss of this customer. Their research found that by buying firms with customers that were doing well and shorting firms whose customers were doing poorly, they were able to yield abnormal returns of 1.55% per month or 18.6% per year.

Therefore, while supply chain engagement has strong potential to impact a company's performance, investors may be ignoring this factor, just as they seem to ignore customer performance. Recently, researchers have also pointed to the weather as a major factor that can clearly influence business success and that is ignored by investors. John Tierney from Deutshe Bank recently commented in Business Insider that "weather can affect everything from commodity prices to the GDP of certain nations," but "investors do not start to price in evolving weather patterns until things are fairly far along." Tierney says that investors "need to talk more about the subject. And more promptly than they have in the past, perhaps, even do something about it."[65]

Finally, most research shows that businesses must integrate sustainability into their design and operations practices to reap rewards. Simply tweaking operations will not deliver results. It may be intimidating for business leaders and investors alike to imagine reworking a supply chain strategy that has worked well for decades or centuries. In an article in the October,

[65] Bryan, Bob. *Business Insider*.

2010 issue of the Harvard Business Review, Hau Lee, director of the Stanford Global Supply Chain Management Forum, recommends that companies "treat sustainability as integral to operations. They should consider it alongside issues such as inventory, cycle time, quality, and the costs of materials, production, and logistics." He states that when sustainability and engagement is fully integrated into the way that companies do business, they will be poised to realize tremendous value.

Lee recommends that companies shouldn't stop after engagement with their direct suppliers but that they should additionally turn their "attention to […] suppliers' suppliers and […] customers' customers—the extended supply chain. It's a critical step, not just to identify more-ambitious structural changes that could generate even greater payoffs but also to better manage risks." Similarly, Robert Eccles and George Serafeim, introduce ways to impact what they call the "performance frontier" of a company in their Harvard Business Review article, "The Performance Frontier: Innovating for a Sustainable Strategy." They state that

> "While minor innovations, such as efficiency improvements, can nudge a downward- sloping performance frontier up a bit, only major innovations in products, processes, or business models can shift the slope from descending to ascending. Such innovations are high risk, involving large-scale investments and long payback periods (often of five years or more). Typically, they concern a bundle of related ESG issues and tackle significant, unsolved challenges in a sector."

Taking this immersive approach to supply chain engagement may be intimidating to business leaders and investors without a clear path to proven returns.

Despite these concerns, new studies keep popping up with strong data that supports the value that can be created through sustainable practices and supply chain engagement. Researchers, business leaders and investors are starting to take notice and incorporate ESG indicators into their decision-making processes. This new trend shows hope for the future of business. As Michael Porter and Mark Kramer state in their article, "Strategy & Society," "If either a business of a society pursues policies that benefit its interests at the expense of the other, it will find itself on a dangerous path. A temporary gain to one will undermine the long term prosperity of both." If businesses reject an approach that prioritizes the well-being of the communities where they operate, they will eventually be left without resources or customers.

REFERENCES

Allison, David. "Coca-Cola Says It Has Met Its Global Water Replenishment Goal." *Bizjournals.com*. Atlanta Business Chronicle, 29 Aug. 2016. Web. 03 Apr. 2017.

Bailey, Jonathan, Josh Zoffer, and Bryce Klempner. "Sustaining Sustainability: What Institutional Investors Should Do next on ESG." *McKinsey & Company*. N.p., June 2016. Web. 03 Apr. 2017. <http://www.mckinsey.com/industries/private-equity-and-principal-investors/our-insights/sustaining-sustainability-what-institutional-investors-should-do-next-on-esg>.

Bartlett, Christopher A. "Unilever's New Global Strategy: Competing through Sustainability." *Unilever's New Global Strategy: Competing through Sustainability - Case - Harvard Business School*. N.p., 20 Nov. 2015. Web. 03 Apr. 2017. <http://www.hbs.edu/faculty/Pages/item.aspx?num=50063>.

Beard, Alison, Richard Hornik, Samantha Presnal, Erin Rush, Heather Wang, and Meghan Ennes. "It's Hard to Be Good." *Harvard Business Review*. N.p., 08 Oct. 2014. Web. 03 Apr. 2017.

Bryan, Bob. "People Are Ignoring One of the Most Obvious Ways to Make Money in the Market." *Business Insider*. Business Insider, 07 June 2016. Web. 03 Apr. 2017.

Butman, John. "A Pain in the (Supply) Chain." *Harvard Business Review*. Harvard Business Review, 31 July 2014. Web. 03 Apr. 2017.

Chaudhuri, Saabira, and Ben Dummett. "Kraft Heinz Withdraws $143 Billion Offer for Unilever." *The Wall Street Journal*. Dow Jones & Company, 19 Feb. 2017. Web. 03 Apr. 2017.

Chaudhuri, Saabira. "Kraft Bid Comes Amid Headwinds for Unilever." *The Wall Street Journal*. Dow Jones & Company, 17 Feb. 2017. Web. 03 Apr. 2017.

Chilkoti, Avantika. "Water Shortage Shuts Coca-Cola Plant in India." *Financial Times*. Financial Times, 19 June 2014. Web. 03 Apr. 2017.

Choi, Dale RogersRudolf LeuschnerThomas Y. "The Rise of FinTech in Supply Chains." *Harvard Business Review*. N.p., 22 June 2016. Web. 03 Apr. 2017. <https://hbr.org/2016/06/the-rise-of-fintech-in-supply-chains>.

Chopra, Sunil, and ManMohan Sodhi. "Reducing the Risk of Supply Chain Disruptions." *MIT Sloan Management Review*. MIT Sloan School of Business, Mar. 2014. Web. 03 Apr. 2017.

Clark, Gordon, Andreas Feiner, and Michael Viehs. *From the Stockholder to the Stakeholder: How Sustainability Can Drive Financial Outperformance*. Rep. University of Oxford and Arabesque Partners, Jan. 2017. Web. 15 Mar. 2017.

Clark, Pilita. "Squeeze on Water Hits Global Food and Drink Groups." *Financial Times*. Financial Times, 7 May 2015. Web. 03 Apr. 2017.

Coca-Cola. *Coca-Cola 2014/2015 Sustainability Report*. N.p.: Coca-Cola, n.d. Coca-Cola, 2016. Web. 15 Mar. 2017. <http://assets.coca-colacompany.com/29/0b/1c0121a84941aa46b9c9f6201ac9/2014-2015-sustainability-report.15_080415.pdf>.

Coca-Cola Investor Info: Webcasts and Events. Coca-Cola, n.d. Web. 1 Feb. 2017. <http://www.coca-colacompany.com/investors/investors-info-investor-webcasts-and-events>.

Cohen, Lauren, and Andrea Frazzini. "Economic Links and Predictable Returns." Journal of Finance 63, no. 4 (August 2008). (Winner of Smith Breeden Prize for the Best Paper Published in the Journal of Finance in Asset Pricing (Distinguished Paper) 2008. Winner of Chicago Quantitative Alliance Academic Paper Competition. First Prize presented by Chicago Quantitative Alliance. Winner of BSI Gamma Foundation Research Grant presented by BSI Gamma Foundation.)

Consumer, Ethical. "Coca-Cola Company, The - Supply Chain Management." *Ethical Consumer: The Alternative Consumer Organisation*. N.p., 20 July 2016. Web. 03 Apr. 2017.

Consumer, Ethical. "Procter & Gamble Company - Supply Chain Management." *Ethical Consumer: The Alternative Consumer Organisation*. N.p., n.d. Web. 03 Apr. 2017.

Eccles, Robert G., and George Seraphim. "The Performance Frontier: Innovating for a Sustainable Strategy." *Harvard Business Review*. N.p., May 2013. Web. 25 Mar. 2017.

"ESG Data Usage | Sustainability at Bloomberg | BCAUSE | Bloomberg L.P." *Bloomberg.com*. Bloomberg, 2015. Web. 03 Apr. 2017.

Fuller, Thomas. "Thailand Flooding Cripples Hard-Drive Suppliers." *The New York Times*. The New York Times, 07 Nov. 2011. Web. 03 Apr. 2017.

Gelles, David. "Why the Kraft Heinz Bid for Unilever Could Make an Odd Match." *The New York Times*. The New York Times, 17 Feb. 2017. Web. 03 Apr. 2017.

Giammona, Craig. "Kraft Heinz Expands Sustainability Push After Unilever Bid." *Bloomberg.com*. Bloomberg, 21 Mar. 2017. Web. 03 Apr. 2017.

Govindarajan, Vijay. "P&G Innovates on Razor-Thin Margins." *Harvard Business Review*. N.p., 23 July 2014. Web. 03 Apr. 2017.

Hanifan, Gary, Aditya Sharma, and Paras Mehta. "Why a Sustainable Supply Chain Is Good Business | Accenture Outlook." *Accenture Outlook*. Accenture, 2016. Web. 03 Apr. 2017. <https://www.accenture.com/us-en/insight-outlook-why-sustainable-supply-chain-is-good-business>.

Hanifan, Gary, Aditya Sharma, and Paras Mehta. "Why a Sustainable Supply Chain Is Good Business | Accenture Outlook." *Accenture Outlook*. Accenture, n.d. Web. 03 Apr. 2017.

Hardcastle, Jessica Lyons. "Reducing Waste with Closed Loop Supply Chains." *Environmental Leader*. N.p., 31 Jan. 2017. Web. 03 Apr. 2017.

Henderson, Rebecca M., and Frederik Nellemann. "Sustainable Tea at Unilever." *Sustainable Tea at Unilever - Case - Harvard Business School*. N.p., 08 Dec. 2011. Web. 03 Apr. 2017. <http://www.hbs.edu/faculty/Pages/item.aspx?num=41262>.

Henderson, Rebecca. "Making the Business Case for Environmental Sustainability." *Harvard Business School Faculty and Research*. N.p., 9 Feb. 2015. Web. 03 Apr. 2017. <http://www.hbs.edu/faculty/Pages/item.aspx?num=48847>.

"In Search of the Good Business." *The Economist*. The Economist Newspaper, 09 Aug. 2014. Web. 03 Apr. 2017.

Ivanova, Velislava, and Lauren Rogge. "The State of Sustainable Supply Chains: Building Responsible and Resilient Supply Chains." *Ernst and Young* (n.d.): n. pag. Ernst and Young, UN Global Compact, 2016. Web. 15 Mar. 2017.

Kramer, Michael E. PorterMark R. "Strategy and Society: The Link Between Competitive Advantage and Corporate Social Responsibility (HBR Bestseller)." *Harvard Business Review*. N.p., Dec. 2006. Web. 03 Apr. 2017.

Kumar, Anand. "Coca-Cola Is in Troubled Waters (again) for a Factory It Was Forced to Shut down 12 Years Ago." *Scroll.in*. Http://scroll.in, 03 Jan. 2017. Web. 03 Apr. 2017.

Lee, Hau L. "Don't Tweak Your Supply Chain-Rethink It End to End." *Harvard Business Review*. N.p., 07 Oct. 2010. Web. 03 Apr. 2017. <https://hbr.org/2010/10/dont-tweak-your-supply-chain-rethink-it-end-to-end>.

Longman, Nye. "Coca Cola: Sourcing the Biggest Sustainability Challenge Faced by Suppliers." *SCM | Supply Chain Digital*. N.p., 20 Oct. 2015. Web. 03 Apr. 2017.

Madsen, Kathrine. "The Private Sector If Well Engaged Could Be a Powerful Force in the Global Fight against Malnutrition." *BusinessDay*. N.p., 02 Feb. 2017. Web. 03 Apr. 2017.

Marshall, Donna, Lucy McCarthy, Paul McGrath, and Fiona Harrigan14. "What's Your Strategy for Supply Chain Disclosure?" *MIT Sloan Management Review*. N.p., 14 Dec. 2015. Web. 03 Apr. 2017. <http://sloanreview.mit.edu/article/whats-your-strategy-for-supply-chain-disclosure/>.

Massoudi, Arash, Bryce Elder, and James Fontanella-Khan. "Unilever Rejects $143bn Kraft Heinz Takeover Bid." *Financial Times*. Financial Times, 17 Feb. 2017. Web. 03 Apr. 2017.

Murphy, Sara. "Coca-Cola and Nestle Are Sucking Us Dry Without Our Even Knowing." *The Motley Fool*. N.p., 02 Mar. 2014. Web. 03 Apr. 2017.

Murray, Alan. "Doing Well by Doing Good Can Be Hard: Ask Unilever." *Fortune Magazine*. Fortune, 17 Feb. 2017. Web. 1 Mar. 2017.

"Natural Resources Conservation Service." *Conservation Practices That Save: Precision Agriculture | NRCS*. Natural Resources Conservation Service, n.d. Web. 03 Apr. 2017.

Nelson, Jack. "Unilever's Brand of Responsible Capitalism Should Be Lauded." *Financial Times*. Financial Times, 5 Mar. 2017. Web. 03 Apr. 2017.

New, Steve. "McDonald's and the Challenges of a Modern Supply Chain." *Harvard Business Review*. N.p., 24 July 2015. Web. 03 Apr. 2017.

New, Steve. "The Transparent Supply Chain." *Harvard Business Review*. N.p., 07 Oct. 2014. Web. 03 Apr. 2017. <https://hbr.org/2010/10/the-transparent-supply-chain>.

"P&G Launches Supplier Environmental Sustainability Scorecard." *P&G*. Procter and Gamble, 12 May 2010. Web. 03 Apr. 2017.

"P&G Shares Data, Results And Analysis Tool From Supplier Scorecard." *The Street*. Business Wire, 4 Apr. 2012. Web. 15 Mar. 2017.

Polman, Paul. "Unilever's CEO on Making Responsible Business Work." Interview by Adi Ignatius. *Harvard Business Review*. N.p., 30 Mar. 2015. Web. 03 Apr. 2017.

"Presentations & Events." *P&G*. Procter and Gamble Company, n.d. Web. 03 Apr. 2017. <http://www.pginvestor.com/Presentations-and-Events>.

"Presentations & Speeches." *Unilever Global Company Website*. Unilever, n.d. Web. 03 Apr. 2017. <https://www.unilever.com/investor-relations/results-and-publications/presentations-and-speeches/>.

"PRI Homepage | Principles for Responsible Investment." *PRI Homepage | Principles for Responsible Investment*. N.p., n.d. Web. 03 Apr. 2017.

Procter and Gamble. *P&G 2016 Citizenship Report*. Cincinnati: Procter and Gamble, 2016. Web. <http://cdn.pgcom.pgsitecore.com/en-us/-/media/PGCOMUS/Documents/PDF/Sustanability_PDF/sustainability_reports/PG2016CitizenshipReport.pdf%22?la=en-US&v=1-201702151553>.

Prokesch, Steven. "The Sustainable Supply Chain." *Harvard Business Review*. N.p., 31 July 2014. Web. 03 Apr. 2017. <https://hbr.org/2010/10/the-sustainable-supply-chain>.

Ram Nidumolu, C.K. Prahalad, and M.R. Rangaswami. "Why Sustainability Is Now the Key Driver of Innovation." *Harvard Business Review*. N.p., 31 July 2014. Web. 03 Apr. 2017. <https://hbr.org/2009/09/why-sustainability-is-now-the-key-driver-of-innovation>.

"Report Shows a Third of Consumers Prefer Sustainable Brands." *Unilever Global Company Website*. Unilever, n.d. Web. 03 Apr. 2017.

"Sustainable Investing: Not Just about Returns." *InvestorDaily - InvestorDaily*. N.p., 16 Jan. 2017. Web. 03 Apr. 2017.

Rowlatt, Justin, and Jane Deith. "The Bitter Story behind the UK's National Drink." *BBC News*. BBC, 08 Sept. 2015. Web. 03 Apr. 2017.

Sandhu, Tirath. "Lower Your Firm's Cost of Capital by Managing Environmental Risks." *Network for Business Sustainability*. N.p., 10 June 2011. Web. 03 Apr. 2017.

Sanjai, P. R., and Anto Antony. "PepsiCo, Coca-Cola Face Ban in Second Indian State on Water." *Bloomberg.com*. Bloomberg, 08 Mar. 2017. Web. 03 Apr. 2017.

Serafeim, George. "The Fastest-Growing Cause for Shareholders Is Sustainability." *Harvard Business Review*. N.p., 19 July 2016. Web. 03 Apr. 2017. <https://hbr.org/2016/07/the-fastest-growing-cause-for-shareholders-is-sustainability>.

Serafeim, Robert G. EcclesGeorge. "The Performance Frontier: Innovating for a Sustainable Strategy." *Harvard Business Review*. N.p., 31 July 2014. Web. 03 Apr. 2017.

Slone, Reuben E. "Leading a Supply Chain Turnaround." *Harvard Business Review*. N.p., 31 July 2014. Web. 03 Apr. 2017.

"Sustainability Guidelines for External Partners." *Sustainability | PGSupplier.com*. N.p., n.d. Web. 03 Apr. 2017.

"Sustainable Living." *Unilever Global Company Website*. N.p., n.d. Web. 03 Apr. 2017. <https://www.unilever.com/sustainable-living/>.

"2016 Cone Communications Employee Engagement Study." *Cone Communications | Cone | Cone PR | Cone Inc | PR Agency | Boston | NYC*. Cone Communications, 2016. Web. 03 Apr. 2017. <http://www.conecomm.com/research-blog/2016-employee-engagement-study>.

Unruh, Gregory, David Kiron, Martin Reeves, and Nina Krushwitz. "Investing For a Sustainable Future." *MIT Sloan Management Review*. N.p., 11 May 2016. Web. 03 Apr. 2017.

Utroske, Deanna. "Are P&G and Unilever Using Child Labor to Source Palm Oil for Personal Care and Cosmetic Products? Amnesty International Says 'yes'." *CosmeticsDesign.com USA*. N.p., 01 Dec. 2016. Web. 03 Apr. 2017.

Vanham, Peter. "The Maker of Dove and Axe Has Doubled Its Stock Price While Executing an Ambitious Plan to Cut Emissions." *Business Insider*. Business Insider, 14 June 2016. Web. 03 Apr. 2017.

Walt, Vivienne. "Unilever CEO Paul Polman's Plan to Save the World." *Fortune Magazine*. N.p., 17 Feb. 2017. Web. 1 Mar. 2017.

Winshel, Deborah, and Philipp Hildebrand. "Adapting to Climate Change." *The New Atlantis* No. 19 (2008): 146. BlackRock Investment Institute, Sept. 2016. Web. 15 Mar. 2017.

Winston, Andrew, and Shiela Bonini. "Greening Global Supply Chains: From Blindspots to Hotspots to Action." *The Sustainability Consortium*. Webmaster Http://www.sustainabilityconsortium.org/wp-content/uploads/2016/09/sustainability_consortium_logo-1.jpg, 2016. Web. 03 Apr. 2017.

Winston, Andrew. "The Data Says Climate Change Could Cost Investors Trillions." *Harvard Business Review*. N.p., 14 Apr. 2016. Web. 03 Apr. 2017.

Winston, Andrew. "IBM's Green Supply Chain." *Harvard Business Review*. N.p., 23 July 2014. Web. 03 Apr. 2017.

Yu, Larry. "The Green Capital Advantage." *MIT Sloan Management Review*. MIT Sloan School of Business, 1 Oct. 2008. Web. 03 Apr. 2017.