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Center for Sustainable Business

The Sustainability Business Case for the 21st Century Corporation

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Today's corporation is dealing with a complexity of social, environmental, market and technological trends that are unprecedented and require a sophisticated, sustainability-based management and innovation approach. While there is some consensus that sustainable practices can create operational efficiencies and cost savings, many companies resist mainstreaming sustainability due to a perception that it is too costly or not core to the business strategy. The NYU Stern Center for Sustainable Business's review of the business and academic literature found positive financial and strategic benefits for companies taking a comprehensive approach to managing for sustainability and embedding it in their core business strategy.

We define sustainable practices as those that: 1) at minimum do not harm people or the planet and at best create value for stakeholders and 2) focus on improving environmental, social, and governance (ESG) performance in the areas in which the company and/or brand has a material environmental or social impact (in their own operations, value chain, or to their customers or society).

The Center for Sustainable Business has identified a comprehensive list of benefits driving positive financial performance that we believe result from embedding sustainability into the core business strategy. Companies tend to start with the low-hanging fruit: operational efficiencies. Numerous studies demonstrate the positive financial impact of reducing water, waste, and energy use. Businesses then turn to risk mitigation in areas where they have exposure, such as labor practices or water scarcity in their own production or supply chain. Because sustainability requires a systems design thinking, and opportunity-seeking approach, a growing number of companies now recognize that mainstreaming sustainability within a company also drives innovation. In addition, the sustainability-oriented company is developing a "sticky corporate ecosystem" where it is engaging with multiple stakeholders (suppliers, employees, civil society, government) and focusing on creating value, rather than extracting value. Sophisticated stakeholder engagement can provide resilience and competitive advantage. Indirect financial benefits of mainstreaming sustainability in the company can include improved employee recruitment, retention and morale, as well as positive and free media coverage. Better governance and transparency also improve financial performance. Lastly, companies see positive sales and marketing benefits accrue to their bottom line as they communicate their "sustainability difference."

Despite these reported benefits, few have been adequately studied at a macro level across industries and many companies still lack mechanisms for tracking certain metrics and the financial return of sustainability investments. We therefore see this as an important area for further research and corporate investment.

Following is a review of the academic and business literature covering the relationship between financial performance and the core sustainability benefits identified by the Center for Sustainable Business.

Sustainable Business Benefits at the Firm Level:	
Cost Savings Through Improved Operational Efficiencies	Companies that make changes in their operations and value chain to reduce waste and increase efficiency using a sustainability lens often experience significant cost savings.
Better Positioned to Manage and Mitigate Risk	Companies implementing sustainable practices are better positioned to manage physical, reputational, and regulatory risks along their supply chain and in their direct operations. Numerous examples demonstrate the financial impact incurred from ignoring these risks and the benefit of improved practices.
Increased Innovation Through Design and Systems Thinking	By applying a sustainability lens to their operations and value chain, companies are using design and systems thinking to develop improved and new systems and products. The resulting sustainable innovations produce significant top and bottom line returns.
More Loyal and Unique Corporate Ecosystem	Sustainable companies engage with stakeholders along their supply chain and aim to create, rather than extract, value from them. Many companies experience financial benefits and competitive advantage by creating this unique corporate ecosystem.
Increased Competitive Advantage	Investments in sustainability enable companies to develop a competitive advantage in the following areas: secure supply chain; loyal customers; market share; non-replicable model; not competing solely on cost; managing complexity and rapid change.
More Positive Earned Media	Behavior and reputation as a sustainable company results in improved and more regular media coverage, while poor behavior leads to damaging financial impacts.
Improved Sales & Marketing	Companies that effectively communicate their core sustainability proposition are found to have increased customer loyalty and improved sales.
Better Recruitment, Retention, and Morale of Employees	Behavior and reputation as a sustainable company result in improved retention, recruitment, morale, and health as well as reduced accidents and lawsuits. These human resources factors improve financial performance through increased productivity, primarily.
Stronger Financial Valuation Through Transparent Reporting of ESG Factors	Transparent reporting around ESG factors through platforms like the GRI or integrated reports results in better financial performance.
Improved Financial Performance Through Better Corporate Governance	Corporate governance structures play a key role in sustainability performance. Executive and board-level participation in sustainability results in higher adoption of sustainability initiatives and increased disclosure around ESG factors, often resulting in improved financial performance.
Lower Financing/Operating Costs, Increased Sales, and Positive Investor Valuation	Companies that are mainstreaming sustainability outperform their peers in terms of sales, lower financing/operating costs, investor response/valuation and incentives for sustainability investments e.g. tax credits, subsidiaries, etc.
Create Value to Society Through Net Positive Impact	Beyond reducing social and environmental impacts caused by business operations, some companies are now developing net positive approaches that aim to create value and deliver regenerative services to society.

Cost Savings Through Improved Operational Efficiencies:

Companies that make changes in their operations and value chain to reduce waste and increase efficiency using a sustainability lens often experience significant cost savings.

According to a recent McKinsey survey, “cost-cutting” ranks as one of the top three reasons why businesses invest in sustainability. Significant cost reductions result from improving operational efficiency through better natural resource management (i.e. water, energy, waste) (McKinsey & Company, 2014). In a Harvard Business Review article, Michael Porter and Claas van der Linde argue that “pollution often is a form of economic waste. When scrap, harmful substances, or energy forms are discharged into the environment as pollution, it is a sign that resources have been used incompletely, inefficiently, or ineffectively” (Porter, M., & van der LInde, C., 1995). Because of this, many companies are already implementing sustainability solutions and are seeing compelling evidence that sustainable investments make business sense. A 2014 Report by We Mean Business found that many companies are seeing an average internal rate of return of 27% and as high as 80% on their low carbon investments (We Mean Business, 2014).

Dow Chemical established the Sustainability External Advisory Committee in 1992 to help develop and advise the company on achieving sustainability goals under their Vision of Zero – zero injuries, zero incidents, zero harm to the environment. In the first ten years of the program, Dow reduced solid waste by 1.6 billion pounds and water use by 183 billion pounds and saved 900 trillion Btu (equivalent to energy usage of 8 million US homes in one year) (Eccles, R., Serafeim, G., & Li, S., 2013). Since 1994, Dow has invested nearly $2 billion to improve resource efficiency and has saved $9.8 billion from reduced energy and waste water consumption in manufacturing (McKinsey & Company, 2011).

Similarly, GE’s commitment to investing in technologies that save money and reduce environmental impact through its Ecomagination program has resulted in financial benefits. At the end of 2013, GE reduced greenhouse gas emissions by 32% and water use by 45% compared to 2004 and 2006 baselines, respectively, resulting in $300 million in savings (Henry, K. 2015).

A focus on sustainability can also unlock opportunities for process and logistics innovations. Wal-Mart, for example, aimed to double fleet efficiency between 2005 and 2015 through better routing, truck loading, driver training, and advanced technologies. By the end of 2014, they had improved fuel efficiency approximately 87% compared to the 2005 baseline. In that year, these improvements resulted in 15,000 metric tons of CO_2 emissions avoided and savings of nearly $11 million (Walmart, 2015).

Process changes such as these not only reduce emissions, but can also increase yields. Ciba-Geigy Corporation responded to new environmental regulation by reexamining the wastewater streams of its dye plant in Tom’s River, New Jersey. Engineers changed the production process by replacing a chemical conversation agent and eliminating the release of toxins into the waste water stream; these changes significantly reduced pollution and increased process yields by 40%, which saved $740,000 annually (Porter, M., & van der LInde, C., 1995).

Chiquita also experienced productivity benefits as result of implementing sustainable practices. In the early 1990s, Chiquita partnered with the Rainforest Alliance, an international non-profit organization, to improve their social and environmental performance on banana farms in Latin America. Rainforest

Alliance Certification includes standards for waste management, water conservation, integrated pest management, and fair working conditions. After investing in Rainforest Alliance Certification, Chiquita saw productivity increase 27% and costs decrease 12% between 1997 and 2005 (Morgan, 2006).

In the mining sector, Alcoa's implementation of environmental best practices resulted in a 75% reduction in water use, 15% reduction in electricity use, and 100% reduction in soluble concentration of silver, suspended solids, and hydrocarbons in wastewater by 2011, reducing the cost of waste water cleaning and disposal. Along with other quantifiable achievements, these reductions equated to $1.5 million in annual savings and roughly $8 million in savings since 1999 (Wirtenberg, 2014).

Since implementing a comprehensive sustainability strategy in 2009, Hilton Worldwide reduced energy use by 14.5%, waste output by 27.6%, carbon output by 20.9% and water use by 14.1%. These reductions saved the hotel chain $550 million since 2009. (Hardcastle, 2016).

Lastly, Nestle increased efficiency throughout its coffee supply chain by reducing middlemen. Over 20 years ago, the company developed a direct procurement system in coffee-producing countries that set up buying stations where farmers can sell their coffee directly to Nestle. By shortening the supply chain, farmers are able to get a higher price for their coffee and Nestle spends less on the middleman. At buying stations in Thailand, for example, Nestle paid an average price for coffee of THB 38.7 (roughly USD 0.97) to farmers while local traders paid around THB 17-25 in 2003 (Nestle S.A. Public Affairs, 2013).

Better Positioned to Manage and Mitigate Risk:

Companies implementing sustainable practices are better positioned to manage physical, reputational, and regulatory risks along their supply chain and in their direct operations. Numerous examples demonstrate the financial impact incurred from ignoring these risks and the benefit of improved practices.

Recent events like Hurricane Sandy, the Bangladesh Rana Plaza factory collapse, and the Volkswagen emissions scandal demonstrate the private sector's increasing exposure to social and environmental risks and the implications for reputation, supply chain, manufacturing, and license to operate. Many companies recognize that the impacts of climate change—increasing temperatures, changing weather patterns, flooding, and drought—as well as resource depletion, pose serious challenges to their facilities, supply chains, employees, consumers, and local communities. The World Economic Forum names "the failure of climate change mitigation and adaption" as the top global risk in 2016 in their annual Global Risk Report. In the largest study on climate change data and corporations, CDP and BSR asked 8,000 supplier companies (that sell to 75 multinationals) to report environmental information and climate risk strategies. Of the respondents, 72% said that climate change presents risks that could significantly impact their operations, revenue, or expenditure. Further, 64% specifically identified climate regulation as a major risk (BSR/CDP Climate Change Supply Chain Report, 2015-2016). McKinsey reports that the value at stake from sustainability concerns are as a high as 25-70% of earnings before interest, taxes, depreciation, and amortization. (Bonini & Swartz, 2014 July)

A PricewaterhouseCoopers report explains that unlike traditional risk, social and environmental risks manifest themselves over a longer term, often affect the business on many dimensions, and are largely outside the organization's control. Managing risks therefore requires making investment decisions today for longer-term capacity building and developing adaptive strategies (Borsa, Frank, & Doran 2014). Risk managers must therefore incorporate sustainability into their strategy to remain viable in the long term, as those that ignore it will face challenges with regulators, NGOs, investors, and consumers (Lam & Quinn, 2012). Lou and Bhattacharya (2009) also find that “boosting a standard deviation more than average in corporate responsibility, firms can reduce their firm-idiosyncratic risk by about 10%” (Luo & Bhattacharya 2009).

Minor and Morgan (2011) find that CSR can provide reputation insurance after an adverse event when the firm’s CSR strategy demonstrates responsibility rather than altruism, i.e. implementing sustainable practices vs. making charitable donations. Their multi-year study of S&P 500 firms found strong evidence that firms’ stock prices decline significantly less after an adverse event when they are actively engaging in CSR that is “not doing harm” as opposed to “doing good” (0.5% compared to 2.5%). Additionally, they found that firms that integrate avoiding harm and doing good are generally immune to reputational damage from adverse events and actually gain about 1.1% value following an event, while firms that try to compensate for harm by engaging in visible “do good” activities suffer the greatest reputational damage following an event (Minor & Morgan 2011).

Furthermore, studies also suggest that companies with strong corporate responsibility reputations “experience no meaningful declines in share price compared to their industry peers during crises” as opposed to firms with poor CR reputations whose reputations declined by “2.4-3%; a market capitalization loss of $378M per firm” (Rochlin, Bliss, Jordan & Kiser, 2015).

BP’s Deepwater Horizon scandal in 2010 reflects Minor and Morgan’s (2011) findings of the reputational and financial consequences of an adverse event. After the explosion that killed 11 people in the Gulf of Mexico and caused the largest offshore oil spill in U.S. history, BP faced substantial litigation and a backlash of accusations of reckless conduct and negligence. The spill followed years of BP safety and health violations. In the years before Deepwater Horizon, BP was fined by OSHA (Occupational Safety and Health Administration) 760 times (Veniziani, 2010). In 2009, they were fined $87 million for safety violations at a Texas City refinery that resulted in 15 deaths and $3 million in 2010 for violations at a Toledo, Ohio refinery. No steps were taken to address the violations at either of these sites (Gutierrez, 2010).

In comparison, Exxon has been fined only once for workplace safety and health violations (Veniziani, 2010). Public anger over the Deepwater oil spill led to decreased sales at U.S. stations (Kaye, 2015) and a 55% drop in share price in the three months after the spill (Chamberlain, 2015). BP’s share price has underperformed peers since the disaster by roughly 60% (Clark, Feiner & Viehs 2015).

Environmental disasters impact companies’ financial performance as well as their license to operate. In 2016, a Taiwanese-owned steel plant in Vietnam was the site of the country’s largest environmental disaster. Toxin-laded waste water discharged into the sea during the plant’s operations, causing major environmental pollution and resulting in a massive fish die-off. The plant’s parent company, Formosa Plastics Group, admitted to wrongdoing and agreed to pay $500M in damages to clean-up the pollutants, and to reimburse communities whose fishing livelihood is impacted by the die-off. The spill has also led to unrest within Vietnam as people protested the company and the rapid foreign investment development in Vietnam (Associated Press, 2016). Companies that continue to take liberties with their environmental practices may face further challenges as they expand into new markets and attempt to build support for operations with local communities.

SeaWorld has experienced ongoing brand challenges following the release of Blackfish, a documentary exposing the mistreatment of orcas in captivity. Overall attendance at SeaWorld parks dropped significantly in the past few years, resulting in 84% decline in profits between 2014 and 2015. Despite reducing ticket prices and launching a nationwide marketing campaign addressing the film's claims, the company is still struggling to regain public trust and shares are now half of their worth in 2013 (Rhodan, 2016).

Beyond managing reputational risk, many corporations recognize sustainability as a key factor in mitigating risk in their supply chain. Nearly every industry faces risk from the long and short-term physical effects of climate change throughout the entire value chain, from raw materials, to transport, to end users. In the agriculture, food, and beverage sector, for example, the impacts of climate change have the potential to alter growing conditions and seasons, increase pests and disease, and decrease crop yields (David Gardiner & Associates, LLC, 2012). Disruptions in the supply chain may affect production processes that depend on unpriced natural capital assets such as biodiversity, groundwater, clean air, and climate. These unpriced natural capital costs are generally internalized until events like floods or droughts cause rapid disruption to production processes or commodity price fluctuation (Clark, Feiner & Viehs 2015). Flooding in 2011 in Thailand, for example, harmed 160 companies in the textile industry and halted nearly a quarter of the country's garment production. Bunge, an Agribusiness firm, reported a $56 million quarterly loss in its sugar and bioenergy segments due to drought in its main growing regions in 2010 (David Gardiner & Associates, LLC, 2012). Trucost (2013) estimates the unpriced natural capital costs at $7.3 trillion (Trucost, 2013). McKinsey values the potential impact of supply chain disruptions at 25% of earnings before interest, taxes, depreciation, and amortization (Bonini & Swartz, 2014 July).

To address these threats along their supply chain, companies like Mars, Unilever, and Kraft have invested in Rainforest Alliance certification to help farmers deal with climate volatility, reduce land degradation, and increase resilience to drought and humidity—all of which ensure the long-term supply of their agricultural products. Certification also improves productivity and net income: According to an independent study by COSA, Rainforest Alliance reported that certified cocoa farmers in Cote d'Ivoire, for example, produced 1,270 lbs. of cocoa per hectare, compared with 736 lbs. per hectare on non-certified farms and net income, the farm's revenue from cocoa sales minus input cost, was significantly higher on certified cocoa farms than noncertified: $403 versus $113 USD per hectare. (Rainforest Alliance, 2011).

Companies are also experiencing risks in their manufacturing due to resource depletion – particularly water risk. Water has largely been considered a free raw material and therefore used inefficiently, but many companies are now experiencing the higher costs of using the resource. Coca-Cola, for example, faced a water shortage in India that forced it to shut down one of its plants in 2004 (Chilkoti, 2014). As the 24th biggest industrial consumer of water, Coca Cola has now invested $2 billion to reduce water use and improve water quality in the communities in which it operates (Clark, 2014). Most recently, it partnered with World Wildlife Fund on a project to restore the Nar river, which flows through an area that produces sugar for its beverages. SabMiller has also invested heavily in water conservation, including $6 million to improve equipment at a facility in Tanzania affected by deteriorating water quality (Clark, 2014).

Water-related risks also threaten to strand billions of dollars for mining, oil, and gas companies. "Stranded assets" are investments that become obsolete due to regulatory, environmental, or market constraints.

For example, social conflict related to disruptions to water supplies in Peru resulted in the indefinite suspension of $21.5 billion worth of mining projects since 2010 (Schneider, 2016).

Additionally, with increased environmental restrictions, companies risk regulatory fines and disputes if they fail to comply with regulation around social and environmental issues. In 2013, for example, Wal-Mart was fined more than $81 million for violating the Clean Water Act (US Department of Justice, 2013). In 1992, Ikea's best-selling bookcase series was found to have a lacquer that produced formaldehyde emissions higher than legally allowed in Germany. Following negative press, Ikea halted production and sales to correct the problem. Not including the cost of lost sales, production, and reputational damage, the incident cost Ikea over $6 million (Bartlett, Dessain & Sjoman, 2006).

Further, the Massey Energy Company exemplifies the risks of poor labor practices. In 2010, an explosion at a Massey coal mine led to the deaths of 29 men following repeated safety violations and blatant disregard from the CEO. Former Massey CEO Don Blankenship received 249 safety violation notices in the year leading up to the explosion and chose to pay fines, instead of allocating funds to address the issues (Sullivan, 2014). Choosing profitability over safety, Blankenship was sentenced to a year in prison for knowingly violating federal mine safety codes (Blinder, 2016). Following the disaster, Massey Energy suffered an $88 million loss in the second quarter of 2010, as opposed to a gain of $20 million in the second quarter of 2009, and was sold for $7.1 billion to Alpha Natural Resources in 2011 ("Massey Energy Company").

Increased Innovation Through Design and Systems Thinking:

By applying a sustainability lens to their operations and value chain, companies are using design and systems thinking to develop improved and new systems and products. The resulting sustainable innovations produce significant top and bottom line returns.

Industry leaders are beginning to recognize the reputational and risk management benefits of sustainability, however research shows that sustainability is also driving organizational and technological innovations that yield significant top and bottom line returns. Sustainability provides a new lens to develop products and services that meet company, consumer, and societal needs. By broadening their approach to innovation, companies develop products that use fewer resources, create closed looped systems, or address a specific social need. Applying sustainability to corporate innovation can significantly reduce costs and drive revenue by developing new or better products and creating new business opportunities (Nidumolo, Prahalad & Rangaswami, 2009).

Cisco, for example, found a profit generating opportunity from the used equipment it received. Previously, Cisco recycled used equipment as scrap at a cost of nearly $8 million a year, although 80% of returns were in working condition. In 2005, Cisco identified internal customers, including customer service teams and technical support, as a place to redirect used equipment. The company implemented a new recycling business unit, which resulted in a 45% increase in the reuse of equipment in the three years after implementation, a 40% reduction in recycling costs, and $100 million in profits in 2008 (Nidumolo, Prahalad & Rangaswami, 2009). Many companies like Cisco are uncovering business benefits from applying a sustainability lens to their operations and value chain.

Sustainability also offers a constructive way to scope product innovation. Redesigning products to meet environmental standards or social needs offers a new approach to reducing costs, and in some cases results in increased revenues. 3M, for example, integrates sustainability into its innovation pipeline through its "Pollution Prevention Pays" program, which aims to proactively minimize waste and avoid pollution through product reformulation, equipment redesign, process modification, and waste recycling (Winston, 2012). For example, 3M's Novec fire suppression fluids are the first viable, sustainable alternative to hydrofluorocarbons, with a zero ozone depletion potential and a global warming potential of less than one ("Explore 3M Novec Product Family Sustainability Attributes"). Over the past 40 years, 3M's Pollution Prevention Pays program eliminated more than 2 million tons of pollutants and saved nearly $1.9 billion ("3M").

Nike embedded sustainability into its innovation process and experienced significant value creation from their Flyknit line, which is engineered using a specialized yarn system knit together in one piece, requiring minimal labor and generating large profit margins. Flyknit reduces waste by 60% compared with regular cut and sew footwear. Since its launch in 2012, Flyknit has reduced 3.5 million pounds of waste and, as of this year, fully transitioned from yarn to recycled polyester, diverting 182 million bottles from landfills ("Nike").

Recognizing the growing consumer interest in sustainable products and looking to solve consumer challenges such as high energy costs, CPG companies have developed new products to gain access to this market. Proctor & Gamble, for example, conducted a life cycle assessment of its products and found that U.S. households spend 3% of annual electricity budgets on heating water to wash clothes. In 2005, they launched a U.S. and European line of cold-water detergents that require 50% less energy than warm water washing ("Tide").

Sustainability is also driving disruptive business models. Whole Foods, for example, was built on the idea of providing high-quality, local products in an industry dominated by low prices. Their model relies on cultivating and developing partnerships with unique suppliers and ensuring sustainability by requiring third party certification by NGOS such as Rainforest Alliance and Fairtrade. With sales worth $15.4 billion in 2015 (Whole Foods Market, 2015).

Lastly, companies are finding innovative tools to quantify environmental impacts. Luxury brand consortium, Kering, developed an Environmental Profit &Loss Account that helps them place a monetary value on environmental impacts along with conventional business costs for their businesses. Conducting an E P&L has given Kering new insights about its environmental impacts, which enables them to develop better policies and targets, engage suppliers, build trust with stakeholders, and better assess environmental performance. Kering has open sourced its methodology to enable other companies and industries to measure environmental performance through an E P&L ("Environmental P & L").

<u>More Loyal and Unique Corporate "Ecosystem":</u>

Sustainable companies engage with stakeholders along their supply chain and aim to create, rather than extract, value from them. Many companies experience financial benefits and competitive advantage by creating this unique corporate ecosystem.

Traditional business models aim to create value for shareholders, often at the expense of other stakeholders. Sustainable businesses are redefining the corporate ecosystem by designing models that create value for all stakeholders, including employees, shareholders, supply chains, civil society, and the planet. In 2011, Michel Porter and Mark Kramer pioneered the idea of "creating shared value" in a Harvard Business Review article, arguing that businesses should no longer operate in opposition to society, but generate economic value by identifying and addressing social problems that intersect with their business; in this way, company success is tied with social progress. Porter and Kramer suggest that a number of large companies – GE, Wal-Mart, Nestle, Johnson & Johnson, and Unilever - have already implemented such programs that engage stakeholders, employees, and the value chain and create unique corporate ecosystems (Porter & Kramer, 2011).

Studies demonstrate that effective stakeholder management enhances firm value. When firms fail to establish good relationships, increased conflict and reduced stakeholder cooperation disrupt a firm's ability to operate on schedule and budget, and therefore to create value (Dorobantu & Odziemkowska, 2016). In their study of the gold mining industry, Henisz et al. (2014) argue that stakeholder relations can heavily influence land permitting, taxation, and the regulatory environment, and therefore play a substantial role in determining whether a firm has the right to transform gold into shareholder capital. For example, Meridian Gold Corp. wrote off nearly $2 billion in reserves from lack of community support for a project in Esquel, Argentina, in 2006 (Dorobantu & Odziemkowska, 2016). Henisz et al. (2014) suggest that engagement in activities perceived as socially responsible create political and social capital that enhance stakeholder cooperation and reduce conflict. The results of their study demonstrate that a firm's market valuation increases with stakeholder support, therefore stakeholder engagement "is not just corporate social responsibility but enlightened self-interest" (Henisz, Dorobantu & Nartey, 2014, p. 1744). Dorobantu and Odziemska (2016) examine negotiated stakeholder agreements as one mechanism of stakeholder governance and find that investors value agreements more highly when there is more "hold-up risk," meaning when they engage with stakeholders who have strong property rights, administrative autonomy, and high capacity for collective action (Dorobantu & Odziemkowska, 2016, p. 8).

Nespresso aims to create long-lasting relationships with consumers, build sustainable business solutions, and source the highest quality coffee ("The Challenge: Nespresso Sustainability MBA Challenge" 2016). Nespresso lacked the expertise to address all of its sustainability challenges, so they enlisted non-traditional partners along the supply chain to help them increase sustainable sourcing, improve capsule recycling capacity, and reduce its carbon footprint. Today, over 80% of Nespresso's coffee comes from AAA certified farms, recycling capacity increased from 25% to 84% since 2009, and the company decreased the carbon footprint of a cup of coffee by 20.7% (Nespresso, 2014). In 2014, Nespresso was the market leader in single-serve coffee, with $3.4bn of market share (Bond, 2014).

Similar to Nespresso's approach to creating value for stakeholders and throughout its supply chain, Fabindia, a 50-year old family-owned retail firm, has developed a unique relationship with its suppliers. FabIndia's mission is to employ India's skilled rural artisans and protect traditional weaving and printing methods, while supplying products to a global market. Throughout its expansion, the firm remains committed to supporting its network of over 40,000 artisans—many of which depend on them for their livelihood—by providing market knowledge and access to consumers that rural artisans would otherwise not have. Through its model of collaboration with suppliers and customer loyalty to their mission, Fabindia has been able to raise the visibility of traditional Indian textiles, generate employment for craft workers, and revive dying skills and crafts (Khaire & Kothandaraman, 2010). Between 2014 and 2015, FabIndia's sales surpassed RS 1,000 crore (roughly $150 million), making it the largest retail apparel brand in India (Malviya, 2016).

Lastly, Wyndham Worldwide (WW) provides another example of building a culture of sustainability that engages all stakeholders. WW is one of the largest hospitality companies, with 100,000 locations in nearly 100 countries and employs 32,500 people globally. It is the largest hotel franchiser, vacation exchange network, and vacation ownership company in the world. The company aims to engage and empower all employees to participate in sustainability innovation; all employees go through a sustainability 101 online learning course and are asked to pledge to work on a specific area, including recycling, energy, or water conservation. As of 2012, the course had reached almost 70% of employees. WW also works hard to engage suppliers and vendors to build sustainable supply chains. For example, WW challenged its uniform company to develop a sustainable uniform for its staff, resulting in a suit made from 100% post-consumer waste. WW asked their key card suppliers to develop a green key card; recycled key cards are now used in over 90% of branded hotel properties. Lastly, WW aims to change customer and guest behavior through education on ecologically friendly initiatives in their hotels (Wirtenberg, 2014). In 2015, WW was named on the Climate "A" List by the Carbon Disclosure Project, while continuing to rank as one of the best performing hospitality companies in the world, with total net revenues over $5 billion in 2014 (Wyndham Worldwide, 2015) compared with top competitors Hilton Worldwide ($7 billion) and Marriott International ($2 billion) ("Wyndham Worldwide Corp Common Stock", 2016).

<u>Increased Competitive Advantage:</u>

Investments in sustainability enable companies to develop a competitive advantage in the following areas: secure supply chain; loyal customers; market share; non-replicable model; not competing solely on cost; managing complexity and rapid change.

Sustainability related issues are effecting resource availability and price volatility, regulation, consumer demands, investor pressure, emerging market competition, and economic uncertainty. Because competitive advantage depends on matching internal capabilities with changing external circumstances, (Hart, 1995), many leaders are recognizing that proactively investing in sustainability will lead to competitive advantage by securing supply chains, gaining loyal customers, increasing market share, providing differentiation, and managing complexity and rapid change.

With globalization, supply chains have become increasingly extended and vulnerable to natural disasters and civil conflict. The 2011 floods in Thailand, for example, affected manufacturing where a quarter of personal hard drives are made and increased global prices by 28%. Most companies recognize that having a sustainable supply chain is now imperative to their success and are working with suppliers to reduce costs, manage risk better, and create new revenue streams (Hanifan, Sharma & Mehta). IKEA, for example, has made significant investment in renewable energy as well as sustainable sourcing of wood products to ensure their supply, which is threatened by deforestation and illegal and non-sustainable practices (Kaye, L. 2013). An Accenture report suggests that manufacturers and retailers regularly spend at least 50% of their revenues on raw materials and packing and the supply chain accounts for 50-70% of total expenses and greenhouse gas emissions for most manufacturing companies (Hanifan, Sharma & Mehta). Companies that invest in sustainability strategies will therefore gain competitive advantage in the long term.

Sustainable companies also gain competitive advantage by attracting loyal customers. Deloitte found that green shoppers buy more products at a time, visit stores regularly, and have more brand and retail loyalty in purchasing behavior (Deloitte & GMA, 2009). Green brands have also been able to capture significant market share – Clorox Greenworks, for example, gained 40% market share in its first year; (ERB Institute of Michigan, 2010). However, niche brands, like Seventh Generation and Method, have ultimately performed better in the long run because they are not competing solely on cost. Their brands have deloped stronger customer loyalty than conventional brands with green products lines, evidenced in sales remaining stronger during the recession compared with their counterparts (Clifford & Martin 2011).

The Dutch flower industry provides an interesting example of how companies gain competitive advantage by creating sustainable models. Facing strict regulation on chemical release, the Dutch recognized that their current input-intensive flower production was polluting soil and groundwater. The industry addressed the problem by developing a closed-loop system that grows flowers hydroponically in greenhouses, lowering risk of infestation, which reduces fertilizer and pesticide use. The system also improves product quality by creating regulated growing conditions and handling costs have decreased. Their innovative system has increased productivity and quality, reduced environmental impact and costs, and increased global competitiveness (Porter, M., & van der LInde, C., 1995).

Lastly, sustainable companies are able to manage complexity and adapt to change better than their counterparts. Applying sustainability throughout a business requires continual learning and constant discourse with stakeholders; organizational learning around strategy, structure, and culture is therefore closely tied to sustainability. Martinuzzi and Krumay (2013) argue that “by adapting to the situation and integrating (social, economic, and environmental) requirements into the learning process, [companies] are in a continuous, result-open (and hence iterative) process, which is the basis for sustainable competitiveness and strengthening the resilience of companies” (Martinuzzi & Krumay, 2013). 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 (Hohnen, 2007). IKEA, for example, is in the process of converting to renewable energy and aims to be largely self-sufficient in its power use. In doing so, IKEA is protecting itself against global and regional energy price changes (“IKEA unveils plans,” 2012). Nike’s product R&D team consistently investigates new natural and synthetic materials. By continually updating their list of available materials, Nike is able to adapt to raw materials shortages (Wong & Schuchard, 2011).

<u>More Positive Earned Media:</u>

Behavior and reputation as a sustainable company results in improved and more regular media coverage, while poor behavior leads to damaging financial impacts.

Today, media extends into every aspect of consumers’ lives, from social media and television to newspapers and journals. New models of peer-to-peer influence and the democratization of information are transforming the media landscape and consumer behavior around purchasing decisions. According to the 2016 Edelman Trust Barometer, two of the top three most used sources of information are peer-influenced media, and 75% of people make purchasing decisions based on peer recommendations. The increasing transparency resulting from new media provides significant risk and opportunity for corporations. Edelman’s survey found that trust in business has increased to 53% in the past year and 45% of respondents cite “contributing to the greater good” as the reason (Edelman, 2016). In this volatile media landscape, advertising corporate social responsibility therefore helps brands build trust, engage consumers, and generate long-term brand loyalty. Specifically, BSR and Participant media argue that advertisers should find ways to enhance transparency, audience empowerment, and purpose to garner the business benefits of engaging in corporate responsibility (Daniel & Robinson, 2015).

In their 25-year study on the evolution of corporate responsibility in the public sphere, Lee and Carroll (2011) argue that CSR is becoming a more prominent issue in the media, which has numerous implications for corporations. Given that news media reflect social values at a given time, the change in salience of corporate responsibility (and various dimensions within it) over time may reflect the public's changing expectations of companies' impact on society and the environment. Additionally, they found that a firm's exposure to news coverage about corporate responsibility significantly influences public opinion and positively correlates with their reputation (Carroll & Lee, 2011). In fact, Einwiller, Carroll, and Kati (2010) found that among numerous factors surveyed, the tone of news coverage for a firm's "environmental and social responsibility" was the only significant factor that affected respondents evaluation of a firm and intent to buy a product. They argue that the public relies on news media for information they otherwise can not directly experience (like the quality of a product); the way the media portrays environmental and social responsibility consequently influences their evaluation of a firm (Einwiller, Carroll & Korn, 2010).

In the U.K., Reputation Dividend found that roughly 7% of the total reputation contribution to a company's market value (or 2.4% of total value) is attributable to its CSR or sustainability reputation. For example, they found that Marks & Spencer's CSR reputation contribution was 6.2%, equaling $0.68 billion, and Unilever's was 5%, equaling $6.52 billion (McElroy). Further, the study found that "community and environmental responsibility" grew substantially more in the past year than any other driver of corporate reputation, accounting for roughly £53 billion shareholder value in the FTSE 350, and has maintained on-going positive growth since their first study in 2013 (Reputation Dividend, 2015).

In 2015, Rainforest Alliance established a multi-brand content partnership on the Guardian's Vital Signs platform to engage with a growing population that cares about sustainability. As result of the platform, the frequency with which corporate partners Domtar, Avery Dennison, and Chiquita were associated with sustainability themes increased. Additionally, all partners saw significant increases in association with key attributes that support positive reputation from a stakeholder perspective, most notably around "assessment of sustainability and corporate citizenship" (Reputation Consultancy, 2015).

Volkswagen's recent emissions scandal demonstrates the impacts of negative media coverage on public perception and financial performance. After admitting they had cheated emissions tests, Volkswagen's market value dropped by 23% in September 2015 and sales declined 25% in the U.S. alone in November. The estimated costs of the scandal are projected to reach more than $15 billion in the US alone, on top of significant damage to stock price, reputation and customer loyalty (3P Contributor, 2016; Tabuchi & Ewing, 2016). Other examples—like Nike's sweatshop scandal, Foxconn's factory violations, and Chipotle's food safety issues—demonstrate the impact of bad press on reputation and financial performance.

Improved Sales & Marketing:

Companies that effectively communicate their core sustainability proposition are found to have increased customer loyalty and improved sales.

Many executives wonder whether the impact of their responsible activities extend beyond customer perception and public relations to influence customers' purchasing decisions. Responsible companies tend to have a dedicated and niche "activist" segment of consumers, however numerous studies show that socially-responsible shoppers are becoming mainstream.

According to a report by BBMG, GlobeScan, and SustainAbility, nearly two-thirds of consumers across six international markets believe they “have a responsibility to purchase products that are good for the environment and society,” including 82% in emerging markets and 42% in developed markets. (BBMG, Globescan & SustainAbility, 2012). In the food and beverage industry, for example, Deloitte found a growing number of consumers considering values beyond price and taste in their purchasing decisions, and considering drivers such as safety, social impact, and transparency. (Ringquist et al, 2016). A study by Accenture similarly found that consumers expect more transparency, honesty, and tangible global impact from companies. While results varied across regions and demographics, the study found a strong correlation between consumers that express high expectations of business to improve their quality of life and those that seek out this information when making purchasing decisions. This is particularly true among emerging markets and millennials, so there is a strong case for companies to heed these results, as they are the consumers of the future (Accenture, 2013).

Chernev and Blair (2015) also found that companies’ engagement in corporate responsibility activities translated to consumers perceiving a higher level of product performance and Choi and Ng (2010) found that sustainability information has a significantly positive impact on consumers’ evaluation of a company, which translates into their purchase intent (Chernev & Blair 2015; Choi & Ng 2011). In fact, Unilever claims its “brands with purpose” are growing at twice the speed as others in their portfolio (Spary, 2015).

Havas’ Meaningful Brands 2015 global study revealed that “meaningful brands can increase their share of wallet by seven times and on average gain 46% more share of wallet than less meaningful brands." They also found that meaningful brands deliver marketing KPI outcomes double that of lower scoring brands – i.e. for every 10% increase in meaningfulness, a brand can increase its purchase/repurchase intent by 6% and price premiums by 10.4% (Havas Media, 2015). The results of these studies support Young and Rubicam’s Spend Shift report that consumers in a post-Recession era are shifting purchasing decisions to brands with integrity, social responsibility, and sustainability at their core (Gerzema & D'Antonio, 2011).

New sustainable products and services are creating significant value for companies across industries. A report by The Conference Board found that revenues from sustainable products and services grew at six times the rate of overall company revenues between 2010 and 2013, among the 12 members of the S&P Global 100 sampled (Singer, 2015). GE’s Ecomagination division, for example, has generated $200 billion in sales since 2005 (Tetzeli, 2015). IKEA’s line of sustainable products like LED bulbs and solar panels from its Products for a More Sustainable Life at Home now generate a billion dollars (Williams, 2015, p.104).

Patagonia’s “Don’t Buy This Jacket” campaign offers an example of successfully communicating a company’s sustainability proposition to ultimate financial benefit. Patagonia aims to “do no unnecessary harm,” and this ethos is baked into every aspect of their operations and supply chain. In 2011, the company urged customers to buy less by running an ad that said “Don’t Buy This Jacket” and asked customers to sign a pledge to use each Patagonia product to its full life and buy used when possible. The marketing campaign demonstrated the authenticity of Patagonia’s model, and as a result, sales increased almost one-third in the nine months following the campaign, generating $158 million worth of new apparel (Stock, 2013).

Finally, corporate responsibility practices can impact sales performance financially. Studies show that sales revenue can increase up to 20% due to corporate responsibility practices (Hainmueller & Hiscox, 2012) and companies can charge higher price premiums based on positive corporate responsibility performance. These premiums can increase up to 20% as well (Abrantes Ferreira, Gonçalves Avila & Dias de Faria, 2010).

<u>Better Recruitment, Retention, and Morale of Employees:</u>

Behavior and reputation as a sustainable company result in improved retention, recruitment, morale, and health as well as reduced accidents and lawsuits. These human resource factors improve financial performance through increased productivity and reduced turnover related costs.

Across industries, research shows a strong case for investing in sustainability to attract and maintain talented employees. Evidence shows that corporate sustainability initiatives improve HR statistics related to recruitment, retention, and morale, which result in increased employee loyalty, efficiency, and productivity.

In Deloitte's 2015 *Global Human Capital Trends Report*, "culture and engagement" ranked as the most important human capital issue for the 3,300 business and HR leaders surveyed. 87% of respondents cited culture and engagement as "important," while the number of respondents that cited this issue as "very important" nearly doubled in the last year (Deloitte, 2015). According to a 2013 Gallup poll, only 13% of the global workforce is "highly engaged" and a majority of the workforce would not recommend their company to peers (Deloitte, 2015). These findings suggest that HR programs should address culture and engagement across leadership, management, and development of employees, because "without strong engagement and a positive, meaningful work environment, people will disengage and look elsewhere for work" (Deloitte, 2015).

Numerous studies find that employees' motivations have changed, with more focus on mission, purpose, and work-life balance, and companies that invest in sustainability initiatives tend to create the culture and level of engagement sought out by 21st century employees. Bhattacharya, Sen, and Korschun (2008) argue that corporate sustainability initiatives reveal a company's values, humanize the company by depicting it as a positive contributor to society, and differentiate it from solely profit-seeking firms (Bhattacharya, Sen & Korschun, 2008). These factors are of increasing importance in recruitment, especially among millennials, and that new MBA grads are even willing to sacrifice 14% of their expected salary to work for a company that values corporate responsibility (Snyder, 2008; Greening & Turban, 2000).

Executives argue that employee motivation is a key factor in creating a business case for corporate responsibility, after reputation and brand (Nelson, 2003). Employees identify more strongly with a company they believe is socially and environmentally responsible, which leads to a high level of commitment, better morale, and dedication. One study found that morale was 55% better in companies with strong sustainability programs, compared to those with poor ones, and employee loyalty was 38% better (SHRM, BSR & Aurosoorya). Better morale and motivation translate into reduced absenteeism and improved productivity. Delmas and Pekovic (2013) found that firms that adopted environmental standards had a 16% increase in productivity over firms that did not adopt sustainability practices (Delmas & Pekovic, 2013).

Additionally, studies by the Rainforest Alliance and the Brazilian nonprofit Imaflora show that industry participation in sustainability certification schemes such as SAN/FSC results in improved job quality and reduced risk of accidents due to increased safety measures (Rainforest Alliance, 2010; Imaflora, 2009).

Further, the IRRC Institute and Harvard Law School reviewed 92 studies on the relationship between HR policies and investment outcomes and found that the majority demonstrated a positive correlation between human capital policies and return on equity, return on investment, and profit margins. Their results show that human capital policies and employee training can be material to financial performance (Beeferman & Bernstein, 2015).

Credit Acceptance, a Michigan-based indirect finance company, experienced positive financial results after implementing employee engagement strategies. In 2001, Credit Acceptance set goals to achieve a return on equity of 18.6% (compared to 10%), a share price of $100 (compared to $9), and being named one of Fortune's Best Companies to Work For by the Great Places to Work Institute by 2014. To do so, the leadership committed to building a bottom-up culture, with a particular focus on internal communication and team building. In 2007, Credit Acceptance began using the Great Places to Work Trust Index employee survey to assess workplace culture. Initial findings showed 77% of employees found the company a great place to work, but results suggested the need to improve communications. Based on survey findings, the company increased internal communications, redefined company values, and developed quarterly engagement surveys. By 2013, these efforts increased the trust survey results to 94%, putting Credit Acceptance on list of 100 Best Companies to Work For, while simultaneously surpassing its goals of return on equity and share price. While these results do not imply causation, they suggest that creating a strong culture was integral to executing their business strategy (Rohman, 2014).

Corporate responsibility performance also impacts turnover and recruitment. Studies show that firms with greater corporate responsibility performance can reduce average turnover over time by 25-50% (Hewitt Associates & Canadian Business for Social Responsibility, 2010).It can also reduce annual quit rates by 3-3.5% (Vitaliano, 2010), saving replacement costs up to 90%-200% of an employee's annual salary for each retained position (Allen, 2008).

<u>Stronger Financial Valuation Through Transparent Reporting of ESG Factors:</u>

Transparent reporting around ESG factors through platforms like the GRI or integrated reports results in better financial performance.

Transparency is a powerful tool to improve businesses' environmental and social performance by holding firms accountable and empowering external stakeholders with information to make better decisions. Transparency enables companies to measure, manage, and evaluate benchmarks and demonstrate that they are on a sustainable path. Companies began reporting on sustainability over 20 years ago, generally in response to highly publicized environmental-related events. Disclosure has since broadened to include social and governance impacts as well as environmental impacts of doing business (Kolk, 2007). Today, thousands of companies report on ESG data around the world and the number continues to grow. The Global Reporting Initiative found that in 2011, 95% of the Global 250 issued sustainability reports, (GRI, 2013) while over half of Fortune 500 companies now issue sustainability reports, up from 20% in 2011. These figures suggest that sustainable reporting is on the rise for top companies (G&A Institute, 2012).

Large companies are more likely to report than small companies, and they tend to be motivated by expectations of transparency from stakeholders and competitive differentiation. The process of developing sustainability reports can improve productivity and efficiency, which contribute to improved financial performance through benefits like increased customer loyalty, reducing waste, and improving risk management (Ernst & Young, 2016). In a 2009 meta-analysis of over 200 empirical studies examining the relationship of corporate social performance and financial performance, the studies specifically covering reporting and transparency found positive market reactions to company disclosures regarding socially responsible behavior (Margolis, Elfenbein & Walsh, 2009). Al-Tuwaijri et al. (2004) also find that good environmental performance is associated with good economic performance, and more extensive environmental disclosure (Al-Tuwaijri, Christensen & Hughes, 2004). Plumlee et al. (2015) find that the quality of disclosure matters in the value gained by the reporting process. Their research shows a positive correlation of environmental disclosure quality and firm value, and that the most transparent companies had higher cash flows (Plumlee, Brown, Hayes, & Marshall, 2015).

Research indicates that reporting may open doors to new sources of capital as well. According to the 2015 EY Global Institutional Investor Survey, investors are increasingly looking at companies' nonfinancial disclosures to inform their investment decisions. In its survey of over 200 institutional investors, 59.1% of respondents view nonfinancial disclosures as "essential" or "important" to investment decisions, up from 34.8% in 2014. According to Ernst and Young, 62.4% of investors are concerned about the risk of stranded assets (i.e. assets that lose value prematurely due to environmental, social, or other external factors) and over one-third of respondents reported cutting their holdings of a company in the past year because of this risk (Ernst & Young, 2015). Reporting on ESG factors allows companies to communicate that they are competitive and lower-risk investments.

<u>Improved Financial Performance Through Better Corporate Governance:</u>

Corporate governance structures play a key role in sustainability performance. Executive and board-level participation in sustainability results in higher adoption of sustainability initiatives and increased disclosure around ESG factors, often resulting in improved financial performance.

Corporate governance plays a key role in determining corporate culture and behavior, and therefore significantly influences the success of sustainability initiatives as businesses move beyond the needs of the stockholder and start to consider other stakeholders. In fact, the Edelman Trust Barometer found that 80% of respondents think CEOs should be "personally visible in discussing societal issues" (Edelman, 2016). Executive and board-level participation ensures that sustainability goals are set as "obligations" rather than "responsibilities" and therefore informs strategy development and performance monitoring to deliver successful outcomes (Shrivastava & Addas, 2014).

In a 2014 Harvard Business Review piece on "Sustainability in the Boardroom," Lynn Paine presents survey findings that less than 10% of U.S. public company boards have a stand-alone corporate responsibility or sustainability committee and sustainability/CSR are consistently ranked at the bottom of board priorities (Paine, 2014). While her findings suggest that sustainability as a board-level issue has yet to be fully embraced by mainstream business, other studies show that companies that gain competitive advantage from sustainability have clear responsibility at the board level and have outlined concrete, measurable sustainability goals (Clark, Feiner & Viehs 2015). In a study of S&P 100 companies, Shrivastava and Addas (2014) find that ESG disclosure scores are highly influenced by governance disclosure scores. They find that boards with better attendance and more independent directors are more likely to have energy efficiency, climate change, green building, and environmental supply chain policies in place. They are also more likely to be GRI Compliant and signatories of the UN Global Compact. Overall, their study indicates that better corporate governance results in higher sustainability performance and increased probability that firms will adopt sustainability policies and comply with international sustainability standards (Shrivastava & Addas, 2014).

Eccles, Serafeim, Ioannou (2011) similarly find that when comparing firms with a substantial number of environmental and social policies to comparable firms with no policies, the “high sustainability” firms are more likely to assign responsibility to the board for sustainability and to form a separate board committee for sustainability. Additionally, high sustainability firms are more likely to make executive compensation a function of environmental, social, and external perception metrics and establish a formal stakeholder engagement process. They also find that these firms are more likely to disclose ESG data through nonfinancial reporting procedures. Lastly, they find that over the course of 18 years, high sustainability firms outperform low sustainability firms in both the stock market and accounting performance (Eccles, Serafeim & Ioannou, 2011)

In Green Giants, Williams (2015) confirms the above research by demonstrating that companies that have built billion dollar businesses around sustainability and social responsibility have created board level entities dedicated to sustainability. Nike and Natura, for example, have sustainability and CR committees, while Unilever and GE have sustainability advisory boards that advise senior executives (Williams, 2015). The success of these “Green Giants” demonstrates that sustainability performance requires institutional commitment and that board-level involvement helps drive accountability that sustainability concerns are considered alongside financial ones, catalyzes innovation, and provides an expert source of knowledge (Paine, 2014). While an enterprise-level approach to sustainability remains relatively rare, IW Financial finds that board and executive level involvement increased from 5% in 2009 to 15% in 2014 in the S&P 500 and anticipate it will continue rising (IW Financial, 2014).   Kolk (2008) similarly finds that corporate governance in relation to sustainability is rapidly emerging—more than half of companies in the Fortune 250 that have sustainability reports include a section on corporate governance (Kolk, 2007).

Lower Financing/Operating Costs, Increased Sales, and Positive Investor Valuation:

Companies that are mainstreaming sustainability outperform their peers in terms of sales, lower financing/operating costs, investor response/valuation and incentives for sustainability investments e.g. tax credits, subsidiaries, etc.

Mounting evidence shows that sustainable companies deliver significant positive financial performance, particularly around sales and lower financing and operating costs, and investors are beginning to value them more highly. Arabesque and University of Oxford reviewed the academic literature on sustainability and corporate performance and found that 90% of the cost of capital studies they analyzed conclude that good ESG standards lower the cost of capital; 88% of the operational performance studies show that good ESG practices result in better operational performance; and 80% of the financial market studies show that stock price performance is positively correlated with good sustainability practices. Overall, their research shows that companies with better ESG performance tend to have lower cost of debt and equity, better operational performance, are less risky, and are better stock market investments (Clark, Feiner & Viehs 2015).

Khan, Serafeim, and Yoon (2015) further the debate on ESG-Corporate Financial Performance by arguing that investments in sustainability should factor in the materiality of sustainability issues. They found that firms with good performance on material sustainability issues (issues of most concern to the business) significantly outperform firms with poor performance on those issues and experience more positive profitability margins. Firms with high performance on material issues and low performance on immaterial issues outperform firms with high performance on immaterial issues and low performance on material issues by 5.41% annually. For example, UPS would see more positive results in investing in material factors like customer privacy and emissions versus immaterial issues (for them) such as water use and waste management ("2013 Materiallity Matrix"). They also found that firms that perform well on immaterial sustainability issues do not underperform firms with poor performance on those topics. Overall, their results show that investments in material sustainability issues can be value-enhancing for shareholders and that investments in immaterial issues have neutral implications (Khan, Serafeim & Yoon, 2015).

Ameer and Othman (2011) found that the top 100 sustainable global companies in 2008 experienced significant higher mean sales growth, return on assets, profit before taxation, and cash flows from operations in some sectors compared to control companies from 2006-2010. They also found that higher financial performance of sustainable companies increased over the study period (Ameer & Othman, 2012). A survey by consulting firm A.T. Kearney found that companies committed to sustainability practices achieved "above average" performance in the financial markets during the 2008 recession, translating into an average of $650 million in incremental market capitalization per company (A.T. Kearney, 2009).

Furthermore, Schroder (2014) examined the relationship between socially responsible investments and CSR and found that companies with good CSR ratings experienced on average lower financing costs, due to better long-term financial performance and lower susceptibility to risk (Schroder, 2014). The market for socially responsible investing has grown considerably in the last 15 years. From 2012-2014, SRI assets in the US increased 76%, reaching $6.57 trillion (Woods, 2015). Additionally, companies with superior environmental performance experienced lower cost of debt by 40-45 basis points (Schneider, 2011).

As covered elsewhere in this paper, sustainable companies generate returns on capital through reduced operating costs – primarily around natural resource management (Bonini, Koller & Mirvis, 2009). PepsiCo, for example, saved more than $375 million since 2010 by implementing a sustainability program that focuses on reducing energy, water, packaging, and waste (PepsiCo Inc., 2015). Sustainable companies are also linked with high employee morale and motivation, which reduce costs related to turnover and recruitment.

Lastly, responsible companies have demonstrated substantial growth by accessing new markets and customers, creating new products that meet unmet social needs, increasing differentiation, and creating higher brand loyalty and better reputations (Bonini, Koller & Mirvis, 2009). There are nine companies globally- Tesla, Chipotle, Ikea, Unilever, Nike, Toyota, Natura, Whole Foods, and GE's Ecomagination - that generate at least a billion dollars in annual revenue from sustainable products or services. Combined, these businesses generate over $100bn in annual revenue and their stock outperforms conventional competitors by nearly 12% (Williams, 2016).

<u>Create Value to Society Through Net Positive Impact:</u>

Beyond reducing social and environmental impacts caused by business operations, some companies are now developing net positive approaches that aim to create value and deliver regenerative services to society.

In recent years, a new vision of business has developed that advocates for creating a net positive impact on society, rather than just reducing harm. Developed by Corporation 2020, Forum for the Future, WWF-UK, and the Climate Group, this framework suggests that businesses should provide regenerative services to people, planet, and society (Hollender, 2015).

Already, companies are beginning to approach their operations through a net positive approach. UK home improvement retailer, Kingfisher, has developed a net positive vision for 2050 and targets through 2020 in the areas of timber, energy, innovation, and communities. Their vision for timber, for example, is global net reforestation and they aim to reach a 2020 target of 100% responsibly sourced timber and paper in all of their operations ("Our Plan").

Ikea has similarly set ambitious net positive targets, aiming to be energy independent by 2020 and become a net positive exporter of renewable energy. Through technological investment and behavior change, Ikea is making sustainable homes for economically feasible for many people. Through its strategy, Ikea cut energy use by 15% between 2010 and 2015, saving nearly £40 million (Beavis, 2015).

Lastly, Dell announced its Legacy of Good plan in 2013 that strives to add intentional value to the areas of environment, people, and communities and assess the net positive impact of IT on society, ultimately to prove that the benefits of IT solutions to society are 10 times greater than the footprint it takes to make it. The plan outlines ambitious sustainability goals at all stages of the value chain and aims to cut energy intensity across its portfolio by 80%, (Dell, 2013), while additionally launching projects in collaboration with BSR, Forum for the Future, and the Global Environmental Sustainability Initiative to understand the value of IT in areas such as ecommerce and remote education. Dell conducted its first net positive research study with Arizona State University to assess the benefits of online learning. The resulting ASU Net Positive report found that online education offers increased access to degrees that can generate socio-economic benefits of more than $545,000 per undergraduate degree over the lifetime of the student and reduce the carbon footprint by at least 30 metric tons. Dell aims to continue applying a net positive methodology to other industries—healthcare, logistics, and municipal operations—to demonstrate that technology can enable positive social and environmental change (Dell, 2015).

A Net Positive Impact approach enables business to think outside the box and develop new products and services that can solve societal problems and provide returns to shareholders, further demonstrating how sustainability drives innovation.

Further Research

The NYU Stern Center for Sustainable Business's literature review demonstrates positive financial and strategic benefits for companies investing in sustainability. Existing empirical research has built a strong case for sustainability particularly in the areas of risk management, efficiency, and innovation, however further research should explore the benefits of stakeholder engagement, "sticky" corporate ecosystems, media coverage, HR, consumers' purchasing decisions, and how transparency influences environmental and financial performance. Most importantly, academics, civil society and business need to come together to design better firm level measurements of the financial impact (direct and indirect) of making sustainability core to the business strategy. The CFO’s office is not currently set up to measure these relationships, with the exception of operational efficiencies. If what is measured matters, then we need to address this shortcoming so business leaders and investors have the tools they need to make better decisions and deliver results to all stakeholders.

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