

# SCMRC LEAD WHITE PAPER SERIES

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## IT'S EASIER BEING GREEN: HOW SUSTAINABILITY INFLUENCES CARRIER CHOICE



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# REPORT HIGHLIGHTS

Research shows that shipping managers prefer trucking firms with high levels of environmental and social sustainability.

Contrary to the popular belief that price matters above all else in carrier selection, many shippers will pay slightly higher rates to environmentally friendly carriers. (See page 5.)

Though often overshadowed by environmental sustainability, social sustainability can have an even greater effect on shippers' trust levels and carrier choice. (See page 6.)

We suggest ways carriers can use these and other recent findings to stand out in a hypercompetitive industry.

*The idea that environmental initiatives will systematically increase profitability has tremendous appeal. Unfortunately, this popular idea is also unrealistic. Responding to environmental challenges has always been a costly and complicated proposition for managers. In fact, environmental costs at most companies are skyrocketing, with little economic payback in sight.*

*- Noah Walley and Bradley Whitehead, "It's Not Easy Being Green," 1994<sup>1</sup>*

*Sustainability is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."*

*- World Commission on Environment and Development*

Environmental sustainability is often associated with harsh economic trade-offs. When federal policymakers established the Environmental Protection Agency in 1970 and regulators began more actively policing environmental issues, many companies grudgingly went along with mandates they *hoped* would help the environment - but *knew* would harm their bottom line.

In the late '80s, the idea of a sustainability "win-win" grew popular. Proponents envisioned scenarios where **environmental and social sustainability** initiatives would boost firms' **economic sustainability**. But the possibility of such win-wins was debated for years.

Today, there is less room for debate. Technological advances, increasingly affordable sustainable technologies, and growing public concern over environmental and social sustainability have made it possible for firms to do right by the environment, their employees, and their communities while improving profitability.

## INTRODUCTION

<sup>1</sup> <https://hbr.org/1994/05/its-not-easy-being-green>

A growing body of evidence demonstrates the potential for sustainability “win-wins” in many industries. For example, [the World Economic Forum estimates](#) that firms that adopt sustainable supply chain practices can increase revenues by up to 20% for “responsible” products, reduce supply chain costs as much as 16%, and increase brand value between 15% and 30% - all while improving their local community and lowering their carbon footprint by up to 22%.<sup>2</sup>

As manufacturers, retailers, and consumers demand sustainability throughout supply chains, shipping managers are scrutinizing current and potential trucking partners’ sustainability as never before. Carriers that ignore sustainability risk being left behind by competitors who know its value.

Below, we examine what a recent stream of research tells us about how sustainability influences shippers’ carrier choice. We also offer ways firms can leverage those findings to stand out in a crowded field where [over 900,000 for-hire carriers](#) use standardized equipment, offer similar services, and compete for the same high volume shipping lanes.<sup>3</sup>



<sup>2</sup> <https://www.weforum.org/reports/beyond-supply-chains-empowering-responsible-value-chains>

<sup>3</sup> <https://ai.fmcsa.dot.gov/RegistrationStatistics/>

**Environmental Sustainability** involves a carrier's investments in "green" technologies and business practices.

#### Equipment that Contributes to Environmental Sustainability:

- Low Viscosity Oil
- Properly Inflated Tires
- Tire Pressure Monitoring Systems
- Low-Rolling-Resistance Tires
- Speed Limiters/Governors
- Weigh Station and Tollbooth Bypass Technology
- Route-Optimization Software
- Aerodynamic Mirrors, Tractor Fairings, Fuel Tank Skirts, and Trailer Skirts
- Computerized Engine Shut-Offs to Reduce Idling
- Automated Manual Transmissions
- Newer Model Trucks
- Biodiesel or Natural Gas-Fueled Trucks
- Electric or Hybrid Electric Trucks

## ENVIRONMENTAL SUSTAINABILITY

Trucking has grown much more environmentally friendly in recent decades. For example, thanks to a string of federal regulations enacted in the early 2000s, 70 trucks built in 2010 collectively produced the same level of emissions as one truck built in early 2002.<sup>4</sup>

But transportation still produces 29% of U.S. greenhouse gas emissions<sup>5</sup> and remains a problematic part of any supply chain's environmental impact. When shipping managers compare carriers, they are likely to notice those who have implemented environmental sustainability initiatives<sup>6</sup> or joined the EPA's SmartWay program.<sup>7</sup> Green technologies like weigh station and tollbooth bypass systems, speed limiters, and route optimization software can help carriers set themselves apart and reap the financial benefits of doing so.

Multiple studies find that shippers are more likely to choose a carrier with a strong record of environmental sustainability. One contributing factor is the pressure companies face to account for both their own carbon footprint and those of other firms in their supply chain. This trend helps explain why environmental sustainability is particularly important to shippers who are looking for a long-term partnership with a carrier; that carrier's carbon footprint will impact the shipping firm's environmental sustainability record for months or years to come.

Many shippers also believe a carrier's environmental sustainability investments will lead to lower prices over time since carriers with strong environmental sustainability typically enjoy better fuel efficiencies and decreased maintenance costs.

<sup>4</sup> <https://rmi.org/keep-on-truckin-50-years-of-efficiency-advancements/>

<sup>5</sup> <https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions>

<sup>6</sup> <https://www.constellation.com/solutions/for-your-small-business/goals/developing-a-small-business-sustainability-plan.html>

<sup>7</sup> <https://www.epa.gov/smartway/how-smartway-partnership-works>

Additionally, shipping managers trust environmentally sustainable carriers much more quickly and fully than their less-green competitors. Researchers long understood trust formation as a lengthy process that involved multiple positive interactions over an extended period, but we now know that a carrier's environmental sustainability can cause shippers to start to trust them before the two sides begin to negotiate their first contract. Trust is vital in any successful supply chain relationship, so it would be difficult to overstate the value of this benefit of environmental sustainability.

### Study #1: The Benefits of Green Weigh Station and Tollbooth Bypass Technology



*Price matters above all else when shippers choose a carrier. For decades, that notion was virtually unquestionable. So, many managers and researchers were likely surprised by a recent study showing that shippers are willing to pay higher prices to environmentally sustainable carriers.*

The study focused on subscription bypass services like Drivewyze and PrePass that allow trucks to avoid many stops

at weigh stations and tollbooths, saving both paper and the fuel required to get trucks back up to highway speeds. The environmentally friendly services are a great example of a sustainability win-win. In 2007, the Department of Transportation estimated that they save carriers approximately \$8.68 in fuel costs per bypass. Despite the opportunity for carriers to lower their carbon footprint while cutting costs, not all have adopted the technology.

The study's 158 participants chose between hypothetical carriers who charged different prices per mile (\$1.96, \$2.00, and \$2.04). Some of the carriers had not adopted bypass technology. Overall, the study's participants strongly favored carriers who used bypass technology, even when they charged slightly more than competitors who had not adopted the technology.

***Social Sustainability involves a carrier's investments in employees and its local community.***

**Elements That Contribute to Social Sustainability:**

- Fair Pay
- Getting Drivers Home Regularly
- Maternity/Paternity Leave
- Vacation Time
- Health/Life Insurance
- Retirement Benefits
- Safety Training
- Skill Development Training
- Wellness Programs
- Diversity and Inclusion Efforts
- Philanthropy/Community Outreach

After years of being overshadowed by environmental sustainability, social sustainability received a great deal of attention in 2020 as companies took measures to protect employees from Covid-19 and many firms supported various social issues.

Though it typically gets less coverage than environmental sustainability, studies show that social sustainability can have an even greater positive impact on shipping managers' trust formation and carrier choice.

Shippers especially value social sustainability when seeking a carrier for a short-term partnership, such as when a retailer needs to add capacity during the holiday season. Shipping managers place less value on carriers' environmental sustainability in those situations, partly because it would have little impact on their firm's own carbon footprint. Instead, they tend to favor carriers with a strong record of social sustainability since those carriers are more likely to retain skilled, reliable drivers in an industry plagued by a perpetual driver shortage. Carriers looking to invest in sustainability should consider the previously mentioned findings on how shippers value environmental sustainability more when seeking long-

term partnerships and social sustainability when seeking short-term partnerships. Carriers who rely on long-term contracts may want to prioritize environmental sustainability, while those who do more business on the spot market may focus more on social sustainability.



## Study #2: Which Aspect of Social Sustainability Matters Most to Shippers?

Researchers who study sustainability tend to lump investments in employee welfare and community philanthropy together as “social sustainability,” then leave it to study participants to imagine exactly how a hypothetical company allocates its funds. Seeking a better understanding of the topic, a team of researchers recently investigated whether shippers place more value on carriers’ investments in employee welfare or community philanthropy.

Responses from the study’s 404 participants revealed that shipping managers generally value carriers’ investments in employee welfare over philanthropy. This is probably because they believe that employee pay, benefits, training, and safety directly affect the service quality they will receive.

*Employee welfare sends a signal about the culture of the organization and leadership’s commitment to developing their people, which generally translates into better, more reliable service for us [as the customer].*

– Study Participant

Charity proved to be surprisingly controversial. While some participants stressed the importance of “contributions to society” and “giving back to the community,” others were wary of philanthropic efforts.

*They need to take the money they are putting into donations and reinvest that in the business to improve their operations and drive down their costs to be more price competitive.*

– Study Participant

*I don’t understand why anyone would make an investment in the community over their employees. It would make me question their decision-making and if I need to be working with them at all.*

– Study Participant

Managers’ varied responses to philanthropy suggest that investments in employee welfare are more likely to yield immediate financial benefits. Companies should take care of their employees before making publicized charitable donations, or their well-intentioned actions may drive shippers away.

But that is not to suggest that community philanthropy is without value. In the words of one study participant, “Without... a market to sustain your business, you will have no business.”

Investments in environmental and social sustainability can be a win-win for carriers, allowing them to save money, mitigate driver turnover, and attract new customers while helping the environment, their employees, and their local communities.

***Economic Sustainability involves a carrier's economic and financial viability.***

But those investments can be disastrous if made without regard for the firm's economic sustainability. And though going out of business is guaranteed to lower a carrier's carbon footprint, both the industry and the planet will be slightly worse off if an environmentally and socially conscious carrier's demise allows a less scrupled - but more fiscally responsible - firm to prosper.

### Study #3: Which Dimension of Sustainability Do Shippers Value Most?



By 2018, studies had shown that all three dimensions of sustainability significantly influence carrier choice. So, researchers set out to answer the next logical question: which dimension matters most?

The 391 supply chain managers who participated in the study valued carriers' economic sustainability considerably more than the other two dimensions. The study confirmed that environmental and social sustainability impact

carrier choice and can help economically sustainable carriers differentiate themselves from the crowd, but such investments can turn detrimental if they damage a carrier's financial health.

The study's findings highlight the importance of economic sustainability. Shippers want to know that their carrier partners are stable and will be around for the long haul.

If carriers weaken their financials by investing in environmental or social sustainability out of necessity - to address environmental regulatory mandates or driver retention problems - they should provide more information (e.g. service levels, delivery statistics, capital investments) to reduce risk in shippers' decision making.

## CONCLUSION

Sustainability is often associated with severe economic trade-offs, but that isn't necessarily the case. As long as carriers stay within their financial means, sustainability is a win-win.

Shipping managers prefer carriers with higher levels of environmental and social sustainability than their competitors. Increasing public pressure to adopt sustainable supply chain practices means that preference will likely grow even stronger in the future.

Many pieces of equipment that contribute to a carrier's environmental sustainability require low initial investments and should provide returns in both fuel efficiency and increased business from shippers, provided they are part of a comprehensive sustainability initiative that is publicized through the firm's website, social media, advertising, or word-of-mouth. Similarly, investments in employee welfare should help reduce driver turnover and its associated costs while attracting new customers who know about the carrier's social sustainability efforts.

Investing in sustainability can help carriers gain new customers and increase profitability while taking care of their employees, their local communities, and the environment. Nowadays, it's easier being green.



**Sources:** This paper draws from five peer-reviewed articles co-authored by Rodney W. Thomas.

[“The Impact of Environmental and Social Sustainability Practices on Sourcing Behavior”](#) shows that environmental and social sustainability affect shippers’ carrier choice and trust levels.<sup>8</sup> The 2016 *International Journal of Physical Distribution & Logistics Management* article was written by Thomas, Brian S. Fugate, Jessica L. Robinson, and Mertcan Tasçioğlu.

In [“Integrating Behavioral Decision Theory and Sustainable Supply Chain Management: Prioritizing Economic, Environmental, and Social Dimensions in Carrier Selection,”](#) Beth Davis-Sramek, Thomas, and Fugate find that, of sustainability’s three dimensions, economic sustainability most strongly affects carrier choice.<sup>9</sup> The *Journal of Business Logistics* article was published in 2018.

In 2019, Thomas, Robinson, Jessica L. Darby, Scott Cox, and Donnie F. Williams Jr. found that shipping managers are willing to pay slightly more to environmentally friendly carriers. They published their findings in a *Journal of Transportation Management* article titled [“An Experimental Test of Green Management Information System Effects on Carrier Selection: Way Station and Tollbooth Bypass Technology Adoption.”](#)<sup>10</sup>

In a 2020 *International Journal of Production Economics* article titled [“Exploring the Differential Roles of Environmental and Social Sustainability in Carrier Selection Decisions,”](#) Davis-Sramek, Robinson, Darby, and Thomas find that environmental sustainability has a greater influence on long-term carrier choice and social sustainability has more effect on short-term carrier choice.<sup>11</sup>

Thomas, Darby, David Dobrzykowski, and Remko Van Hoek’s 2021 *Journal of Supply Chain Management* article - [“Decomposing Social Sustainability: Signaling Theory Insights Into Supplier Selection Decisions”](#) - shows that shippers generally value carriers’ investments in employee welfare over their philanthropic work.<sup>12</sup>

<sup>8</sup> <https://www.emerald.com/insight/content/doi/10.1108/IJPDLM-02-2015-0041/full/html>

<sup>9</sup> <https://onlinelibrary.wiley.com/doi/full/10.1111/jbl.12181>

<sup>10</sup> <https://digitalcommons.wayne.edu/jotm/vol29/iss2/3/>

<sup>11</sup> <https://www.sciencedirect.com/science/article/pii/S0925527320300554>

<sup>12</sup> <https://onlinelibrary.wiley.com/doi/full/10.1111/jscm.12247>

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