Green technologies environmentally and profit friendly

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Companies looking to reduce their environmental impact without negatively affecting profits may want to consider increasing their investment in green technology and other sustainable IT solutions, according to a new study on information technology and sustainability published in *Production and Operations Management*.

Terence Saldanha, assistant professor of information systems at Washington State University's Carson College of Business, and his research coauthors have examined the impact of green IT investment and implementation on a firm's energy conservation efforts and profits.

According to Saldanha, an increased focus on corporate environmental sustainability, as well as global efforts in response to climate change, continue to encourage companies to explore ways for improving energy efficiency.

"But this also goes beyond the notion of just being good to the environment. Customers also are looking for it," said Saldanha.

How firms can lessen environmental impact

The Paris Agreement, aimed at strengthening the global response to climate change, recognizes the important role technology will play in addressing climate change issues. As efforts are made to limit global temperature increase, firms may face new regulations which place a stronger emphasis on environmental sustainability.

Researchers say companies that invest in their own green technologies can operate in more environmentally sustainable ways without hurting profits. But as technology continues to evolve and becomes more deeply integrated in business processes, some argue that the increase use of technology will lead to more challenges. For example, creating more e-waste from the disposal of outdated equipment or systems.

Even though it's important for firms to be mindful of the e-waste they generate, the environmental benefit of the right technology investment could outweigh any negative impact, according to Saldanha.

"You can achieve both profit and energy efficiency through IT investments," he said.

Timing and technology investments matter

Investment in technology alone doesn't automatically lead to an improved bottom line, researchers note. When and how companies make IT investments in internal operations and partnerships with suppliers also matter.

According to Saldanha, when companies make investments in technology to their own internal operations—such as modernizing data centers, moving toward virtualization of servers, or automating certain processes—it's possible to reduce energy consumption without hurting profits.

On the other hand, firms that make investments in green technology through partnerships with suppliers—such as implementing takeback agreements or using more green technology products under contract—can create more environmentally sustainable operations.

However, they might not experience any significant impact to profits, either positive or negative.

"When considering IT investments, companies should be aware of the tradeoffs that happen when they are implementing those kinds of steps with technology from a supplier," Saldanha said.

More information: Jiban Khuntia et al, Information Technology and Sustainability: Evidence from an Emerging Economy, *Production and Operations Management* (2017). DOI: 10.1111/poms.12822

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