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Key Finding

Food waste is an overlooked and underestimated contributor to households' carbon footprint.

Business Application

Providing communities with easy access to groceries (by encouraging the opening of more grocery stores, cheap online grocery options, etc.) is an exceptionally powerful way of limiting carbon emissions.

Making modern urban lifestyles environmentally sustainable is one of the most important challenges of our time. My research examines two key aspects of this challenge: Identifying practices that facilitate sustainable food consumption and designing new business models that enable sustainable transportation.

My work on sustainable food consumption examines how the configuration of the food supply chain (retail store density, online-offline channels, revenue models, etc.) influences the environmental impact of the distribution, retail and disposal of food. My research identifies food waste as the key, high-impact contributor to global warming and prescribes food supply chain configurations that reduce food waste and the carbon impact of food.

In other work, I have looked at new business models, such as bike-share systems and ride-sharing marketplaces, that facilitate reducing the carbon footprint of activities associated with transportation and/or facilitate decongestion in urban areas. My work in this area studies customer responses to the operational performance of such models and uses them to advise better system designs. For example, in the context of bike-share systems, I identify customer responses to bike availability, accessibility and network structure to advise on station-network designs. In the context of a ride-hailing marketplace I identify customer responses to incentives and wait-times for rides, to better advise designs of promotions and incentive schemes that are most effective in scaling up a ride-hailing marketplace.

Elena Belavina is an Assistant Professor at the Booth School of the University of Chicago. She holds a PhD in Management from INSEAD and bachelor and master degrees in applied mathematics and physics from the Moscow Institute of Physics and Technology. To know more, visit her [website](#).