Supply Chain Resiliency and the Need for Stress-Tests

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David Simchi-Levi is a Professor of Engineering Systems at Massachusetts Institute of Technology and the Co-Director of Leaders for Global Operations. His research currently focuses on developing and implementing robust and efficient techniques for logistics and manufacturing systems. He has published widely in professional journals on both practical and theoretical aspects of logistics and supply chain management.

Dr. Simchi-Levi has been the principal investigator for more than five million dollars in funded academic research. He is the Editor-in-Chief of Operations Research, the flagship journal of INFORMS, the former Editor-in-Chief of Naval Research Logistics and a member of the board for several scientific journals including Management Science, Networks, Transportation Science and Telecommunication Systems, and a former Area Editor of Transportation for Operations Research. His Ph.D. students have accepted positions in leading academic institutes including Berkeley, Columbia U., U. of Illinois Urbana-Champaign, U. of Michigan, Purdue U., Georgia Tech, and Virginia Tech.


He is the founder and chairman of LogicTools (www.logic-tools.com), a company that provides Decision Support Systems and professional services for supply chain planning. These systems have been used widely to reduce cost and improve service level in large-scale logistics systems. Clients include Caterpillar, ConAgra, Kraft Foods, Mercer Management, Ryder, SC Johnson, UPS, U.S. Postal Service, and Walgreens to name a few.

Professor Simchi-Levi has consulted and collaborated extensively with private and public organizations. He is one of the developers of a Decision Support System for school bus routing used by New York City Board of Education to route and schedule school buses throughout the five boroughs in New York City. The system won the first place prize in the 1994 Win World Competition for the Public Sector.

The global pandemic has exposed serious flaws in supply chains, including critical ones for industries such as pharma and medical supplies. Shortages of personal protective equipment for health workers and ventilators in hospitals are the most prominent ones. To prevent this problem from occurring again when the next disaster strikes, governments should consider establishing a stress test for companies that provide critical goods and services that’s akin to the stress tests for banks that the U.S. government and European Union instituted after the 2008 financial crisis. This test should focus on the resilience of companies’ supply chains.