

Market Failure in the Chemicals Market Caused By
Lack of Publicly Available Chemical Safety Information

Joseph H. Guth, J.D., Ph.D.
Legal Director
Science & Environmental Health Network
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Redaction of chemical identities from health and safety studies effectively prevents disclosure to the public of the health and safety information about those chemicals. This contributes to the pervasive lack of information about the health and safety properties of chemicals on the market, the key element of what has been called "the Data Gap." This data gap directly undermines the chemicals market and prevents it from operating as a properly functioning free market.

This effect has been described in numerous reports that are compiled in the bibliography below. Particularly salient are two reports on chemicals policy and the failures of TSCA from the University of California, Berkeley in 2006 and 2008 that were commissioned by the California Legislature and California EPA, respectively. Two passages from those reports concisely describe the problem.

1. From Wilson et al. (2006) at p. 23:

"The work of Nobel prize-winning economist Joseph Stiglitz suggests that the Data Gap has created a "market failure" in the U.S. that prevents the laws of supply and demand from enabling the market to produce what the public really wants. Because the chemicals market lacks robust, easy-to-use information on chemical toxicity, the prices businesses and consumers pay for chemicals may not reflect their true preferences; they may inadvertently be purchasing hazardous chemicals that they might avoid if they had better information. As a consequence, Guth, Denison and Sass argue that "the demand for safer products is not adequately expressed or realized in the market." These conditions disadvantage producers of safer products, and they give rise to commercial interests that are motivated to protect existing products, including those that are hazardous. These interests naturally resist information disclosure policies out of concern that they could undercut the market share of existing chemicals if those chemicals are found to be hazardous." (Citations omitted, references included in bibliography below.)

2. From Wilson et al. (2008) at pp. 6-7:

"The data gap has produced a skewed chemicals market in which products compete on all attributes except safety. As a result:

- Consumers are largely unable to choose products on the basis

- of their potential health and environmental impacts
- Businesses and manufacturers have limited information with which to identify and eliminate hazardous chemicals and products in their supply chains
- Public agencies have insufficient information to identify chemical hazards of highest priority for human health and the environment
- The deterrent function of the product liability and workers' compensation systems is undermined

Finally, without information on chemical hazards or uses, neither the market nor public agencies can stimulate or reward the development and commercialization of safer alternatives."

Bibliography

Wilson M., Chia D., Ehlers B., California Policy Research Center, University of California Office of the President, "Green Chemistry in California: A Framework for Leadership in Chemicals Policy and Innovation," Special Report to the California Senate Environmental Quality Committee and the Assembly Committee on Environmental Safety and Toxic Materials (2006), available at: <http://coeh.berkeley.edu/greenchemistry>. See pp. 23, 41, 55, 74 discussing how data gaps in the chemicals market are impeding the development of green chemistry and recommended that those gaps be closed by provision of publicly available chemical information

Wilson, M.P., Schwarzman, M.R., Malloy, T.F., Fanning, E.W., Sinsheimer, P.J., "Green Chemistry: Cornerstone to a Sustainable California," University of California Centers For Occupational Health (2008) (www.coeh.ucla.edu/greenchemistry.htm). See pp. 6-7 for discussion of effects of data gap caused by TSCA.

Schwarzman, M.R. and Wilson, M.P., "New Science for Chemicals Policy," *Science*, vol. 326, pp. 1065-66 (2009) (http://coeh.berkeley.edu/docs/news/science_policy_forum_112009.pdf.) See p. 1066 discussing problems of trade secret claims under TSCA.

Michael P. Wilson and Megan R. Schwarzman, "Toward a New U.S. Chemicals Policy: Rebuilding the Foundation to Advance New Science, Green Chemistry, and Environmental Health," *Environmental Health Perspectives*, vol. 117, pp. 1202-1209 (2009) (<http://coeh.berkeley.edu/docs/news/2009-ehp.pdf>). See pp. 1205-06 discussing data gap caused by TSCA.

Guth, J., Denison, R., Sass, J., *Require Comprehensive Safety Data for all Chemicals*, NEW SOLUTIONS: A JOURNAL OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH POLICY, Volume 17, Number 3, pp. 233-58 (2007). See pp. 241-45 for discussion of market flaw resulting from data gap caused by TSCA.

Guth J., *The Chemicals Market Cannot Generate Green Chemicals Unless the Data Gap is Closed*, Comment filed with California Department of Toxic Substances Control Green Chemistry Initiative Conversation with California (October 21, 2007), available at: <http://www.sehn.org/pdf/GreenChemistryIntiativeComments.pdf>. Presents thorough analysis of market flaw caused by data gaps.

For overview of economic consequences of “imperfect information” and “information asymmetries” in information economics, see Stiglitz, J. E., “Information and the Change in the Paradigm in Economics, Part 1,” 47 *The American Economist* 6-26 (Fall 2003); Stiglitz, J. E., “Information and the Change in the Paradigm in Economics, Part 2,” 48 *The American Economist* 17-49 (Spring 2004) (available at <http://www2.gsb.columbia.edu/faculty/jstiglitz/papers.cfm>). See also Stiglitz, J.E., *Globalization and Its Discontents*, pp. 73-74, 261n.2, W.W. Norton & Company, Inc. (2003).

For a review of numerous transparency policies in diverse fields, including the Toxics and study of attributes that make such policies effective, see Archon Fung, David Weil, Mary Graham and Elena Fagotto, “The Political Economy of Transparency: What makes disclosure policies effective,” Ash Institute for Democratic Governance and Innovation, John F. Kennedy School of Government, Harvard University (2004), available at: <http://www.innovations.harvard.edu/showdoc.html?id=6784>.

Jeffrey Trauberman, “Statutory Reform of ‘Toxic Torts’: Relieving Legal, Scientific and Economic Burdens on the Chemical Victim,” 7 *Harv. Envtl. L. Rev.* 177, 184-87 (1983) (discussing chemicals market, the importance of the assumption of perfect information to efficiency, the lack of information in the chemicals market and consequent inefficiencies).