

New “Gas Mileage Game” Fuels Understanding of Environmental Policy

Businesses increasingly are calling upon managers to deal with issues seemingly beyond their control, such as governmental actions, media attention and public scrutiny. A new course, “Non-market Strategy: Setting the Rules of the Game,” offered for the first time last winter at the Ross School, gives students real-world insight by examining strategies for dealing with these types of issues and their public policy implications.

Martin Zimmerman, clinical professor of business and former Ford Motor Co. executive, and Thomas P. Lyon, the Dow Chemical Professor of Sustainable Science, Technology and Commerce,

teach the course that reproduces the dynamics of public regulation-making. Topics addressed include environmental and safety regulation, international trade policy, corporate social responsibility and the integration of market and non-market strategies.

An innovative element in the course—the “Gas Mileage Game”—immerses students in real-world problem-solving by allowing them to take on the competing roles of auto companies, government representatives and non-governmental organizations.

In the game, members of Congress decide what, if any, new gas mileage regulations to enact while trying to maximize their chances

to be re-elected and do what is best for their constituents. Auto companies decide whether to adopt new technologies that will improve gas mileage and try to influence government regulation while preserving sales, market share and profits. Advocacy groups strive to persuade companies and the government to raise car gas mileage standards. Finally, all groups consider what is best for the country and the environ-

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ment and factor this into their decisions.

According to Nathan Bos, assistant research scientist in the School of Information and co-developer of the game along with Zimmerman and Lyon, the game draws upon conceptual frameworks from economics, political science and strategic analysis.

Among questions kept in mind during game development were: What is it like to be an automotive executive deciding whether to upgrade your fleet’s fuel efficiency or a member of Congress deciding if new environmental regulation is warranted?

“Tom and I relied heavily on Marty for the aspect of realism,” Bos said. “We would frequently ask things like, ‘what do government and company representatives really talk about when discussing future regulation, and what arguments do environmental advocacy groups make and how do companies respond?’”

Zimmerman, who retired from Ford as group vice president of corporate affairs in 2004, said the discussion often is about environmental benefits, politics and, more important, costs.

Bos, Lyon and Zimmerman tested the game last winter on students who provided valuable feedback. “We really benefited from their input. It was a learning experience for them and us,” Zimmerman said.

He acknowledged it is difficult to compress real-world issues into a three-hour game, and the complexity of the interactions can be a challenge for students. “We were

cautious about adding complexity. If it were too complex, students wouldn’t get it; and if it were too simple, they wouldn’t learn,” he said.

Zimmerman believes the course appeals to a broad range of students. “I would like to see a nice mix of students from the Ross School, School of Natural Resources and Environment and Gerald R. Ford School of Public Policy take the class,” he said.

No one wins in the game. “The essence of it is learning. Students are graded on their debriefing—the strategies they used for the issues they encountered,” Zimmerman explained.

Zimmerman and Bos anticipate the game will evolve over time. “We may have to change the market algorithm next year to reflect higher gas prices,” said Bos. “American consumers may be starting to care about higher gas mileage more than in the past and may be willing to pay more for fuel efficiency. We will pay close attention and think about ways the game can and should be changed to reflect current conditions,” he added.



Martin Zimmerman



Nathan Bos



The “Gas Mileage Game” immerses students in real-world problem-solving.

At Ford, Zimmerman was responsible for corporate economics, governmental affairs, environmental and safety engineering, corporate citizenship and the Ford Motor Company Fund. Before joining Ford, Zimmerman was a Ross School faculty member and served as chair of the business economics group. He rejoined the faculty in January.

Zimmerman serves on the National Commission on Energy Policy and the board of the National Bureau of Economic Research. He is a former member of the President’s Council of Economic Advisers. **M**

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