View from Tokyo: IMVP Auto Symposium Probes Japan’s Next Challenges


Co-sponsored by the Research Institute for Economy, Trade, and Industry (RIETI), Hosei University, MIT International Motor Vehicle Program

Understanding how the Japanese auto industry has remained dynamic and innovative in a sea of moribund industries provides valuable lessons, said Masahiko Aoki, RIETI president and CEO and Stanford University professor. That premise attracted more than 250 scholars and decision-makers from industry and government to Hosei University’s Sky Hall in Tokyo Sept. 12 for the Auto Industry Symposium, co-sponsored by the International Motor Vehicle Program (IMVP).

IMVP’s long history with the industry and with Japanese scholars made the program a natural symposium partner for Hosei and RIETI, said IMVP Co-Director John Paul MacDuffie. Sixteen speakers, most with IMVP research backgrounds, shared observations about the challenges ahead for the Japanese auto industry.

Second Century Advances Machine


“The Machine showed that in the 1980s, many factories in Japan were operating under fundamentally different production models,” said Frits Pil, assistant professor, University of Pittsburgh. “However, over the last decade, that knowledge has diffused widely - the big gaps in factory level performance no longer exist. But have firms done better? Not really, what we see are islands of excellence. The focus on factories has led to under-optimization of other areas of the value chain.”

“We are not building the cars customers want when they want them,” Pil said. “One in four customers in Europe walks out of dealerships with cars that are different from what they expected to buy walking in. In the U.S., it’s one in two. Why do they take it? We pay them to take it. Last year we gave customers an average of $2,000 to take the cars.”

Holweg, an IMVP Sloan Industry Fellow, pointed to the problem with variety in car options. “Millions of variations mean customers never find what they want in stock. Today, customers want choice and customization. Yet this choice is effectively limited to what is available on the dealers’ lot, which is the fundamental reason we have discounts - customers are not finding what they want available on the dealers’ lot.”

“An car that offers a lot of choices does not have to be more complex in production,” Holweg said. The build-to-order model, where specific cars are built for specific customers, would permit buyers to have true choices and dealers to reduce costly inventories. This pull system, rather than a forecast system, would drastically reduce stock holding and incentives, but does require a system-wide rethinking of how cars are designed, built, and sold.

Capitalizing on Thai, Chinese Strengths

A long-time IMVP researcher, Hosei University Professor Emeritus Koichi Shimokawa, offered participants a vision of new markets that go beyond China to Thailand. “I don’t believe that China is going to be the only right answer for the Japanese auto industry,” Shimokawa said. “There is a new focus on Thailand. Historically Japanese manufacturers have considered China a difficult market because the companies were state run and they felt it was high risk. In ASEAN investments, Thailand has been the central focus.” Both Honda and Toyota turned to exporting from Thailand when local sales dropped. Today the Thai Honda/Ayutthaya Four-Wheel Plant exports to 27 countries – including Japan. The Thailand Toyota Innovative Multinational Vehicle (IMV) Project, Shimokawa said, produces cars for 80 countries.

For China, Shimokawa suggested that the Japanese strategy should utilize China’s strengths, for example in open architecture for mass-produced products, rather than merely relying on cheap wages.

New Telecommunications Opportunities

MIT Professor Charles Fine described new business opportunities that could put automakers at the leading edge of on board communications. Car makers lost a significant opportunity when they failed to see that mobile phones, first introduced as car phones in the U.S., had a profitable future. Today mobile peer-to-peer (p2p) networks and wireless communications offer a second chance to take a telematics lead. “Now Starbucks and McDonalds are deploying thousands of WiFi hotspots a year,” Fine said. “However, a car company could deploy millions a year if they were built into cars.”

The technical requirements are no longer the burning question. The real question, Fine said, is how to make telematics a business proposition. “What’s the right business model? Should it be given away free in cars? Should this be a competing network? Mobile p2p is disruptive to businesses that build towers and carriers because you no longer need those structures. So, this is an opportunity for somebody.”

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