

Launching multiple products to attract both consumers and application developers key to tech firm success, study says

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(PhysOrg.com) -- High-tech firms should market multiple product versions at the same time, such as Apple did with the iPhone and iPod Touch, both to attract early adopters and build a network of individuals and companies that develop applications, according to a new study from the University of California, Davis.

Professor Hemant Bhargava of the Graduate School of Management and co-authors Byung Cho Kim from Sogang University and Daewon Sun from the University of Notre Dame studied 20 years of products such as the [Xbox](#), e-readers and the iPhone devices that operate in two-sided markets. One side of the market is the consumer side, where [consumers](#) can have an iPhone on which to communicate or a [video game](#) console on which to play a game. And the other side of the market is where developers who make games and other applications to run on those devices reach potential buyers.

“Often, entrepreneurs and firms are unable to successfully commercialize their innovation despite having technologically sophisticated products,” Bhargava said in advance of the study’s publication in the journal *Production and Operations Management*.

To be successful, he said, companies must overcome many obstacles, including:

- Chicken and egg problem — For example, convincing a sufficient number of merchants to adopt a new payment technology, before customer demand warrants the technology.
- Uncertainty in product design and compatibility — For example, should all electric cars use the same battery, one that could be charged at every battery station, or will the market be fragmented among many technologies?
- Convincing consumers to pay high up-front costs — In return for small and uncertain benefits delivered over time (such as residential solar power).
- Growth-versus-profitability dilemma — Should a vendor of an e-book technology sacrifice margin and profits in return for a high market share in order to entice publishers toward its technology?

Bhargava and his co-authors found that start-ups often roll out minimal product lines during initial launches to avoid design complexity and higher fixed costs, then wait for substantial developer participation before expanding the product lines. The research shows, however, that early expansion is generally better than deferred expansion, except when developer participation is extremely uncertain.

While the common belief is that firms can either have growth or achieve profits in the early launch of a product, “our research is founded on the proposition that growth and profitability need not necessarily operate in conflict,” Bhargava said.

“Firms should expand the product line early in order to increase the installed base and induce a higher level of developer participation,” he said.

The researchers build on existing theory that launching two versions of a product — basic and premium — could resolve the growth-versus-profitability conflict, especially when the value of the new product

increases with the number of people using it. The premium version would provide the needed higher profit margin, while the low-priced or free basic version would deliver the larger overall market share that would attract outside [application developers](#).

A case in point is Apple's entry in 2007 into the mobile phone and smartphone market, an industry filled with powerful incumbents, Bhargava said. Soon after launching the relatively expensive iPhone at the end of June 2007, [Apple](#) added the much cheaper iPod Touch (iPhone minus the phone feature).

“With this second product, Apple quickly was able to increase the number of devices running [iPhone](#) applications, which made the platform very attractive to potential application developers,” he said.

For a startup that wants to expand an Internet-based information technology that relies on consumers and third-party developers, the new study suggests these important practical guidelines:

- Increase the awareness of the product to make customers purchase it in the early stages.
- Provide incentives or convenient [development](#) tools to application developers to enable fast growth of applications.

More information: The paper is available at [papers.ssrn.com/sol3/papers.cf ... ?abstract_id=1692252](http://papers.ssrn.com/sol3/papers.cf...?abstract_id=1692252) (click on one-link download).

Provided by UC Davis

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