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Innovation strategies of Indian market leaders

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Abstract

Purpose – The purpose of this paper is to identify the innovation strategies, and to understand the role of innovation, in the growth of Indian market leaders.

Design/methodology/approach – This paper synthesizes recent research on the innovation strategies of Indian companies. It identifies innovation strategy in terms of dimensions used in prior literature such as exploration vs exploitation, market-pull vs technology push, internal vs external development of capabilities, and product vs process innovation. It also identifies different organizational processes used by Indian market leaders to drive innovation. Finally, it identifies future innovation management challenges likely to be faced by Indian companies.

Findings – Market-leading Indian companies focus their attention on business model innovation for affordability. They use technology as a means to deliver such innovation rather than innovating in technology *per se*. They display a high level of ambidexterity in their innovation strategies on the four dimensions of innovation identified. So far, they used top-down innovation models for breakthrough innovation, and bottom-up innovation models for “managed innovation”. Going forward, they will need to adopt more research and development-intensive innovation strategies. They will also have to develop new organizational process models for breakthrough innovation.

Practical implications – The paper provides insights on innovation strategy to Indian firms aspiring for market leadership. Managers in multinational corporations will have a better understanding of the innovation strategies followed by their Indian competitors.

Originality/value – India is an important growth market for most corporations. This article provides easily accessible insights into the innovation strategies that work in the Indian market.

Keywords Innovation strategy, India, Emerging markets, Technology, Growth, Innovation

Paper type Viewpoint

Introduction

At the time the Indian economy was opened to competition in the early 1990s, there were fears that Indian firms would not be able to survive the entry of better endowed multinational competitors. But, in several sectors, not only have Indian firms survived, they have thrived and prospered, and attained leadership positions. Indian companies are among the top firms in domestic markets – e.g. Tata Motors in trucks and cars, Bajaj Auto in motorcycles, Titan Industries in watches and Pantaloon in retail – and in international markets as well – firms such as Tata Consultancy Services (TCS, in software services) and Bharat Forge (forged automobile components). Indeed, over the last two decades, Indian firms have become more prominent on the international business landscape. India’s success in software services has led to firms like TCS and Infosys becoming subjects of study at business schools the world over, as have prominent acquisitions such as that of Corus by Tata Steel, and Novellis by Hindalco Industries.



However, Indian firms have rarely been seen as exemplars of innovation. One reason for this is that the industries in which Indian firms have been prominent in global markets – software services, generic pharmaceuticals and automobile components – are either primarily B2B markets, or do not involve consumer branding. Another reason is that Indian firms have limited presence in industries such as semiconductors or consumer electronics which are well known for product and technological innovation.

It is also useful to remember that prior to the deregulation of the Indian economy, Indian firms had little incentive to develop innovation capabilities as the licensing system that constrained launch of new products or enhancement of capacities prevented firms from using such capabilities effectively (Krishnan and Prabhu, 1999; Krishnan, 2010). Innovation within firms, if it could be called that, focused only on absorption of technologies sourced from foreign firms, but there was no real incentive to enhance efficiency or develop new products. Instead, firms focused most of their creative energy on finding ways around the regulatory system, leading to the now famous paradigm of “Jugaad”.

Innovation strategies of Indian firms

It is unlikely that Indian firms could have done so well, post-deregulation, without consciously innovating. Hence, two questions suggest themselves: what innovation strategies have Indian market leaders followed? What role has innovation strategy played in the growth and competitiveness of these firms?

It is clear that technological innovation has not been the focus of Indian firms. Instead, their distinctiveness has been in using and adapting technology as a basis for business model innovation. In the international market, this has taken the form of new business models such as the global delivery model pioneered by large software services firms that allows them to deliver high quality software solutions using a team of software experts located across the globe, optimizing on expertise, cost and location. In the domestic market, the dominantly successful strategy has been “business model innovation for affordability” – this has primarily had the objective of addressing a price-sensitive and value-conscious market with the “right” products and services. The focus has been on identifying new target customers (often at the “bottom of the pyramid”), offering them a favourable value proposition (usually through “pay as you use” pricing rather than large upfront costs) and using technology to deliver such a value proposition at low cost. Mobile services firms such as domestic market leader Bharti Airtel questioned conventional notions such as the primacy of ownership of the network and instead partnered with equipment firms such as Ericsson who invested upfront in the network infrastructure. This enabled Bharti Airtel to conserve capital and expand its network rapidly, thereby paving the way for a low cost model that has resulted in some of the lowest mobile services prices in the world. Bharti Airtel extended this logic to other domains such as the information technology backbone of the network, and even transmission towers.

Innovation strategy has traditionally been studied on four different dimensions: exploration vs exploitation of capabilities; market pull vs technology-push; internal vs external sourcing of capabilities; and product vs process innovation. In a recent study (Krishnan and Jha, 2011), we delved into the innovation strategy of five Indian market

leaders – Tata Motors (cars), Bajaj Auto (motorcycles), Biocon (biopharmaceuticals), Titan (watches and retail) and Pantaloon (retail) – on these dimensions.

We found that innovation played a fundamental role in the leadership of all of these companies. For example, Tata Motors entered the Indian car industry only in the early 1990s, but is among the top three companies in terms of volumes today thanks to its development of the Indica platform that is well suited to the budget of Indian consumers and Indian road conditions. In developing the Indica, Tata Motors identified the market need, and played the role of a system designer and integrator in putting together subsystems from different sources. Another leader, Biocon, entered the biopharmaceutical industry only in 1998, but used the fermentation capabilities it had developed in its earlier enzyme business to first move into statins and immunosuppressants before developing biosimilar drugs, and more sophisticated monoclonal antibodies for cancer therapy in collaboration with a Cuban Research Institute.

We found that all the five companies were ambidextrous, and used a combination of exploration and exploitation. While the exploration capabilities of all the five companies increased over time, the firms differed in terms of where in the value chain they were explorative. The retail firms were relatively more explorative in downstream functions (marketing) while others were explorative in both upstream and downstream functions. We found that all firms used a combination of internal and external sources for developing capabilities. But, firms in the more technology-intensive industries (transportation and pharmaceuticals) relied more heavily on external sources (through acquisitions and alliances) to complement their internal capabilities compared to retail firms.

Product innovation played an important role in all five companies with a visible trend towards products that are affordable to a large mass market. Affordability clearly emerged as an important plank of innovation. But process innovation, particularly in the form of improvements to manufacturing or delivery processes to lower costs, were an integral part of all the companies we studied. This was another form of ambidexterity – companies could not afford the luxury of focusing on one at a time.

Given the earlier absence of an enabling environment for technology development, we did not expect to see technology-push innovation. However, in at least two cases, that of Tata Motors and Biocon, pre-existing technological capabilities – engineering in the case of Tata Motors and fermentation-based manufacturing processes in the case of Biocon – became the backbone of their innovation efforts and were used to drive innovation. Both these companies focused on building additional and complementary capabilities through exploration, and by using multiple external sources. Thus, companies that had built technological capabilities at a time when there was little compulsion to do so, were well placed to push forward in a more competitive environment.

Another important dimension of innovation strategy by Indian companies has been the acquisition of foreign firms to fill gaps in their innovation skills portfolio and rapidly enhance innovation capabilities. For example, one of the firms in our study, Biocon, acquired Nobex, a US-based pharmaceutical company to gain access to a delivery technology for oral insulin as well as Nobex's patent bank related to oral insulin. These will help Biocon in its efforts to develop its own second generation oral insulin drug. Other prominent acquisitions for technology and innovation capabilities include that of a German forging company CDP by Bharat Forge, Jaguar Land Rover and Daewoo Heavy Commercial Vehicles by Tata Motors and a blue-ray technology company, OM&T, by Moserbaer (Krishnan, 2010).

Indian companies have to compete in the domestic market with multinational companies with strong brands and technological capabilities. They can compensate for their relative disadvantage in resource endowments by their more empathetic understanding of the local market, their flexibility to experiment, and speedy exploitation of innovation capabilities or assets created. To attain leadership, local companies do not have the luxury of alternate cycles of exploration and exploitation or using only internal efforts to drive the innovation process; instead companies need to be ambidextrous to a high degree, possibly much greater than their multinational competitors.

A process perspective

From an innovation process perspective, Indian firms use both top-down and employee participation-based models. Top-down models, based on the identification of innovation challenges by the top management, have been the mainstay of breakthrough innovation (Munshi, 2009). Prominent examples of this approach have been Ratan Tata's challenge to Tata Motors to create the Nano – a car for a family of four at a retail price point of Rupees 1,00,000 (a little over \$2,000), or Dr G. Venkataswamy's call to his colleagues at Aravind Eye Hospital to eliminate needless blindness by re-engineering the way cataract surgeries are done. Such socially-relevant challenges give a sense of purpose to the quest for innovation and are effective in securing employee commitment.

At the same time, companies have realized there is a wealth of knowledge available with their employees, and have used “managed” innovation programmes to seek employee ideas for improvements, cost reduction and value addition within the scope of their existing products and businesses. While such efforts often started on the factory floor within the scope of total quality management programmes, they have today spread to the rest of the organization, and even into companies that do not have factories in the traditional sense. Cognizant Technology Solutions, the fastest growing large software services company in India, has a network of 6,000 innovation evangelists and catalysts within the company who either champion innovation or coach employees to go beyond what the client has asked for, resulting in an estimated \$200 million value addition per year. The jewelry division of Titan Industries has set up an internal “Innovation School of Management” in which employees are trained in the tools and techniques of innovation, and given time to work on innovation projects. One innovation coming out of this school, a new mould setting process, resulted in cost savings of Rupees 430 million (about \$9 million).

The future of innovation by Indian companies

Multinational companies, hamstrung by the slow growth in their home markets, are now looking more seriously at growth markets like India. For example, Indian companies were pioneers in introducing mobile phone handsets with multiple SIM cards, but Nokia has responded with an affordable handset with options for five SIM cards, including placing one of them in a more accessible location above rather than below the battery. Similarly, General Electric (GE) has taken the lead in creating low cost and rugged medical diagnostic equipment like ECG and ultrasound machines for the rural market. Several global automobile companies are reported to be viewing the low-end automobile space seriously, and the Nano can expect strong competition in the near future. Indian consumers are also displaying an aspiration to go up the consumption ladder quickly.

These developments suggest that Indian companies cannot rely on their superior understanding of the Indian market and cost optimization capabilities alone. Going forward, they will be under pressure to improve their technological capabilities as well, and the ambidexterity they have displayed so far will have to be raised to the next level.

Organizationally, in addition to the top-down breakthrough innovation model, and the bottom-up incremental innovation model, companies will have to embrace other means of driving more radical innovation. Over the next decade, we can expect to see a growth in importance of the research and development function, and more innovation links outside the organization. Internal venturing and intrapreneurship models are also likely to become more common as Indian companies seek to stay abreast of the innovation curve.

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About the author

Rishikesh T. Krishnan has been studying the links between strategy and innovation for almost 20 years. Professor Krishnan is a Visiting Fellow at the Indian School of Business (ISB), Hyderabad, and Professor of Corporate Strategy and Policy at the Indian Institute of Management, Bangalore (IIMB), India. Professor Krishnan completed a three-year term as Jamuna Raghavan Chair Professor of Entrepreneurship at IIMB in August 2010. He was the Fall semester 2008 Visiting Scholar at the Center for the Advanced Study of India, University of Pennsylvania. In November 2010, he received the Dewang Mehta Award for Best Teacher in Strategic Management. Professor Krishnan's book *From Jugaad to Systematic Innovation: The Challenge for India*, published in February 2010 identified the challenges faced by India in enhancing industrial innovation and proposed an agenda to enhance innovation output (see www.jugaadtoinnovation.blogspot.com for details). He has served on a number of committees set up by the Government of India, Nasscom and CII related to innovation in India. He is on the boards of four companies and one non-profit. Professor Krishnan holds an MSc in Physics from the Indian Institute of Technology at Kanpur; and an MS in Engineering-Economic Systems (now Management Science and Engineering) from Stanford University. He obtained his doctorate from the Indian Institute of Management, Ahmedabad, where he won the Outstanding Thesis Proposal award instituted by the Industrial Finance Corporation of India. Rishikesh T. Krishnan can be contacted at: rishi@iimb.ernet.in

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