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Emerging markets and innovation: A partnership for global progress

Tejinder Sara, Faye Hall Jackson

College of Business and Information Science

Tuskegee University, USA

e-mails: tsara@tuskegee.edu; jacksonhf@tuskegee.edu

The purpose of this paper is to briefly discuss the role innovation plays in global competition and discuss how companies from some of the emerging markets are using innovation to compete with global companies from the developed world. Innovation is linked to the marketing concept as a driver for developing new products, services, and/or delivery systems. As global borders disappear, and training and education along with trade freedom increase, the opportunity for innovation increases. This writing offers a forward look into the global possibilities of emerging market innovation.

JEL Classifications: D21, F23, M16, O31

Keywords: Innovation, global competition, innovation firms.

Introduction

In recent years technology and innovation have been cited as important drivers of competitive positioning of a company. Jeffery Immelt, CEO of General Electric Corp., stated “Companies and countries that really play offense vis-a-vis technology and innovation are going to come out ahead” (The Economist, 2008). In its “The Global Competitiveness Report 2008-2009”, the World Economic Forum concluded that in the long-run a country’s competitive standing can only be expanded with technological innovation of its firms. (Sala-I-Martin et al., 2008). In another survey, executives see innovation as the most important way for companies to stay competitive in today’s global business environment (The McKinsey Quarterly, 2006).

In a recent report, Boston Consulting Group (BCG) (2010) concluded that over a three year period, innovative companies outperformed others in their industry by 12.4%. This finding supports the thought that innovation is a key determinant of organizational success. The BCG report also presented results from a survey of 1590 top executives from companies from around the globe. In its findings, 72% of the respondents included innovation among the top three priorities and 84% of respondents said innovation will be a key part of their strategy to benefit from the economy recovery. The results of the survey reveal that top executives of companies around the globe believe innovation will play a key role in positioning organizations for competitive advantage and profitability. For developed or developing country, the global competitive landscape has seen change during the first decade of the twenty-first century. Companies from developing countries are using innovative ideas and techniques to compete in the global marketplace. Companies from developed countries are expanding their reach of innovations to a broader audience. The purpose of this paper is to briefly discuss the role innovation plays in global competition and how companies from some of the emerging markets are using innovation to compete with global companies from the developed world.

Background

Conventional wisdom holds that cutting-edge high end products were designed, produced and marketed by knowledge intensive companies in North America, Europe, and Japan. As such, it was assumed that companies in these countries would continue to be global

leaders in design and manufacture of innovative products, and low-end knockoffs of the innovative products will be the province of companies in the emerging markets. However, the first decade of the twenty-first century has witnessed a move up the global value chain by companies from the emerging markets. Each year since 2005, Bloomberg Business Week has published annual rankings of “The 50 Most Innovative Companies” globally. In early years, companies from North America, Europe, and Japan dominated the list. As shown in Table 1 below only two companies from emerging markets (one each from South Korea and India) appeared in the year 2006 list. Companies from the United States dominated the list in early years (with 30 in 2006). But companies from emerging markets started to appear with more frequency in recent years.

TABLE 1. CHANGE IN HOME BASE OF THE WORLD'S 50 MOST INNOVATIVE COMPANIES

	2006	2010
North America, Europe, and Japan	48	40
Brazil, China, India, and Korea	2*	10**

Source: Business Week-BCG Survey, http://www.businessweek.com/interactive_reports/most_innovative.html

*South Korea, 1 and India, 1; **Brazil 1, China 4, India 2, and South Korea 3

TABLE 2. SHARE OF BRAZIL, CHINA, INDIA, AND KOREA IN WORLD POPULATION AND WORLD ECONOMIC OUTPUT IN YEAR 2000 AND YEAR 2008

Share	Year 2000%	Year 2008%
Population	41.08	40.39
GDP (Current USD)	8.9	13.2
GNI (PPP)	15.9	21.1

Source: World Development Indicators, World Bank, Washington DC, 2010

TABLE 3. PROJECTED GROWTH RATES OF SELECTED COUNTRIES

Real GDP Growth %	2011	2012	2013	2014
Brazil	5.5	4.9	4.5	4.6
India	8.0	8.2	8.0	7.9
China	8.1	8.3	8.3	8.1
South Korea	4.0	4.3	4.2	4.0
Euro Zone	1.1	1.6	1.8	1.9
Japan	1.1	1.2	1.0	0.9
United States	1.4	2.0	2.2	2.3

Source: Economist Intelligence Unit, 2010

Table 1 shows the decrease in dominance of the US companies (with 22 in 2010) and increase in companies from emerging markets of Brazil, China, India, and South Korea. The new trend in innovation capabilities of companies in emerging market economies has been accompanied by another trend. For the first time in the last two centuries, the emerging market economies will contribute a larger percentage to the world economic growth compared to the developed countries (Bisson, Stephenson, and Viguerie, 2010).

Table 2 below shows that even though the share of world population of Brazil, China, India, and South Korea remained stable in the first decade of the new century, there was a marked increase in their share of world output. In addition, as shown in Table 3, these countries are expected to grow much faster compared to the United States, Euro zone, and Japan. The rapid growth of emerging market economies means there will be a large increase in middle-class consumers in these markets. This in turn will provide opportunities for innovations in product design and value chains.

The rise of global innovation

As pointed out above, in years to come there will be increased business opportunities in both developed and emerging markets. The expanded number of suppliers of products

and services will also bring change to the way these goods and services are consumed and received. The marketplace pressure to deliver these products and increase their utility from the consumers' perspective will drive continuing innovation in both developed and emerging markets. While emerging markets will fight to provide value for the end user while sustaining profitability, developed markets will increasingly try to guard their existing market share by flanking itself with cooperating allies and looking to expand service innovations.

Today's rules of competition have changed. One reason for this is that knowledge about new technologies spreads quickly to different parts of the globe. Another reason is that ability and tools to apply knowledge is at the disposal of individuals and organizations at a scale not seen before. For example, UNIVAC, the huge computer devised nearly sixty five years to develop the Atomic Bomb, filled a football stadium. It also required more than 100 engineers to operate. Today, a hand held device has more computing power than the UNIVAC. The result is new entrants in the global competition in many cases apply emerging technologies to produce and distribute low-cost, simple, and convenient products and services with fewer functions that incumbent companies had not thought of providing, or had no desire to provide (Scott and Christensen, 2004). Many of these new entrants are in emerging markets, whereas the incumbent providers are in the developed countries. The incumbents concentrate on sustaining existing innovations and product/service features. In many cases their leaders are like maintenance engineers, using today's innovations to keep products and ideas humming along, rather than architects imagining tomorrow's products and services that will be demanded in the fast growing emerging markets. Care should be taken by these "maintenance engineers" to ensure that they are not developing a better faster way to deliver a product or service that is no longer being requested. Such is the case of the conventional typewriter that has been replaced by several iterations of word processors.

As architects imagining tomorrow's products and services, we need only look at the pharmaceutical industry. Eighty percent of the prescription drugs we use today to combat illness were not available ten years ago. But a number of these drugs are now developed and tested in emerging markets. This is the result of increased training and education, technological readiness, and trade freedom in these markets which are all attributes of innovation. For example, Indian pharmaceutical industry, once known for counterfeit drug making, is moving up the value chain by seizing opportunities for development of proprietary medicines. India's pharmaceutical industry exported 8.3 billion USD in drugs and services in fiscal year 2008-2009 and is expected to grow at a rate of 13 percent in 2010 reaching a turnover of 24 billion USD (Timmons, 2010). Piramal Lifesciences Limited, a pharmaceutical company located in Mumbai, has 300 scientists working to develop new drugs for illnesses such as cancer and metabolic disorders.

Domestically, Sun Pharmaceutical Industries has marshaled 650 scientists to work with state of the art machinery and 10 000 caged test animals to break down existing drugs and reformulate them with fewer side effects and at lower cost. Jim Worrell, chief executive officer of a pharmaceutical consulting company based in the United States believes that formulation, manufacturing, and packaging of some of the drugs to be developed by pharmaceutical companies based in developed countries will move to India. Firms in developed countries are already taking notice of capabilities of Indian firms. In 2008, Daiichi Sankyo, one of the largest Japanese pharmaceutical companies bought a stake in Ranbaxy Laboratories, the largest pharmaceutical company in India. In 2009, GlaxoSmithKline, one of the largest global pharmaceutical companies formed a partnership with Indian company, Dr. Reddy's Laboratories, one of the most innovative pharmaceutical companies in the emerging markets. GlaxoSmithKline was attracted by Dr. Reddy's Laboratories capacity to undertake large scale product development at low cost. For example, Dr. Reddy's Laboratories is in the last stages of clinical tests for a diabetes drug it has been developing. The company expects to submit the drug for approval by the US Food and Drug Administration (FDA). Recognizing the growing

prowess of the Indian pharmaceutical industry, the FDA has opened two offices in India staffed with technical specialists and drug inspectors.

The above example illustrates that rising companies from the emerging markets are threatening premium players in market after market - and not only at the low end (Ryans, 2010). In many cases the executives of global companies from the developed countries are so focused on their traditional competitors that they do not recognize the threat developing from rivals coming out of emerging markets. For example, when doing business in emerging markets, global players concentrate on urban high end markets. On the other hand, low cost emerging market companies operate in second or third tier cities that have not received attention of high-end companies. The experience gained from this strategy is then used to close the quality and performance gaps with high-end producers. As an illustration, TATA Motor Company of India producer of the world's cheapest car, Nano (discussed below), for India's masses has also acquired British Jaguar and Land Rover companies. The company plans to use the experience it gained from low cost operations in India to turn around the two British ailing automobile companies.

The above discussion illustrated how some new comers from emerging countries are becoming the innovators in today's global competition. Many companies from these countries are rising in the global ranking of innovative companies and threatening the premier positioning of companies from developed countries. As stated earlier there has been a rapid ascent of companies in ranking from emerging market companies from Brazil, China, India, and South Korea. Below a brief discussion of an innovative initiative taken by a company from each of these countries is discussed. Each of the companies identified below were ranked in Bloomberg Business Week's list of "The 50 Most Innovative Companies." The discussion highlights how companies from emerging markets are able to use innovative techniques to pose market challenges to companies from developed countries. Peter Drucker considered by many to be the father of "modern management" predicted many of the major developments of the late twentieth century and over the years provided consulting services to leading corporations around the world. In one of his insights, Drucker pointed out that innovation is not a "flash of genius", but hard work by firms and individuals of a country (Drucker, 2001). The examples given below show that companies, no matter the location or economy, can with foresight and perseverance compete any where on the globe. One factor in this truth is that globalization has brought down geographic and market boundaries, thereby enhancing a company's ability to innovate by borrowing ideas from other countries.

Examples of innovative companies in emerging markets

TATA MOTOR COMPANY (India)

Tata Motor Company is part of Tata Group, a conglomerate with businesses in different industries in India. Tata Group understood the role of innovation in competing in the new landscape. So it established the Tata Group Innovative Forum composed of senior executives of the company (Andrew, 2010). Tata's strategy is what Clayton Christensen has called "disruptive-innovation" (Christensen, 1997). According to disruptive-innovation theory, new entrants attack established market leaders by employing relatively simple and low-cost technological solutions to offer cheaper, simple, and more convenient products and services. These products and services are mostly targeted at less demanding customers. As an illustration of Tata's "disruptive" innovation strategy, it designed a "Peoples Car" - Nano that sacrifices some performance in order to drastically reduce cost. The car was introduced in the Indian market in 2008 and costs less than half than any other car in the Indian market, including cars from American, European, and Japanese automobile companies being sold in India. At introduction the car had a price of about 2500 USD. The target market for this car is millions of Indians who would not have dreamed of buying a car and instead would have settled for motorbikes, or motor scooters. The Nano powered by a two cylinder 33 horsepower engine is over 10 feet long

and nearly 5 feet long (Check dimensions). It is capable of reaching a speed of 65 miles per hour (Chang, 2008), Tata plans to start exporting Nano to other emerging markets in Asia, middle east, Africa, and Latin America. The car has already won a number of innovation awards. In 2008, it won the Wall Street Journal Technology Innovation Award in the transportation category. In 2009 it won the Frost and Sullivan 2009 Innovation Award for its outstanding innovation and exceptional contribution to auto Industry.

LG (South Korea)

LG Electronics, a South Korean company that did not even show up in the 2006 list of top 50 most innovative companies (it was number 85), is at number 7 in the 2010 list. This leap by LG is mostly the result of its innovations in supply chain. As an illustration, innovations in its procurement functions have cut 2 billion USD in its annual purchasing costs (Ihlwan, 2010). Innovation includes not only designing and producing new and better goods for which firms can charge higher price compared to their competitors, but cheaper ways of producing existing goods. The company has also worked in innovative ways with its supplier to cut costs while simultaneously improving the quality of its outputs. These innovations have enabled the company to reduce cost of many of its consumer products. For example, it was able to reduce the cost of its best selling touch screen phone by 30%. In recognition of its innovations in supply chain, LG Electronics won the 2010 Institute of Supply Management Award for Leadership and Innovation in Procurement.

BYD (China)

Until 1995 BYD, a Chinese company, did not even exist. But in 2010 it was ranked number eight in BloombergBusinessWeek's Most Innovative Companies. In 1995, Wang Chuan-Fu, a chemist, started BYD to manufacture rechargeable batteries (Gunther, 2009). In five years BYD became the world's largest manufacturer of cell phone batteries and was designing and manufacturing mobile-phone handsets for some of the largest global companies, such as Motorola and Nokia and batteries for laptop computers, iPhones and iPads. BYD's success resulted from using a business model where every job is broken to the basic tasks and results are tested rigorously. The end result is that as opposed to other battery manufacturers, BYD products have never had a recall. In 2003 BYD entered the automobile business and in October 2009 its Sedan named F3 became the best selling car in China. BYD's 50 Most Innovative Companies ranking is essentially based on the company's leap to be able to design and manufacture a plug-in electric car. Most automobile analysts had assumed that it would be well established automobile companies, such as Toyota, Nissan, Honda, Ford, or GM that would win the race to deliver an affordable electric car (Sidhu, 2010). BYD beat all of these companies by bringing to market a plug-in electric car with a backup gasoline engine and a 62 mile range on a single charge. Company's executives had come to the conclusion that a newcomer like BYD could not compete with incumbents like GM and Toyota in the gasoline engine market because these companies had decades of experience and larger resources. On the other hand, all companies were at the starting line in the race for electric cars. With threat of climate change and push for clean technologies, it is estimated that global market for electric cars will be 10 million units or more by year 2016 (Sidhu, 2010). BYD has the opportunity to have the largest share of this market.

Petrobras (Brazil)

Petrobras is a Brazilian petroleum and refining company and is ranked number 41 on The 50 Most Innovative Companies list for 2010. It was formed in 1953 and the Brazilian government currently owns one-third of its shares. Petrobras is the largest company in South America and sixth largest in the world. It has made some of the biggest oil discoveries in the world in recent decades. These oil discoveries are located in salt beds deep below the country's coastal waters. The company also operates in twenty seven

countries, primarily in Africa and Latin America. Thanks to the technology that Petrobras has developed and refined after borrowing from other companies in the petroleum industry, it is estimated that the company's oil production will increase at a growth rate higher than that of other big oil producers (Defotis, 2010). Petrobras has been ranked number 1 for innovation in petroleum industry by Fortune Magazine. Recognizing the trend in alternative energy fuels, Petrobras' research has focused on finding innovative methods of developing biodiesel, ethanol, and other renewable energy sources (ScienceDirect).

Conclusion

Global innovation is deeply rooted in the marketing philosophy which simplified briefly states find a need and feel it better than your competitor and in a way that adds consumer utility. Developed markets have the luxury of repeatedly 'filling these needs' in such a way that they are in constant development and refinement. Emerging markets conversely are just beginning to compete in the global economy primarily because of the new found global access afforded these markets through technology. Tata Motor Company's illustration of disruptive innovation shows how a nationally developed product can have international appeal using as its base for innovation adapting an already existing product for use by a viable but overlooked population of potential consumers. LG offers another aspect of emerging market innovation by concentrating its efforts not on product development but product delivery. In short, this innovation relied exclusively on moving an existing product more efficiently to current markets and expanding the product reach to challenge existing market share of current providers.

These innovation examples make one thing perfectly clear, in this global economy everyone has a fair chance of being innovative. Are all chances equal? Of course not, but with increased training and education, trade freedom, and the use of technological advances, everyone has a fair chance of creating value through innovation in today's global economy.

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