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HOW TO MEET CHINA'S COST INNOVATION CHALLENGE

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As they go global, Chinese companies are challenging conventional business models. This strategy seems to be working as their market shares in a wide range of industries and countries are steadily rising. The authors describe that strategy and how managers outside China can respond.

Forget the idea that the rise of Chinese competitors simply means cheap, low-quality imitations flooding world markets. Chinese companies are starting to disrupt global competition by breaking the established rules of the game. Their tool of choice is *cost innovation*, the strategy of using Chinese cost advantage in radically new ways to offer customers around the world dramatically more for less. This article describes just how Chinese companies are doing it and suggest strategies to counter Chinese "cost innovation."

The unlikely but highly effective tactic of cost innovation

The term "cost innovation" might sound like an oxymoron. Most of us in the commercial world have got used to associating innovation with the business of providing more functionality and greater sophistication. But the fact that it breaks conventional wisdom is precisely why it has the potential to rewrite the existing rules of global competition. Cost innovation has three faces:

- First, Chinese companies are starting to offer customers high technology at low cost. Computer maker Dawning, for example, has put supercomputer technology into the low-cost servers that are the everyday workhorses of the world's IT networks. This novel strategy is demolishing the conventional wisdom that high technology is restricted to high-end products and segments. And it is interrupting the game whereby established global competitors maximize their profits along the product life cycle by only slowly migrating new technology from high-priced segments toward the mass market.
- Second, the emerging Chinese competitors are presenting customers with an unmatched choice of products in what used to be considered standardized, mass-market segments. Goodbaby, for example, offers a product line of over sixteen-hundred types of strollers, car seats, bassinets, and playpens – four times the range of its nearest competitor – all at mass-market prices, thus challenging the idea that if customers want variety and customization, they have to pay a premium.
- Third, Chinese companies are using their low costs to offer specialty products at dramatically lower prices, turning them into volume businesses. For example, consumer appliance maker Haier has transformed the market for wine-storage refrigerators from the preserve of a few wine connoisseurs into a mainstream category sold through America's Sam's Club at less than half the then-prevailing price. The end result: Haier has a 60 percent market share, while yesterday's niche players have been left floundering. This new Chinese competition is challenging the notion that specialty products must forever remain low-volume and high-priced.[i]

The advance of China's emerging dragons

This cost innovation strategy seems to be working. China's emerging dragons are winning share across a wide spectrum of industries. Consider a few examples: Galanz now supplies more than half of all microwave ovens sold in the global market; BYD is the world's second-largest maker of rechargeable batteries; China International Marine Container (CIMC) is six times larger than its nearest international competitor, dominating the world of shipping containers with more than 55 percent global market share; Shanghai Zhenhua Port Machinery Company (ZPMC) has a 54 percent share of the world market for harbor cranes. Pearl River Piano, which has won 15 percent of the U.S. market (40 percent in upright pianos) in just five years, is the global volume leader, producing around a hundred thousand pianos every year. Wanxiang, the world's largest producer of universal joints, has established an industry fund to buy U.S. firms in auto components; it has already made 18 acquisitions across four continents.

Just like other forms of disruptive competition, the global advance of the dragons creates a particular problem for managers: tried and tested strategies that have proven successful in dealing with traditional rivals are unlikely to work in addressing this new challenge from China.

Moving up-market probably won't be enough

In our experience, shifting focus to high-end segments is the most common strategy managers in high-cost countries are planning to adopt in response to the new competition from China. But focusing on what one manager we interviewed called "the sunlit uplands" of the market more often than not proves ineffective. One reason is that falling volume means this strategy is difficult to sustain over the medium term. Volumes at the top end of the market tend to be small, which means it becomes more and more difficult to continue investing in the high fixed costs of R&D and product development. Established competitors are left with insufficient units over which to spread the cost once they lose the volume business and focus solely on the upper end. It is also likely that their manufacturing costs are driven up as volume falls and production becomes subscale.

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How CIMC won out in the specialist segment of manufacturing "tank containers", used for transporting liquids, provides a salutary example. Over the 1990s, the tanker container industry had come to be dominated by South African companies who had focused on this segment seeking refuge from cut-throat competition in the market for standard, dry containers. Led by Consani Engineering, Trencor, and Welfit Oddy, the South Africans controlled close to 50 percent of the world market in 1999. Established since 1928 and winner of several awards for technology excellence and export achievement, Consani alone accounted for 22 percent of world production in 1999.[ii]

In attacking these incumbents, CIMC deployed the strategy of cost innovation, but this time focusing on offering potential customers a wider variety of specialist models at lower cost. It began by signing a technology-transfer agreement with a British container specialist, UBH International Limited (UBHI). CIMC's second step was to reduce costs below those of the established competitors by driving for scale advantage. Within fifteen months it had built a new plant almost three times the size of the incumbent global leader and had rapidly gained market share.

Having won a large volume of business on the basis of low costs, the next step was to use its competitive Chinese design staff to expand the product line and offer more models and customization services. Key to offering this extra value added while keeping costs down was its innovative redesign of the production line to increase flexibility. CIMC was able to reduce the setup time to change models from twenty minutes to five minutes, allowing it to produce a wider variety of tank containers more cheaply than its competitors.

By 2003, CIMC had captured 30 percent of the world market in the tank container segment. In 2005 it expanded production again to become the world leader in this segment as well. The South African companies that had dominated what they viewed as a safe, high-end niche had been toppled. Their attempt to escape the Chinese challenge by moving to successively higher-end market segments ended in dramatic failure. Tencor ceased production of dry freight containers in 1999 to focus on tanks, but by 2004 it ended manufacture of tank containers as well. Consani was placed into liquidation in January 2005. Meanwhile, UBHI was effectively forced to enter an alliance with CIMC in order to maintain the viability of its "focus on the high-end" strategy.

Winning in the new global game

The potential of new competition from China to upend the global market from low-end to high-end segments isn't going to be addressed by incremental improvements or tweaking of current strategies. Radical new approaches are called for. We explore three possible responses below:

- Using cost innovation to beat the dragons at their own game
- Giving a global mandate for certain products to your China subsidiary
- Allying with the dragons through partnership or acquisition to strengthen your global competitiveness

One way or another, you need to access Chinese cost innovation capabilities, whether by direct observation, by developing and restructuring your own operations in China to capture more learning, or through acquisitions or alliances.

Learning the tricks of cost innovation

The key to beating the Chinese dragons at their own game lies in combining cost innovation with your existing strengths as an established foreign player. But can you do this at home? Or is cost innovation only possible by accessing advantages uniquely available in China? Delivering high technology at low cost, for example, might depend on being able to tap into sources of technology that are available more cheaply in China than elsewhere and leveraging the low-cost pool of Chinese engineers. Likewise, your ability to emulate the dragons' strategy of delivering specialty products at low cost might be greatly enhanced if you could benefit from the scale economies available from China's mass markets.

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Gilbert Cloyd, Procter and Gamble (P&G)'s chief technology officer, explains the shift in thinking this way: "Prior to 2000 we were always going to deliver the absolute best, then "cost save." We have changed that to "cheaper and better. That's the innovation standard, so that for the target consumer in a segment, we provide them with an experience that they find better than any other competitive product in that category and price tier, and at a cost structure that the competition can't match." He concedes that in the past there were some in P&G who "saw those objectives as contradictory." But he says the game is about "accepting up front that the true innovation goal is being both *better* and *lower cost*. And that has caused us to rethink a lot of things."[ii] The new mind-set of cost innovation is the first step in preparing your response to disruptive competition from China.

Giving your China subsidiary a global mandate

One way to accelerate learning about cost innovation is to transfer the global mandate for running certain businesses, products, or worldwide customer segments, including strategic decision making, to China. A few companies have already taken the step of giving their Chinese subsidiaries global responsibilities. One of the pioneers here is Intel.

In August 2005, Intel announced that global responsibility for its Channel Platforms Group (CPG) would be shifted to Shanghai. This was the first time Intel had ever transferred the global leadership of one of its five major strategic business units outside the United States. Intel's rationale for giving the global mandate for CPG to Shanghai (whose charter is to expand Intel's worldwide presence by accelerating global channel growth through innovative business models and platform solutions tailored to meet local market needs), is instructive. In addition to China's huge market potential, an Intel vice president, William Siu, noted that it was giving its Shanghai center global responsibility because "Shanghai is becoming increasingly important as a commercial and technology centre, not only for China, but for the worldwide IT industry[iv]." Intel went on to say that running the SBU from China would be particularly important in allowing it to unlock potential demand in emerging markets and in the cost-competitive segments of the developed world that required advanced technology at demanding price points. The Chinese head of the unit added: "While CPG will be based out of China, we are an international organization whose charter is to serve the needs of the channel worldwide." Put another way, Intel has given China a global mandate to help it bring cost innovation to world markets – a strategy the headquarters was less well equipped to pull off.

Philips is another company that has taken the step of giving its Chinese subsidiary a global mandate. Its global business of supplying TV sets – from R&D through design, manufacture, and global marketing – is now managed from China.

General Electric (GE) Medical Systems is a good example of the potential benefits of transferring a global mandate for certain product line to China – especially one likely to face threats from the dragons' global market ambitions. Today, GE Medical's Chinese subsidiary is responsible for the bulk of GE's global R&D in CT medical scanners. China also accounts for a slice of GE Medical's global R&D effort in magnetic resonance, and X-ray ultrasound diagnosis equipment. In 2002, GE Medical's subsidiary in Wuxi fully developed and launched the LOGIQ Book – a high-end, ultrasound diagnostic machine the size of a laptop PC. Despite being portable, it was capable of high-quality color imaging, with a performance that matched existing bulky, desktop machines. Using the cost innovation capabilities available in China, GE Medical was able to put high technology into a portable, cost-effective offering. Perhaps not surprisingly, the product has been a global hit. As its local general manager put it "We have a strong belief: that is, if we can produce something at "China cost," but also of high quality, high functionality, and high technology, it will become a very popular mass-market product, and it will be truly welcomed by customers."[v] Seeking to replicate this success, GE Medical has now established twenty-eight specialist development laboratories, each focusing on a different product lines across five SBUs in China.

Forming an alliance with the Dragons

Suppose it were possible to find a way to combine the strengths of an established multinational –

its technology, systems, brands, and the experience and reach of its existing subsidiaries – with the cost-innovation advantages being built by the emerging Chinese dragons. This combination should be an unbeatable force in global competition.

Historically, joint ventures between foreign and Chinese companies were aimed either at breaking into the Chinese market or securing an effective, high-quality supply chain through equity involvement in the operations inside China. But consider the alliance Huawei and 3Com put together. In 2003, they formed a new joint venture company to serve the global market for communications equipment, 51 percent owned by Huawei and 49 percent by 3Com. By joining forces, the partners hoped to improve their ability to win share from the dominant global player in this sector, Cisco.

Huawei brought its cost-innovative product line, a strong market share in the developing world, and its cost-competitive service capabilities and design and engineering resources. 3Com contributed its world-renowned brand, an extensive global distribution network, detailed knowledge of customers in the United States and Europe, and a set of complementary product add-ons that completed the offering, as well as $165 million of financing. The combination has proved powerful: by November 2006 the Huawei-3Com joint venture was valued at $1.8 billion.

Of course, strategic alliances often prove to be unstable. By the end of 2006 3Com agreed to buy out 100 percent of the venture (which by now accounted the majority of 3Com's corporate profits). In September 2007, 3Com struck a deal to be bought by Huawei and private equity firm Bain Capital LLC for $2.2 billion in cash. Perhaps not surprisingly, therefore, outright acquisitions as a way of bringing together the complementary skills of foreign and Chinese firms are becoming a popular alternative.

The value of inbound China M&A surpassed $22bn in 2007. Access to unique knowledge and experience accumulated by Chinese companies over the past two decades of reform, especially about delivering unsurpassed value for money and cost innovation, is becoming an increasingly important motivator among these acquisitions. A good example is the acquisition by PalmSource Inc., a maker of operating systems for mobile devices based in Sunnyvale, California, of China MobileSoft Limited (CMS), a leading Chinese mobile phone software company, in 2005. MobileSoft had developed a wide range of software for mobile phones, including more than a dozen phone applications, operating software for smart and feature phones, and a version of Linux optimized for mobile devices. The combination of Palm OS and China Mobilesoft's software products will give PalmSource one of the broadest lines of mobile software in the industry, powering mobile phones at all price points in all regions of the world.

Meeting the challenge of cost innovation

Whether you are an established multinational, a national champion, or a entrepreneurial start-up, the choices for positioning yourself for success in this new global environment are clear: you can take on board the notion of cost innovation and deploy some of your distinctive capabilities and experience to beat the dragons at their own game; you can restructure your own organization to fully leverage the potential advantages China's unique environment offers across the spectrum from R&D and design to operations and marketing; or, you can seek to access these advantages by partnering with a Chinese firm for global (not just local) advantage.

Whichever path you choose, responding to disruptive competition from the emerging Chinese companies means tapping into the secrets of cost innovation. So the prerequisite for all these types of initiatives is perhaps the most difficult adjustment of all: recognizing and accepting China as the source of deep-seated complex learning that can help you deliver high technology, variety, and specialist offerings at low cost – and hence improve your global competitiveness. Above all else, achieving this shift in mind-set will determine which companies can continue to prosper when the dragons come knocking at the door.

i. For further details of these and other examples, see M. Zeng and P. J. Williamson, 2007, *Dragons at Your Door, How Chinese Cost Innovation is Disrupting Global Competition*, Boston: Harvard Business School Press.
ii. See http://www.sassda.co.za.
iii. http://english.people.com.cn/english/200010/25/eng20001025_53583.html.
iv. "Intel announces plans to open Shanghai HQ", *China Daily* 08/02/2005 page 10
v. Yang Guang, "GE medical in China", *Sino Foreign Management*, May 2003, 31-34.

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