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Recent Research

On emerging-world corporate "tigers," the profitability of innovations, and other topics of interest.

Recent Research by Des Dearlove and Stuart Crainer

Revenge of the Domestic Tigers
Paul Bracken (paul.bracken@yale.edu), "Big Business and the Golden Straitjacket."
http://ssrn.com/abstract=692026

Forget Wal-Mart conquering the world; the future may belong to companies such as Petrobras (Brazil), Lukoil (Russia), Wipro (India), Haier (China), and Cemex (Mexico). "The rise of big business in Russia, China, India, Brazil, Mexico, and other emerging market nations is one of the most important yet overlooked basic trends taking place in the world today," writes Paul Bracken, professor of management and political science at Yale School of Management.

Foreign multinationals have had big business mostly to themselves in these countries for more than a decade. Many developing countries depended on foreign companies to supply the job training, technology, and know-how they lacked. In return, foreign multinationals often used their leverage to force concessions from national governments. Globalization and the requirements of a market economy thus tended to reduce the power of

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national governments, as policy options were often defined to favor the interests of large global companies. This has been called the Golden Straitjacket.

But, says Professor Bracken, all that is about to change. The government leaders of emergent nations with large domestic markets are beginning to rethink the wisdom of surrendering their home markets. And in the next few years, he says, the growing power of domestic companies in these countries will create a new kind of emerging-world "tiger," turning up the heat on the foreign multinationals, and allowing emergent nations — their governments and their companies — to break out of the straitjacket.

For example, one reason for China's decision to develop its own car industry was to limit the undue influence that foreign multinationals had over the growth of the Chinese economy. Foreign car companies could choose to hold back on technology transfer or to pull back their investments in China; the nation's prospects could then suffer. But the presence of a large Chinese car company targeting the same market makes those choices risky strategies for multinational firms.

As the influence of multinationals wanes, homegrown corporations will, to a degree, pick up the slack and extend their clout over government policy, especially in the area of competition and business regulations. India is a good illustration of how that is changing. Until a strong private sector emerged in the 1990s, bureaucracy and central planning prevented Indian companies from becoming efficient. But today, large corporations (such as the outsourcing giant Wipro) increasingly shape economic policy, often by successfully lobbying for limits on regulations.

These changes mean that foreign multinationals will have to find new ways of operating in these countries. In the future, Professor Bracken says, it will be much harder for them to go it alone, to deal directly with national governments, or to stitch together a network of small and compliant partner companies. Instead, he says, Western multinationals will have to work with and through homegrown companies to get access to these giant markets.

They also must pay attention to their own home markets, because some of the new large businesses from emergent nations may attempt to conquer their backyards. After all, no one in the West had heard of Toyota in 1965, and the Korean giant Samsung was virtually unknown just a decade ago.

Opportunity Knocks

Thomas Astebro (astebro@rotman.utoronto.ca) and Kristina Dahlin (kd@rotman.utoronto.ca), "Opportunity Knocks."
http://ssrn.com/abstract=609421

Innovation is often studied in the context of the activities of corporate R&D departments and government agencies. Individual inventors tend to be overlooked except for a very few whose inventions become wildly famous. Thomas Astebro, an associate professor of strategic management, and Kristina Dahlin, an assistant professor of strategic management, both of the Joseph L. Rotman School of Management at the University of Toronto, point out that this is a significant oversight. Independent inventors generated about 15 percent of patented inventions in the United States in 2003. U.S. government employees came up with a mere 1 percent.

Professors Astebro and Dahlin examined 559 Canadian inventions generated by independent inventors at inception stage and followed up after the inventions had been commercialized. The inventions were as varied as a meat tenderness tester, an industrial crusher of recycled cans, and a mechanically integrated tree harvester. The inventions were analyzed in terms of four parameters: *technological significance* (the impact that an invention has on technological development); *technical performance* (measured by whether an invention fulfills a different function or works better than competing products); *feasibility* (technical soundness and completeness); and *technical uncertainty* (the likelihood that planned and future R&D efforts will resolve outstanding technical issues).

The research demonstrates that technical performance and uncertainty have a "significant and important" impact on the commercial prospects for an invention. On the other hand, feasibility, while important in patenting an invention, is relatively unimportant in commercialization. The ballpoint pen, for example, was patented and usable in 1888, but it wasn't commercialized until 1945.

Professors Astebro and Dahlin also found that the more technologically significant the invention, the less likely it is to be commercialized. This is because genuinely significant inventions may be complicated, require a new production process, or appear complex and different to consumers. They are a hard sell. In fact, most of the inventions studied were of "modest" technical significance. Only 8 percent were rated as making a large contribution to technical change. For corporations, the message is that realistic rather than fantastic R&D is likely to reap the most dividends. Corporations are likely to profit more from an incremental advance than from a great leap forward.

The Paradox of E and O

Michael Beer (mbeer@hbs.edu), "Transforming Organizations: Embrace the Paradox of E and O." (No URL. Paper available only from author.)

When it comes to transforming big corporations, there are two fundamentally different strategies, says Harvard Business School professor Michael Beer. He calls these Theory E and Theory O (where E stands for economic value and O for organizational capabilities).

Chief executive officers who employ Theory E are driven by one thing: increasing shareholder value. They often conclude that the way to generate the best shareholder returns is through drastic restructuring — to slash and burn. People are laid off, facilities closed, and the portfolio of businesses reshuffled. A good example of a pure Theory E approach was Al "Chainsaw" Dunlap's attempt to transform Scott Paper (now owned by Kruger Inc.) between 1996 and 1998.

CEOs who employ Theory O, on the other hand, put their faith in developing the organization's skills and culture as the vehicle to produce improved performance. This is by necessity a longer-term strategy. Andrew Sigler, CEO of Champion International (now part of International Paper Company), pursued this approach in the 1980s and early 1990s.

Which is the more effective strategy? Professor Beer argues that both E and O can boost performance. Theory E, however, does not produce long-term sustained improvements. The E transformation at Scott Paper, for example, resulted in some immediate gains for shareholders, but undermined the organization's future. The O transformation at Champion International, by contrast, resulted in culture change and some improvements in performance, but negligible enhancement of shareholder value.

In the end, Professor Beer notes, neither concept on its own will deliver sustainable long-term improvement in shareholder value and organizational capability. A more effective strategy, he writes, is to combine E and O, switching back and forth between the two approaches to fit the company's needs. Knowing when to apply one or the other theory is the key to being a successful chief executive.

This dual strategy is best exemplified by General Electric under Jack Welch, Professor Beer argues. In the early 1980s, Mr. Welch reshuffled the GE portfolio, following the principle that every business had to be No. 1 or 2 in its industry. Then he restructured, with the result that more than 110,000 GE employees lost their jobs. In all, GE cut costs by $6 billion, and the media dubbed Mr. Welch "Neutron Jack." Pure Theory E.

But by 1986, Mr. Welch was ready to begin stage two: rebuilding GE into a company fit for the 21st century. He lavished attention and money on GE's executive training facility at Crotonville, N.Y., and encouraged innovation and the exchange of ideas. In the mid-

Most small, high-growth companies are not free-for-all cultures; they display surprising stability.

1990s, Mr. Welch adopted Six Sigma quality standards, insisting that GE master the new capability and investing in the time and training required to do so. This was Theory O in action.

As a result of this E and O strategy, during Mr. Welch's 20 years as CEO, GE grew from a $13 billion company into a $400 billion–plus colossus, producing 100 consecutive quarters of increased earnings from continuing operations. Over the same period, GE sales rose to $173 billion from $27 billion, and profits were up nearly sixfold, to more than $10 billion.

But, Professor Beer stresses, this strategy works only when O follows E. When the strategies are implemented the other way around, employees feel betrayed.

The author argues that his finding is supported by the analysis in Jim Collins's best-selling book *Good to Great* (HarperBusiness, 2001). Professor Collins's study of every company that had made the Fortune 500 — more than 1,400 firms in all — showed only 11 were able to achieve and sustain high performance (cumulative stock returns 6.9 times the general market) for a 15-year period following a transformation. The 11 that did all used an integrated E and O strategy, according to Professor Beer.

What Are Firms?
Steven N. Kaplan (steven.kaplan@chicagogsb.edu), Berk Sensoy (bsensoy@chicagogsb.edu.), and Per Strömberg (per.stromberg@chicagogsb.edu), "What Are Firms? Evolution from Birth to Public Companies."
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A company is formed. Armed with a business plan, its founders raise money from venture capitalists. Over time, its revenues grow, as do its assets and market capitalization. Even though profits are elusive, it becomes a public company. The number of employees, 22 at the time of the business plan, grows to 124 at its initial public offering (IPO) and 378 by the time of the company's third annual report. Assets grow from $2.6 million to $19.6 million at IPO, and then to $96.7 million. This is a familiar story. But during this period, how does the company — along with its legal, organizational, and cultural characteristics — change?

Steven N. Kaplan, the Neubauer Family Professor of Entrepreneurship and Finance; Berk Sensoy, a Ph.D. candidate; and Per Strömberg, an associate professor of finance, all at the University of Chicago Graduate School of Business, examined 49 venture capital–financed companies to explore how such entities evolve as they move from early business plans to initial public offerings.

The research produced an intriguing finding: As these companies developed, a large majority displayed surprising stability and continuity in their operations. In other words, small, high-growth companies are not the stereotypical free-for-all.

This stability was exhibited in a variety of ways. Although the companies were growing quickly, they usually stayed in the same core business. Indeed, only one organization in the 49-company sample made a fundamental shift away from its original business. Others evolved their core activities — for example, moving from offering a new computing platform to offering a new operating system to offering a range of software programs. Their business model was consistent and they tended, perhaps at the insistence of their backers, to adhere to their business plan. Assets such as patents, intellectual property, and physical assets were relatively stable. And their competition remained largely the same during the process of evolution.

But while there was widespread stability in the nonhuman side of these businesses during their evolution, human capital was far from constant. People came and went. And over time, the importance of human capital appeared to diminish. At the business-plan stage, 50 percent of the companies emphasized the expertise of their personnel. By the time of the IPO, less than 15 percent played up the importance of the human element.

This flies in the face of the accepted entrepreneurial wisdom that people are the driving force behind a business's growth and that consistency of personnel is a key to growth. According to the authors, by the third annual report after the IPO, only 50 percent of the companies had the same CEO as when the business plan was created. And of the next five most senior executives, only 25 percent remained.

The authors conclude that to make a successful leap from smart idea to IPO, old-fashioned structural capital and getting the basics right — such basics as the business plan, the business model, and a clear point of differentiation — carry a great deal more weight than who's running the company.

The Lean Green Machine?
Andrew J. Hoffman
(ajhoff@umich.edu) and Max H.
Bazerman (mbazerman@hbs.edu),
"Changing Environmental Practice:
Understanding and Overcoming
the Organizational and Psychological Barriers."
http://ssrn.com/abstract=663564

The old assumption that what's good for the environment is bad for business no longer holds. The growth of the "green" consumer and green investment funds, for example, shows that individuals and shareholders are increasingly prepared to support environmentally aware businesses.

The development of products such as fuel cell vehicles and biomaterials to replace fossil fuel also indicates that green solutions exist. Yet most companies have been slow to adopt environmentally friendly business practices, even though consumers and investors might thank them for it. The problem is that many firms are hardwired to behave in ways that damage the environment, say Andrew J. Hoffman, the Holcim Professor of Sustainable Enterprise at the University of Michigan Business School, and Max H. Bazerman, the Jesse Isidor Straus Professor of Business Administration at Harvard Business School.

The actions of Ben Cone, a forester in North Carolina, illustrate the point. In the 1970s, Cone noted red-cockaded woodpeckers, an endangered species, on his property. But because he didn't want to log their habitat at that time, his discovery caused no immediate problems.

That changed in 1991 when Mr. Cone wanted to sell some timber from his land, and the presence of the woodpeckers was formally recorded. Mr. Cone hired a wildlife biologist to determine the number of birds and learned that under the Fish and Wildlife Service's guidelines, a circle with a half-mile radius had to be drawn around each colony, within which no timber could be harvested. If Mr. Cone harvested the timber, he would be subject to a severe fine and imprisonment.

Concerned that the woodpeckers might take over more of his land, Mr. Cone abandoned a 60-year tradition of sustainable forest management, instead adopting massive clear-cutting of his trees. It turned out that the birds' habitat involved only 15 percent of his forest, and conserving it would have allowed him to continue his original strategy of merely thinning the trees on his property each year, cutting only those mature enough to be logged and replacing them with seedlings. This approach lets foresters produce consistent revenue while continually replenishing their property. But the environmental and commercial damage was already done.

The forester destroyed his property because he assumed that any outcome desired by the government would be bad for him. This, say the authors, is a common assumption among businesspeople. As a result, businesspeople fail to look for tradeoffs that might benefit both sides.

A knee-jerk reaction to environmental dilemmas is typical of the business mind-set, say Professors Hoffman and Bazerman. It is rooted in something they call the "mythical fixed pie of negotiation" — the belief that negotiators are fighting over a finite number of resources. Yet, they note, there is now a ready supply of good ideas about how to improve the environment in ways that are also good for business.

Persuading executives and organizations to adopt win-win environmental practices, they say, requires change in entrenched attitudes and behavior. Companies must be convinced to move from "Does it pay to be green?" to "How and when does it pay to be green?" To do this, policymakers must take the lead, Professors Hoffman and Bazerman argue, by designing environmental legislation to elicit more effective — and less environmentally damaging — responses.

The Endangered Species Act of 1973 (ESA) is a case in point. The law allows the U.S. government to designate animal or plant species as endangered and to place legal constraints on property to protect those species' natural habitat. As the woodpecker example above illustrates, many landowners and businesses have viewed this legislation as a threat to their assets. This view persisted even though Habitat Conservation Plans (HCPs) were introduced in 1982, allowing landowners to negotiate settlements that safeguard their livelihoods. It took the introduction of a "No Surprises" policy in 1991 — reassuring landowners that the government would stand by these agreements and would not seek to impose further restrictions at a later date — to begin to change attitudes. That effort by policymakers to lessen the resistance displayed by many companies toward environmental mediation has paid off handsomely, Professors Hoffman and Bazerman say: By 1997, there were 243 HCP agreements in place in the United States. The authors contend that many similar steps by government agencies and lawmakers are required to demonstrate to companies that protecting the environment and protecting profits are not mutually exclusive. They add that without such intervention by policymakers, it will be impossible to transform environmentally suspicious companies into environmentally aware ones. +