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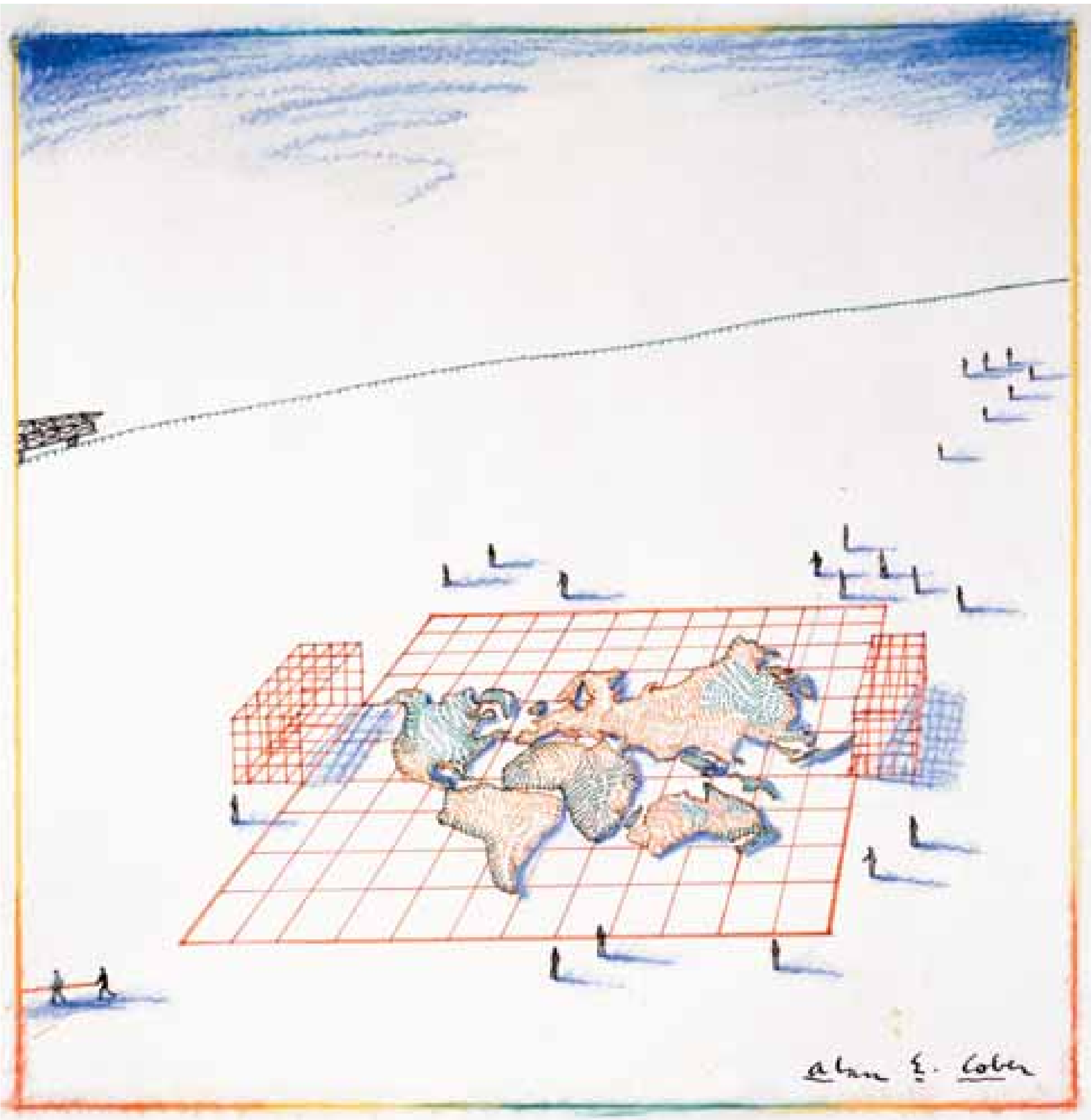
The New Global Challengers

How 100 Top Companies from Rapidly Developing Economies Are Changing the World



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A Word from the Authors

In our discussions with executives at the world's largest companies, globalization and its challenges are often at the top of the agenda. Invariably, one key question comes up: Which are the new companies based in China, India, and other rapidly developing economies that I need to know about? Executives recognize that a new class of company is arising in the world today—a group of emerging challengers that are becoming important players in both developing and developed markets around the globe.

Indeed, many companies based in RDEs are going global fast. As this report highlights, a sample of 100 leading RDE-based companies already have combined annual revenue of $715 billion—and are growing at an average rate of 24 percent per year. Companies in this sample are gaining global market share, making major acquisitions, and emerging as important customers, business partners, and competitors for the world's largest companies.

The Boston Consulting Group recently assessed the activities and strategies of these newly globalizing companies. We identified and profiled 100 of them, focusing on those with large businesses, significant global activity, an evident commitment to further globalization, and solid prospects for continued success. A global team of senior BCG consultants, based principally in Beijing, Moscow, Mumbai, and São Paulo but also spanning other RDEs, contributed to this effort. We would like to acknowledge particularly valuable contributions to the research and analysis by our colleagues Evgeni Agronik, Jean Chen, Rahul Guha, Vladimir Kim, Xin Liu, and Fernando Machado. We would also like to acknowledge the editorial and production assistance of Barry Adler, Gary Callahan, Kim Friedman, Gina Goldstein, and Kathleen Lancaster.

Our analysis of this sample of 100 companies has yielded important insights into the broader trend of RDE-based companies that are expanding globally. This trend is only beginning. Ultimately, its implications will affect every industry and market. We hope that you will find this report interesting and useful. As always, we would be pleased to talk with you about our observations and conclusions.

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The New Global Challenge

A revolution in global business is under way. Companies based in rapidly developing economies (RDEs) such as Brazil, China, India, and Russia, armed with ambitious leaders, low costs, appealing products or services, and modern facilities and systems, are expanding overseas and will radically transform industries and markets around the world. As this movement unfolds, established incumbent companies will meet the new RDE-based challengers in many arenas: in the competition for supplies, in the search for talent, in the quest for innovation, on the acquisition front, and in markets at home and abroad. Each of these encounters will pose threats but will also offer opportunities for partnering and cooperation. So it will be vital for all companies, regardless of their home location, to understand these developments and take action ahead of them, lest their competitive positions deteriorate.

Established incumbent companies will meet the new RDE-based challengers in many arenas.

Many Companies on the Move

The handful of RDE-based companies that have recently captured media attention—prominent examples include the Chinese manufacturers Haier Company and Lenovo Group and the Indian software houses Infosys Technologies and Wipro—represent only a small fraction of a much larger phenomenon. The number of RDE-based companies that are actively expanding beyond their home markets, or planning to, approaches several thousand.

Already, RDE-based companies have started assuming leadership positions in lucrative developed markets and have established beachheads in other RDEs. Here are just 15 examples:

- Bharat Forge (India) is now the world's second-largest forging company
- BYD Company (China) is the world's largest manufacturer of nickel-cadmium batteries and has a 23 percent share of the market for mobile-handset batteries
- Cemex (Mexico) has developed into one of the world's largest cement producers
- China International Marine Containers Group Company (China) has a 50 percent share of the marine container market, supplying the top ten shipping companies globally
- Chunlan Group Corporation (China) has a 25 percent share of the Italian air-conditioner market
- Embraco (Brazil) is the world leader in compressors, with a 25 percent share
- Embraer (Brazil) has surpassed Bombardier as the market leader in regional jets
- Galanz Group Company (China) commands a 45 percent share of the microwave market in Europe and a 25 percent share in the United States
- Hisense (China) is the number-one seller of flat-panel TVs in France
- Johnson Electric (China) is the world's leading manufacturer of small electric motors
- Nemak (Mexico) is one of the world's premier suppliers of cylinder head and block castings for the automotive industry
- Pearl River Piano Group (China) is the global volume leader in piano manufacturing
- Ranbaxy Pharmaceuticals (India) is among the top ten generic-pharmaceutical players in the world
- Techtronic Industries Company (China) is now the number-one supplier of power tools to Home Depot in the United States
- Wipro (India) has become the world's largest third-party engineering-services company

To be sure, not all challengers will be successful. Some may meet the same fate as D'Long Group, a Chinese investment company that acquired

Fairchild Dornier, a German aircraft manufacturer, with great fanfare in 2003, only to seek bankruptcy protection a year later. But many others will break through to become established global players. Just as many companies based in South Korea and Japan are now firmly global, so too will today's RDEs produce future global leaders. Indeed, the RDEs themselves possess characteristics that constitute particularly powerful platforms for the creation and development of future global companies.

RDEs as Platforms for New Types of Global Competitors

Why are we now seeing the emergence of global challengers from RDEs? A variety of fast-moving globalization forces are spurring this trend. These include the Internet, the World Trade Organization, the dramatic surge in low-cost communications technologies, and economic reforms in key RDEs. In addition, the development of RDE markets themselves is a strong enabler for the creation and growth of globally ambitious companies. Once those markets begin developing, many companies realize that they need to move beyond their home markets in order to grow further, create value, and sustain long-term competitiveness. We briefly explore the role of RDE countries as platforms for new global challengers below; later in the report we address the companies' own motives for globalization.

RDEs have rapidly growing markets, some of which are very large. Markets such as China, India, and Russia are sufficiently large and fast growing to support large domestic companies. For example, China's Huawei Technologies Company, a telecom equipment maker, has achieved domestic sales of more than $3 billion. The rapid growth of RDE markets in general over the past decade means that domestic companies have an opportunity to become quite large on their home turf.

RDEs have low-cost resources. All RDEs have an abundance of low-cost basic labor, and most offer other resources at low cost. Domestic companies in these markets are often better than foreign companies at exploiting these low-cost resources. We discuss this issue extensively later in the report.

Difficult operating environments in RDEs produce some highly capable companies. The challenges of operating in RDEs include selling profitably to low-income customers, dealing with immature logistics and distribution environments, navigating ambiguous legal environments, handling rapid external change, and managing despite shortages of management talent. A company that has addressed these issues in its home market will have an advantage when seeking to grow in similar markets abroad. Such companies may also have developed the ability to innovate quickly and to make very rapid decisions—skills that are essential to capturing fast-moving opportunities.

RDEs are training grounds for competing with global incumbents. Increasingly, RDEs are key markets for multinational companies (MNCs) that are the incumbent leaders in developed-country markets. RDE-based companies have the opportunity to learn from these competitors in their midst. Consumer electronics companies such as Hisense and TCL Corporation in China, for example, compete aggressively in their home markets against global incumbents Matsushita, Philips, Samsung, and Sony.

Despite providing all these advantages, RDE markets in themselves do not allow companies to attain global scale, no matter how big or fast growing they are. Ultimately, many RDE-based companies find that they must seek opportunities abroad. We will discuss this point further.

The RDE 100 Emerging Global Challengers

To better assess the globalization strategies of RDE-based companies, we have identified 100 large RDE-based companies that, in our opinion, are at the leading edge of globalizing their businesses. Having identified this group of companies, we then looked at their similarities, differences, and globalization patterns and derived some interesting implications from this analysis. Our list of 100 emerging global challengers comprises a diverse group of companies based in ten RDE countries. (See Exhibit 1.) We

EXHIBIT 1

THE RDE 100 SPAN MULTIPLE INDUSTRIES AND COUNTRIES

Company	Industry	Country
Aluminum Corporation of China (Chalco)	Nonferrous metals	China
América Móvil	Telecommunications services	Mexico
Bajaj Auto	Automotive equipment	India
Bharat Forge	Automotive equipment	India
BOE Technology Group Company	Computers and IT components	China
Braskem	Petrochemicals	Brazil
BYD Company	Consumer electronics	China
Cemex	Building materials	Mexico
Charoen Pokphand Foods	Food and beverages	Thailand
China Aviation Corporation	Aerospace	China
China FAW Group Corporation	Automotive equipment	China
China HuaNeng Group	Fossil fuels	China
China International Marine Containers Group Company (CIMC)	Shipping	China
China Minmetals Corporation	Nonferrous metals	China
China Mobile Communications Corporation	Telecommunications services	China
China National Heavy Duty Truck Group Corporation (CNHTC)	Automotive equipment	China
China Netcom Group Corporation (CNC)	Telecommunications services	China
China Petroleum & Chemical Corporation (Sinopec)	Fossil fuels	China
China Shipping Group	Shipping	China
Chunlan Group Corporation	Home appliances	China
Cipla	Pharmaceuticals	India
CNOOC	Fossil fuels	China
Companhia Vale do Rio Doce (CVRD)	Mining	Brazil
COSCO Group	Shipping	China
Coteminas	Textiles	Brazil
Crompton Greaves	Engineered products	India
Dongfeng Motor Company	Automotive equipment	China
Dr. Reddy's Laboratories	Pharmaceuticals	India
Embraco	Engineered products	Brazil
Embraer	Aerospace	Brazil
Erdos Group	Textiles	China
Femsa	Food and beverages	Mexico
Founder Group	Computers and IT components	China
Galanz Group Company	Home appliances	China
Gazprom	Fossil fuels	Russia
Gerdau Steel	Steel	Brazil
Gree Electric Appliances	Home appliances	China
Gruma	Food and beverages	Mexico
Grupo Modelo	Food and beverages	Mexico
Haier Company	Home appliances	China
Hindalco Industries	Nonferrous metals	India
Hisense	Consumer electronics	China
Huawei Technologies Company	Telecommunications equipment	China
Indofood Sukses Makmur	Food and beverages	Indonesia
Infosys Technologies	IT services/business process outsourcing	India
Johnson Electric	Engineered products	China (Hong Kong)
Koç Holding	Home appliances	Turkey
Konka Group Company	Consumer electronics	China
Larsen & Toubro	Engineering services	India
Lenovo Group	Computers and IT components	China
Li & Fung Group	Textiles	China (Hong Kong)
Lukoil	Fossil fuels	Russia
Mahindra & Mahindra	Automotive equipment	India
Malaysia International Shipping Company (MISC)	Shipping	Malaysia
Midea Holding Company	Home appliances	China
MMC Norilsk Nickel Group	Nonferrous metals	Russia
Mobile TeleSystems (MTS)	Telecommunications services	Russia
Nanjing Automobile Group Corporation (NAC)	Automotive equipment	China
Natura	Cosmetics	Brazil
Nemak	Automotive equipment	Mexico
Oil and Natural Gas Corporation (ONGC)	Fossil fuels	India
Orascom Telecom Holding	Telecommunications services	Egypt
Pearl River Piano Group	Musical instruments	China
Perdigão	Food and beverages	Brazil
PetroChina Company	Fossil fuels	China
Petrobrás	Fossil fuels	Brazil
Petronas	Fossil fuels	Malaysia
Ranbaxy Pharmaceuticals	Pharmaceuticals	India
Reliance Group	Chemicals	India
Rusal	Nonferrous metals	Russia
Sabanci Holding	Chemicals	Turkey
Sadia	Food and beverages	Brazil
Satyam Computer Services	IT services/business process outsourcing	India
Severstal	Steel	Russia
Shanghai Automotive Industry Corporation Group (SAIC)	Automotive equipment	China
Shanghai Baosteel Group Corporation	Steel	China
Shougang Group	Steel	China
Sinochem Corporation	Chemicals	China
Şişecam	Building materials	Turkey
Skyworth Multimedia International Company	Consumer electronics	China
Sukhoi Company	Aerospace	Russia
SVA Group Company	Consumer electronics	China
Tata Consultancy Services (TCS)	IT services/business process outsourcing	India
Tata Motors	Automotive equipment	India
Tata Steel	Steel	India
Tata Tea	Food and beverages	India
TCL Corporation	Consumer electronics	China
Techtronic Industries Company	Engineered products	China (Hong Kong)
Thai Union Frozen Products	Food and beverages	Thailand
Tsingtao Brewery	Food and beverages	China
TVS Motor Company	Automotive equipment	India
UTStarcom	Telecommunications equipment	China
Vestel Group	Consumer electronics	Turkey
Videocon Industries	Consumer electronics	India
Videsh Sanchar Nigam (VSNL)	Telecommunications services	India
Votorantim Group	Process industries	Brazil
Wanxiang Group Corporation	Automotive equipment	China
WEG	Engineered products	Brazil
Wipro	IT services/business process outsourcing	India
ZTE Corporation	Telecommunications equipment	China

SOURCES: BCG RDE Challengers Database; BCG analysis.

identified these companies from a pool of more than 3,000 candidates by screening primarily for size, extent of overseas revenue, and prospects for further expansion. (For details, see the sidebar below.) Although these companies employ different strategies and are at different stages of globalization, they share a strong ambition to grow globally. They also share a set of compelling competitive advantages that they are leveraging in various ways to pursue global growth.

Where They Come From

Asia is home to the large majority—70—of our RDE 100 companies, followed by Latin America with 18. Another 12 are based in Egypt, Russia, and Turkey. China is by far the dominant home-base country, with 44 of the RDE 100, followed by India with 21 and Brazil with 12. (See Exhibit 2.)

Relative to the current size of their national economies, China and India are disproportionately represented on the list. China's share of the total GDP of the 100 RDE countries is 29 percent, but Chinese companies account for 44 percent of the companies on our list; for India, the numbers are 13 percent and 21 percent, respectively. At the other extreme, Russia and Indonesia are greatly underrepresented.

Among the RDEs studied, China and India in particular have already produced an impressive set of

METHODOLOGY FOR SELECTING THE RDE 100

The RDE 100 list was generated through a detailed screening process. We began with more than 3,000 companies based in 12 major RDEs, which we had selected on the basis of the size of their economies (GDP), the value of their exports, and the amount of their foreign direct investments. Our list of RDEs comprised Brazil, China, the Czech Republic, Hungary, India, Indonesia, Malaysia, Mexico, Poland, Russia, Thailand, and Turkey. The initial master list of candidate companies was compiled on the basis of rankings of the largest companies in each of the selected countries, such as the top 500 companies in India selected by *Businessworld,* the leading Indian business magazine, and the top 500 companies in Brazil selected by *Exame,* the leading Brazilian business magazine.

An international BCG research team consisting of business analysts and economists from Brazil, China, India, Mexico, and Russia, and a panel of senior BCG experts in Asia, Europe, and the United States then conducted a rigorous four-step triage. In step one, we ensured that only truly RDE-based companies were selected, omitting foreign joint ventures and RDE subsidiaries of multinational corporations. In step two, we homed in on those players with annual revenue of at least $1 billion (as of 2004), a threshold we believe is necessary to drive a serious globalization campaign. In step three, we eliminated players whose current international business presence amounted to less than 10 percent of revenue (we made an exception for companies that were close to 10 percent and whose international business activity had grown swiftly in the recent past).

In step four, we scored the major globalization credentials of those companies that had passed all three previous thresholds. The scoring was based on five criteria: the international presence of the company as indicated by its owned and operated subsidiaries, sales networks, manufacturing facilities, and R&D centers; the major international investments it had pursued in the past five years, including mergers and acquisitions (M&A); its access to capital for financing international expansion, whether through free cash flows, stock markets, or other sources; the breadth and depth of its technologies and its intellectual-property portfolio; and the international appeal of its existing offerings and value propositions.

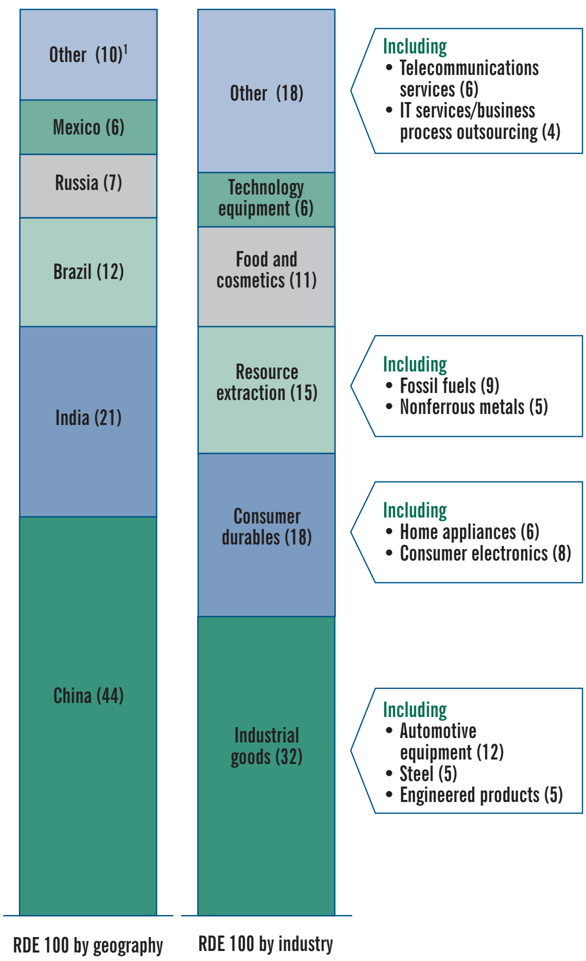
This analytically rigorous approach generated a list of 80 companies that fully met our criteria. Twenty companies that did not pass the $1 billion minimum-revenue hurdle are nonetheless included among our RDE 100 because they have created unique globalization capabilities or business models. From the original list of 12 countries, no companies from the Czech Republic, Hungary, or Poland made it through the screening, primarily because the larger globalizing companies in these countries are actually subsidiaries of foreign multinationals. We also included a company from Egypt in the final list, although Egypt was not among the markets in our initial screening.

companies with strong global ambitions. Where the globalizing Chinese companies differ dramatically from the globalizing Indian companies is in their ownership structures. More than two-thirds of the Chinese companies among the RDE 100 are state owned or state controlled, often with publicly traded subsidiaries or with minority stakes in the hands of strategic investors (both domestic and foreign). Of the remaining companies, some have a mixed-ownership structure but only four Chinese companies on the list are privately owned (and these include one company actually domiciled in Hong Kong).

The shares of Indian companies are usually divided among private owners, strategic investors, and the general public, with no single investor possessing a majority stake. All the Indian companies on our list are publicly traded and all have foreign strategic investors as stockholders. Only one Indian company on the list is state controlled. Companies from other countries display a wide range of ownership patterns. In some countries, such as Mexico, strategic investors play an important role while in others, such as Turkey, the families of the founders still exert control.

EXHIBIT 2

THE RDE 100 REPRESENT A VARIETY OF COUNTRIES AND INDUSTRIES



Sources: BCG RDE Challengers Database; BCG analysis.

[1]These companies are located in Egypt, Indonesia, Malaysia, Thailand, and Turkey.

The Industries They Represent

The RDE 100 are active in a wide range of industries. The largest is industrial goods, which includes 32 companies active in the automotive equipment sector, basic materials, and various engineered products. The second-largest group is consumer durables, comprising 18 companies involved mainly in household appliances and consumer electronics. Resource extraction is the third-largest cluster, with 15 players. Food-and-beverage and cosmetics companies come in fourth, with 11 players, and technology equipment companies fall into fifth place, with 6. The remaining 18 companies represent a broad spectrum of industries ranging from pharmaceuticals and mobile-communications services to shipping and infrastructure.

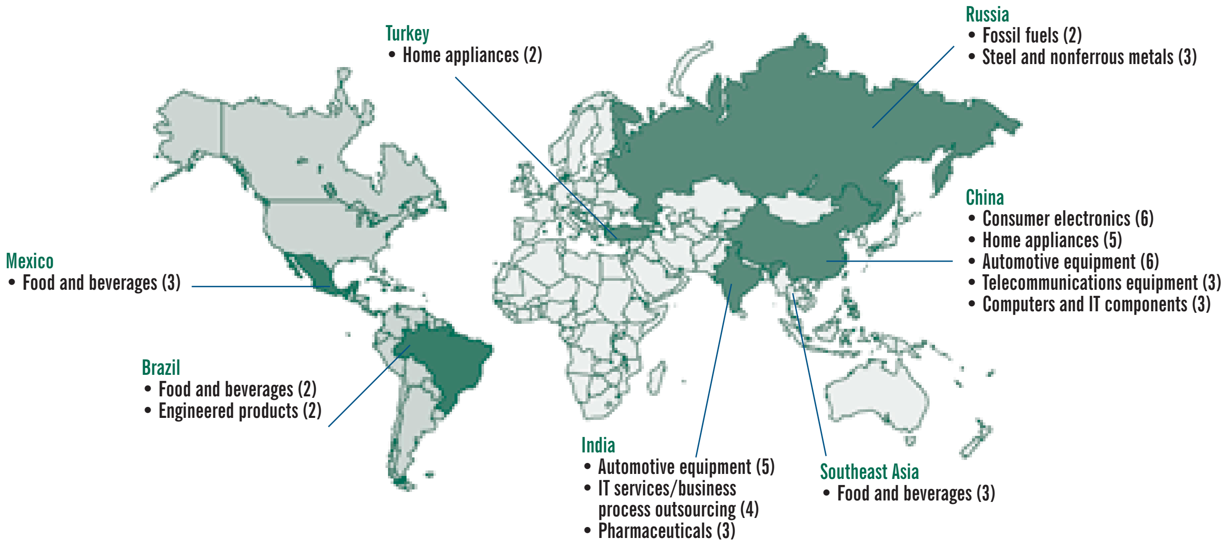
When we view the industry distribution of the RDE 100 together with their geographic distribution, certain clusters of regional capabilities emerge. (See Exhibit 3, page 10.) China possesses the most diverse set of emerging global challengers. Chinese companies are well represented in consumer electronics, household appliances, telecommunications and IT equipment, and automotive equipment manufacturing. India is well represented in automotive equipment manufacturing, IT services, and pharmaceuticals, especially generic drugs. Most other countries have large domestic players in only one or two clusters, as well as perhaps a few individual challengers in other sectors. Examples include raw-material extraction in Russia, household appliances in Turkey, and food processing in Thailand.

Why They Are Going Global

For RDE-based companies, the decision to globalize is ultimately driven by the need to create sustain-

EXHIBIT 3

MANY OF THE RDE 100 FALL INTO REGIONAL COMPETENCE CLUSTERS



Sources: BCG RDE Challengers Database; BCG analysis.

able advantage and shareholder value. International opportunities can provide a strong platform for shareholder value creation. Our research indicates that for 88 of the RDE 100 companies, the key motive for globalization is gaining access to new profit pools. Overseas markets may bring RDE-based companies higher margins and revenue, as well as higher volumes (which contribute to scale economies) and opportunities for growth-enhancing acquisitions.

For the remaining 12 of our RDE 100 companies, such as China's CNOOC (fossil fuels), globalization is driven by the need to secure long-term access to raw materials. The underlying motives may be both nationalistic and related to shareholder value. These companies are less likely to compete for overseas customers and instead will challenge developed-market companies for access to supply and for M&A opportunities.

Their Huge Economic Muscle

In aggregate, the RDE 100 accounted for $715 billion in revenue in 2004—similar to the 2004 GDP of the entire national economies of Mexico and Russia. Already, 28 percent of the group's collective revenue, or $200 billion, comes from international sales. Among other impressive statistics:

- The RDE 100 grew at a rate of 24 percent per year from 2000 through 2004, ten times as fast as the GDP of the United States, 24 times that of Japan, and 34 times that of Germany. They earned $145 billion in operating profits, equivalent to a margin of 20 percent over sales, compared with 16 percent for the United States' S&P 500 companies, 10 percent for Japan's Nikkei companies, and 9 percent for Germany's DAX companies.

- In 2004 their collective portfolio contained $520 billion in net fixed assets, which is more than those of the world's top 20 automobile manufacturers combined. That year the RDE 100 invested around $110 billion. They employed 4.6 million people and had a collective payroll of approximately $20 billion. And they purchased an estimated $190 billion to $200 billion in raw materials and energy, $50 billion to $60 billion in parts and components, and $40 billion to $50 billion in services such as third-party IT and engineering, shipping, and logistics.

- The RDE 100 spent $9 billion on R&D in 2004, equivalent to 1.3 percent of sales, to support the work of their 250,000 to 300,000 engineers and scientists.

- On the acquisition front, the RDE 100 completed 200 publicly announced international transactions between 2001 and 2005. That number does not take into consideration the sizable number of acquisitions in individual companies' domestic markets, which further strengthened these companies' platforms for launching global growth.

The Shareholder Value They Create

Sixty of BCG's RDE 100 are public companies or have subsidiaries that are publicly traded in major international capital markets. The total market capitalization of these entities is $680 billion (as of March 2006). These companies' collective stock performance has been impressive. From January 2000 to March 2006, their total shareholder return (TSR) increased by more than 150 percent, while the TSR of companies listed in Morgan Stanley's Emerging Market Index rose by 100 percent and that of the S&P 500 companies declined slightly. (See Exhibit 4.)

How Global They Are Today

As a group, the companies in the RDE 100 already represent a formidable force in the global economy. Given their growth rates, most will continue to gain strength in the coming years. The picture becomes more complicated, however, when we look at individual companies. Whereas some of the RDE 100 players have established themselves firmly in the global marketplace, others are rapidly doing so now, and others are still in the early experimentation phase.

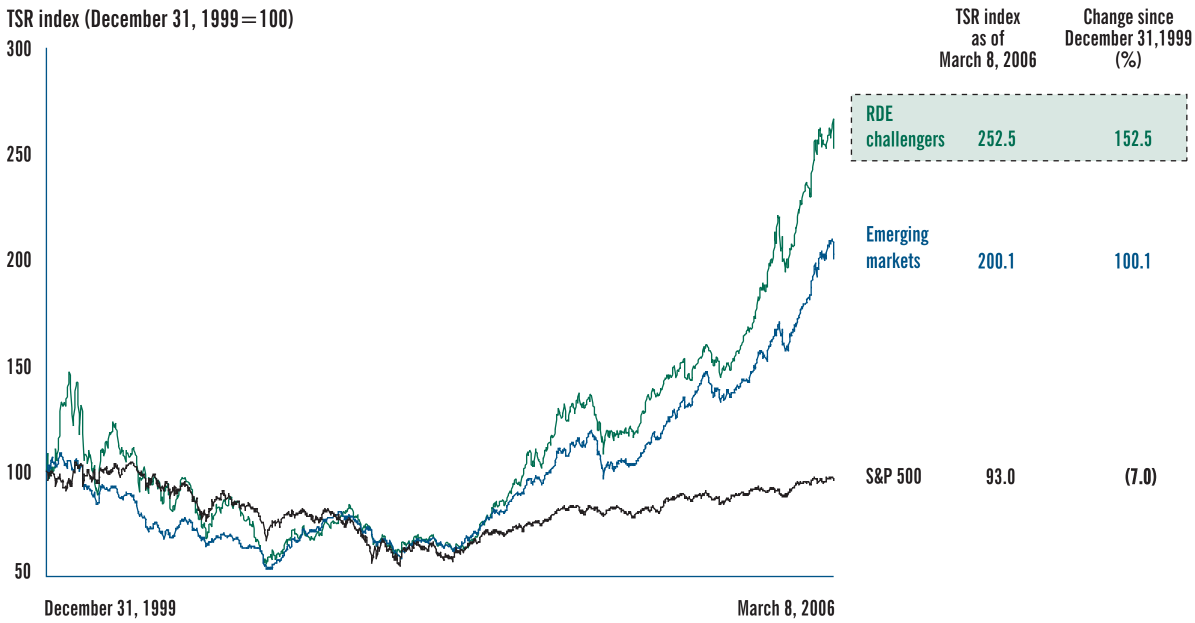
In terms of the maturity of their globalization drive, our RDE 100 can be divided into three groups: the early movers, the fast followers, and the up-and-comers.

The Early Movers. At the top is a relatively small group of ten players that started to globalize early and have gained global leadership positions in their industries. Mexico's Cemex, for example, has grown through a series of international acquisitions to become one of the largest cement producers in the world. The company has consistently generated superior returns compared with its international competitors and has developed unique capabilities in the form of a highly scalable operating model, a serial acquisitions approach, and a global logistics

EXHIBIT 4

THE RDE 100 CREATE SHAREHOLDER VALUE

Total shareholder return index, December 31, 1999, to March 8, 2006



Sources: Datastream; BCG analysis.

Note: The TSR index of RDE challengers is based on the TSR of 60 RDE companies or their subsidiaries listed in Hong Kong, London, Mumbai, New Delhi, and New York; the TSR of emerging markets is based on Morgan Stanley's Emerging Market Index.

system. Other companies in this category include $1.1 billion Johnson Electric, the world leader in small electric motors, with more than 40 percent market share. Headquartered in Hong Kong, this company is building its advantage with a strong Chinese operating base. Also well established globally is Brazil's Embraco, the $800 million world leader in compressors, with a 25 percent global market share.

The Fast Followers. The next group of companies, 46 of the 100, are currently making rapid progress in their globalization, building on significant initial experiences. Companies in this group include China's Haier Company (household appliances); India's Infosys Technologies (IT services and business process outsourcing); India's Bharat Forge (automotive equipment); and Turkey's Koç Holding (household appliances). These companies have ambitious globalization plans and a critical mass of international business in their portfolios. They have already signaled their global ambitions to the investment community. Other players in this group include the large RDE resource conglomerates seeking either access to new raw-material sources, such as China's CNOOC, or access to downstream markets, such as Russia's Lukoil, which demonstrated its intentions by acquiring parts of the Getty gas-station network in the United States.

While these companies have already received significant public attention, others have so far kept a relatively low international profile. These less well-known players include, for example, China's Pearl River (pianos), China's Hisense (consumer electronics), Mexico's Nemak (automotive equipment), and Turkey's Vestel Group (consumer electronics).

The Up-and-Comers. The last group consists of 44 companies. These are players that are at an early stage of globalization or whose ambitions have, until recently, been more regional than global. Companies in this category include India's Tata Motors (automobiles), Egypt's Orascom Telecom Holding (telecommunications services), Turkey's Şişecam (glass), and Brazil's Braskem (petrochemicals). Spanning a wide range of industries and home countries, this group includes many companies that merit careful watching in the future.

Regardless of where in the globalization process each of our 100 companies stands, all of them share the ambition to become truly global players. In pursuit of this goal, they are devising and deploying a variety of strategic models.

How the RDE 100 Are Going Global

The companies on our RDE 100 list are pursuing globalization in their own unique ways. They are also truly operating all over the map. But certain patterns are discernible in their actions to date.

Their Six Strategic Models for Globalization

Each company's overall approach tends to follow one of six primary globalization strategies:

- Model 1: Taking RDE brands global
- Model 2: Turning RDE engineering into global innovation
- Model 3: Assuming global category leadership
- Model 4: Monetizing RDE natural resources
- Model 5: Rolling out new business models to multiple markets
- Model 6: Acquiring natural resources

We should note that these six strategies, while distinct, often overlap in practice. Moreover, they have certain aspects in common. All of them build on low cost positions—a key competitive advantage of RDEs. And virtually all the companies are voracious when it comes to learning and adapting. This skill gives them the advantage of being able to learn from other, more established companies, as well as from their own bold, entrepreneurial experience and willingness to adapt to changing market conditions. We discuss the six globalization models below.

Model 1: Taking RDE Brands Global. Twenty-eight of our RDE 100 are growing internationally by taking their established home-market product lines and brands to global markets. A representative company employing this strategy is China's Hisense, a $3.3 billion consumer-electronics group. The company is one of China's premier manufacturers of TV sets (it has an 11 percent share of the domestic market), air conditioners, PCs, and telecom equipment. In addition to manufacturing in China, Hisense has production sites in Algeria, Hungary, Iran, Pakistan, and South Africa. The company has expanded mainly through organic growth and is now selling 10 million TV sets and 3 million air conditioners each year in more than 40 countries. International sales account for $490 million, or 15 percent, of total revenue. Hisense has the best-selling brand of flat-panel TV sets in France, where its products are being distributed through major retail chains such as Carrefour.

Hisense's success to date is based on its stylish consumer products, which provide very good value for an affordable price. The company brings to the international marketplace a continuous stream of new products developed by its world-class R&D center, which is located in one of the world's fastest-moving and most demanding consumer-electronics markets—China itself. The domestic market also gives Hisense a superscale, low-cost manufacturing base, allowing it to leverage a network of low-cost component suppliers and specialized assembly crews. In addition, Hisense is getting a jump-start by building on experience gained through joint ventures and alliances with global players such as Hewlett-Packard, IBM, and Panasonic.

Companies in this category build international momentum on the basis of home-market products that have broad global appeal or are easy to customize for new markets. In developed-country target markets, these companies often position their products as good-value-for-the-money alternatives to established brands. That positioning now encompasses a sizable and rapidly growing segment, propelled by large discount retailers such as Wal-Mart.

The 28 RDE 100 companies pursuing this strategy deal primarily in consumer electronics and household appliances, as well as automotive equipment, specialty foods, and beverages. These companies had $138 billion in combined 2004 revenue, of which 19 percent, or $26 billion, came from abroad. Their average annual growth rate from 2000 through 2004 was 24 percent. A particularly large number of players in this category (18) are in China.

Model 2: Turning RDE Engineering into Global Innovation. Twenty-two of the RDE 100 companies are growing internationally by marketing innovative technology-based solutions that leverage their strengths in engineering and research. A representative example is Wipro, the Indian IT-services group. Wipro has expanded rapidly by providing software-coding support. As offshored IT services and business process outsourcing have flourished, the company has grown quickly, from $545 million in revenue in 2000 to $1.8 billion in 2004. Whereas Wipro's value proposition at first focused mainly on cost, the company now creates much of its value by completely redesigning its clients' business processes, a task requiring comprehensive process-innovation capabilities.

Furthermore, Wipro is taking innovation to the next level by building extensive engineering capabilities, thus making R&D services the next battleground. The company already claims to be the world's largest third-party provider of R&D services. Its 12,000-strong Product Engineering Services (PES) group offers a complete range of R&D services—from product strategy to hardware design to quality consulting—to clients that sell electronics-based products. With more than 120 active clients in industries such as semiconductors, automotive products, platforms and peripherals, consumer electronics, and medical devices, PES has seen its revenue grow at a rate of 36 percent per year from 2003 through 2005. The group already accounts for 36 percent of Wipro's total revenue.

In many domains, the RDE talent pool is deep and growing quickly.

Innovation-based globalization will require RDE-based players to mobilize engineering and science talent in areas in which they can create sizable and sustainable advantage over their counterparts in developed markets. In many domains, the RDE talent pool is deep and growing quickly, and RDE players are at an advantage when it comes to monetizing that pool relative to MNCs that are setting up RDE-based R&D centers. In a ranking by university students in China, for example, China's Huawei Technologies Company was rated as a more attractive employer than any of its MNC competitors.

The 22 RDE 100 companies that are pursuing innovation-based globalization strategies are active in telecommunications equipment, aerospace, automotive equipment, pharmaceuticals, and technology services. They had $56 billion in combined 2004 revenue, of which they earned 39 percent, or $22 billion, abroad. Average annual growth from 2000 through 2004 was 33 percent. A large number of players in this category—11—are based in India.

Model 3: Assuming Global Category Leadership. Twelve of the RDE 100 are growing internationally by establishing themselves as specialists and global leaders in one specific, relatively narrow product category. For example, Hong Kong's Johnson Electric had $1.1 billion in revenue in 2004 (67 percent from outside Asia) and is the global market leader in small electric motors for automotive, consumer, and various commercial applications. The company can produce 3 million motors daily in its superscale operations in China alone. These operations are complemented by several other manufacturing sites in Latin America, the United States, and Western Europe, and by R&D centers in Israel, Italy, Japan, and the United States.

While Johnson Electric puts a strong emphasis on aggressive organic growth, it has also pursued multiple acquisitions in the United States to absorb the in-house production of tier one suppliers that it can handle more efficiently. Such acquisitions have included some of the electric-motor assets of ArvinMeritor, Kautex Textron, and Lear. In parallel, the company is using acquisitions to broaden its capability base and move into more specialized product lines, such as precision piezoceramic motors (through the purchase of Israel's Nanomotion) and digital-camera motors (through the purchase of Japan's Nihon Mini Motor).

Johnson Electric makes broad use of China's advantages, leveraging superscale manufacturing and material sourcing to achieve an extremely high degree of specialization, very high volumes, and very low global unit costs. The company also employs sophisticated global supply-chain management to meet the standards of automotive OEMs and leading commercial brands worldwide. The company's quest for scale is helped by global OEMs' trend toward outsourced motor production—and by global companies' enthusiasm for China as a preferred source of manufactured products. Johnson Electric also leverages highly specialized and customercentric R&D in China and throughout the world, allowing it to become a motion subsystems innovator as well as a leading motor supplier.

Companies in this category have in common a relatively well-defined target market for their products; considerable depth in their chosen niches (which in some instances amounts to global category leadership); superscale manufacturing; highly focused R&D; and global logistics, which they have down to a science. Their specialization allows them to be best in class, ahead of the competition on cost, innovation, and the understanding of next-generation customer needs. It also provides them with a scalable platform from which to drive global industry consolidation—and also to add on new, related niches.

The 12 of our RDE 100 companies pursuing category leadership are involved mainly in discretely manufactured industrial products: motors (such as Johnson Electric), compressors (such as Brazil's Embraco), power tools (such as China's Techtronic), and shipping containers (such as China International Marine Containers Group Company). These companies had $36 billion in combined 2004 revenue, of which they earned 61 percent, or $22 billion, abroad. Their average annual growth from 2000 through 2004 was 23 percent. A particularly large number of RDE players in this category are based in Brazil and China.

Model 4: Monetizing RDE Natural Resources. Thirteen of the RDE 100 are growing internationally by marketing products that leverage their home countries' natural-resource advantages. Prime examples are the Brazilian food processors Sadia and Perdigão, with annual revenue of $2.2 billion and $1.8 billion, respectively, of which nearly half comes from exports to more than 100 countries. Both companies hold 30 to 50 percent shares of the Brazilian market in their main product lines. Both operate along the entire value chain, from farming to marketing chilled and frozen foods and high-value-added products such as ready-to-eat meals. Sadia does business with 12,500 soy and corn producers and 10,200 integrated farmers. The company has 9 industrial units and 8 distribution centers in Brazil, and 11 sales offices around the world. Perdigão has 16 industrial units and 16 distribution centers in Brazil, as well as 7 sales offices in Europe, the Middle East, and the Far East.

Both companies' expansion models focus on growing their domestic production capacity while investing in overseas supply-chain-management capabilities. Perdigão's Rio Verde Agro industrial complex is now Latin America's largest slaughterhouse, and the company's total exports average 60,000 tons per month. Sadia's total exports reached 1 million tons in 2005, an increase of more than 16 percent over 2004. In 2005 both companies expanded their export-focused facilities: Perdigão opened a 400-ton-per-month processing facility in Brasilia, while Sadia opened a large distribution center in Ponta Grossa and bought Sofrango, a major poultry producer in Brasilia.

The two companies' key competitive advantage lies in abundant production resources for pork, poultry, and grain, which are complemented by ideal growing conditions for animal feed and by low labor costs. Both have hatcheries that are among the most productive in the world, achieving low production costs and high yields with the highest quality standards. And both pride themselves on their state-of-the-art global distribution and supply-chain-management systems.

Companies in this category build their global expansion on natural resources that are low cost by international standards, with no compromise in quality. This advantage stems from an abundance of energy, minerals, agricultural feedstock, or a combination of those resources. The companies in our selection that take this approach are active in fossil fuels, mining and metals, and agricultural products. Brazil's Companhia Vale do Rio Doce (CVRD), for example, builds its global advantage and growth on rich, low-cost iron-ore reserves. In addition to leveraging abundant natural resources, players in this group have generally developed superior operating models for their industries.

The 13 companies pursuing this model had $110 billion in combined 2004 revenue, of which they earned 66 percent, or $73 billion, abroad. Their average annual growth from 2000 through 2004 was 26 percent. Almost all the companies in this category are based in Brazil or Russia.

Model 5: Rolling Out New Business Models to Multiple Markets. Thirteen of our RDE 100 are building regional or global portfolios in their respective industries by rolling out business models that they have generally pioneered in their home markets. These companies had $93 billion in combined 2004 revenue, including 29 percent, or $27 billion, earned abroad. Their average annual growth from 2000 through 2004 was 28 percent.

Representative of this strategy is Cemex, the $15.3 billion Mexican cement conglomerate. One of the largest ready-mix-concrete companies in the world, Cemex is vertically integrated, with more than 50,000 employees in more than 50 countries. Cemex generates $12.1 billion, or 79 percent, of its revenue abroad. It has built a truly global presence through acquisitions in the Americas (Colombia, Dominica, Panama, Puerto Rico and other parts of the United States, and Venezuela), Asia-Pacific (Bangladesh, Indonesia, the Philippines, and Thailand), the Middle East (Egypt), and Europe, topped off by the 2005 purchase of the U.K.-based cement giant RMC Group.

The key to Cemex's success lies in its rigorous approach to integrating and running acquisitions, part of the "Cemex way." This formula is based on a global capability platform that covers every aspect of the business, including plant management, supply chain management, distributor management, and end-customer service. Integral to the approach is a seasoned M&A and postmerger-integration team that can execute serial acquisitions.

The key to Cemex's success lies in its rigorous approach to integrating and running acquisitions.

A number of companies in this category are still in the early stages of globalization. Contenders represent a variety of industries besides cement, including chemicals, food products, and telecommunications services. These companies tend to expand in one of three ways. Like Cemex, they may have a comprehensive formula for acquisitions, markets, and operational excellence. Or they may operate in a manner that creates superiority along a critical dimension, such as the way that Thailand's Charoen Pokphand Foods approaches operational efficiency in agricultural production through technology and scale. Finally, they may exploit advantages such as cultural similarities, shared language, or political ties that provide privileged access to a market—as, for example, Orascom Telecom does, using its Egyptian home base to expand into the neighboring region.

Model 6: Acquiring Natural Resources. In contrast to most emerging challengers, 12 of our RDE 100 companies are expanding overseas not to tap new profit pools but to acquire vital raw materials for their home markets. A good example is Shanghai Baosteel Group Corporation, China's biggest steel maker, which had revenue of $19.5 billion in 2004. Founded in 1978 and still state owned, Baosteel has a production capacity of approximately 20 million tons of crude steel a year, half as much as Luxembourg's Arcelor and about 20 percent more than Germany's ThyssenKrupp.

Baosteel's combination of state-of-the-art technology, the lowest cost base in Asia, and strong operational capabilities has translated into operating profit margins well above the industry average. More than 98 percent of its revenue comes from China, the world's fastest-growing steel market. Baosteel is well positioned to capitalize on this growth, given its domestic market share of about 50 percent in the automotive and household appliances segments. To date, Baosteel's international expansion has aimed at securing stable iron-ore supplies. To that end, it acquired a 50 percent interest in CVRD's Água Limpa iron-mining complex in Brazil in 2001 and one year later invested in a joint venture with Hamersley Iron, an Australian subsidiary of Rio Tinto Group. The joint venture will supply Baosteel with more than 20 million tons of iron ore annually.

The companies in this category are active in either fossil fuels or metal and mining products. Nine of the 12 are based in China, which consumes far more oil, gas, and iron ore than it produces. Irrespective of their countries of origin, these companies typically enjoy solid government backing for their attempts to acquire assets abroad. Following the buildup of overcapacity in some sectors (steel in China, for one) and a further upgrade in their operational capabilities, some of these companies will likely compete in global product markets. The companies pursuing this model had $282 billion in combined 2004 revenue, including only $30 billion, or a little more than 10 percent, earned abroad. Their average annual growth from 2000 through 2004 was 25 percent.

How They Are Growing: Buying and Building

Although much public attention focuses on the multibillion-dollar acquisitions of a handful of RDE-based companies, these transactions account for less than 20 percent of the international growth of the RDE 100. These companies have achieved more than 80 percent of their growth organically, either by exporting from their home-country bases or by establishing international operations, in some cases through joint ventures. Only 24 of the companies on our list conducted more than three M&A deals between 1988 and 2005, while 27 companies conducted no deals at all. That being said, we need to make two important qualifications.

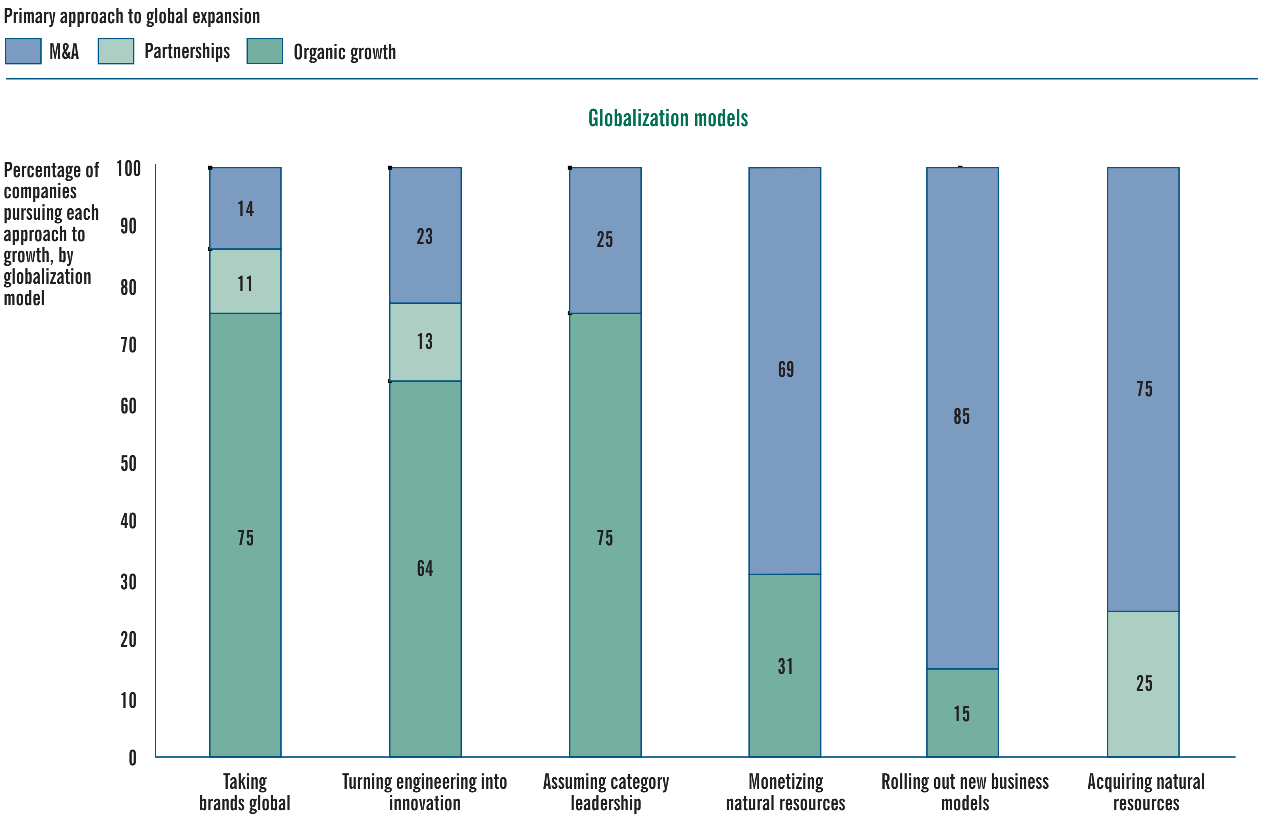
First, acquisitions form an integral part of international expansion in some globalization models. For instance, they are very important for companies rolling out their business models to other regions. América Móvil, a Mexican provider of telecommunications services, spent more than $5 billion to conduct 15 acquisitions, from 2001 through 2005, intended to build up its presence across Latin America. Raw-material companies have employed similar strategies, particularly to secure access to vital supplies. At the other extreme, companies taking their home-market brands global have seldom pursued M&A. (See Exhibit 5.)

Second, the M&A activities of the RDE 100 are on the rise. Whereas in 2000 they recorded only 15 acquisitions, in 2004 the number rose to 40, and in 2005 to 59. (See Exhibit 6, page 18.)

Most of these deals are small, with specific objectives. They usually help an RDE-based company establish a commercial beachhead through existing brands, distribution channels, and local management. In addition, many RDE-based companies, such as India's Bharat Forge (automotive equipment), have used M&A activities to obtain immediate access to vital technologies. Some RDE players have bought underperforming incumbents or dormant brands with the aim of turning them around. An example is Techtronic's formation of a strong power-tool portfolio combining brands such as AEG, Atlas Copco, Dirt Devil, and Ryobi

EXHIBIT 5

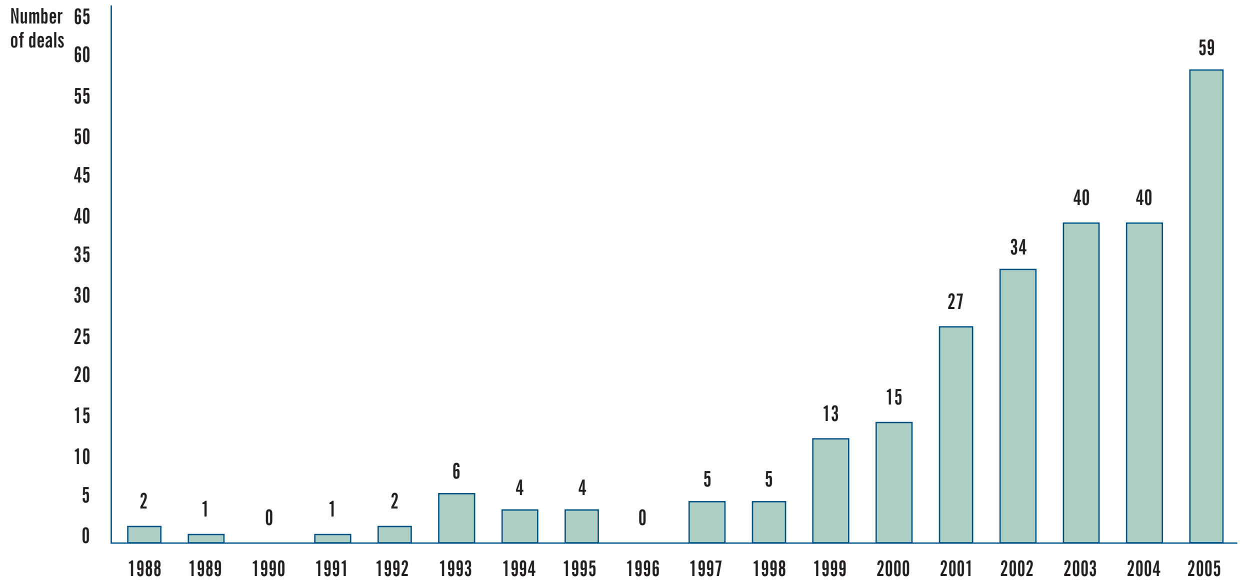
RDE COMPANIES' APPROACH TO EXPANSION IS RELATED TO THE GLOBALIZATION MODEL USED



SOURCES: BCG RDE Challengers Database; BCG analysis.

EXHIBIT 6

OUTBOUND M&A ACTIVITIES OF THE RDE 100 ARE GROWING



SOURCE: BCG RDE Challengers Database.

with superscale, low-cost Chinese manufacturing and leading-edge R&D capabilities. The company is now the category leader at Home Depot, the world's largest do-it-yourself chain, and it has won several awards for product quality and innovation.

Looking ahead, we expect acquisitions to play a more important role. The desire of RDE players to grow will likely exceed their ability to develop the necessary capabilities in-house, spurring them to acquire other companies. They will get better at identifying and integrating targets. Meanwhile, incumbent companies in mature markets may become increasingly open to M&A transactions with RDE peers. Banks and private equity firms will increasingly act as matchmakers.[1]

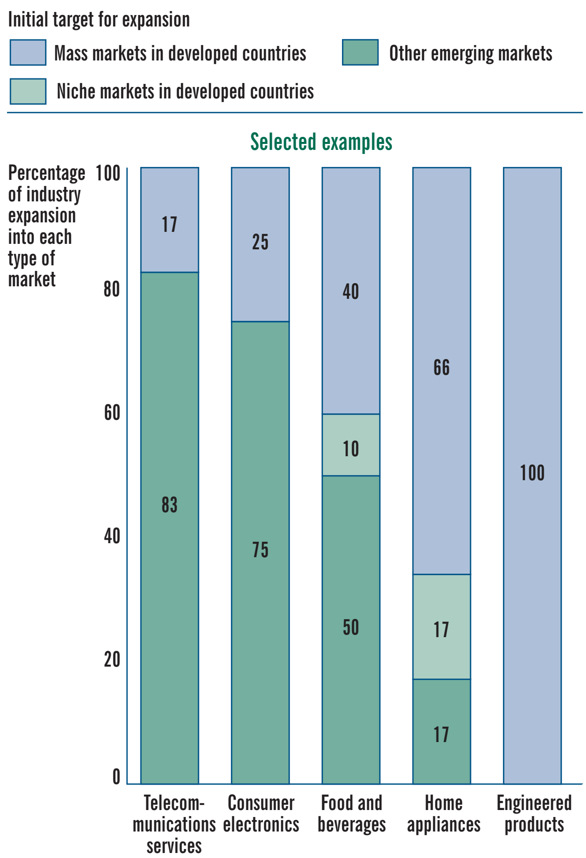
Where They Are Growing: Next Door and Around the World

Looking at the markets that our RDE 100 are targeting for expansion, we found that the decision whether to test the waters in other emerging markets first or to go directly for the large developed markets is closely related to industry and business model. (See Exhibit 7.)

1. See *China's Global Challengers: The Strategic Implications of Chinese Outbound M&A*, BCG report, May 2006.

EXHIBIT 7

TARGET REGIONS FOR EXPANSION ARE RELATED TO INDUSTRY



SOURCES: BCG RDE Challengers Database; BCG analysis.

As mentioned above, providers of telecommunications services, such as Egypt's Orascom Telecom and Russia's Mobile TeleSystems (MTS), tend to expand into neighboring regions with close ties to their home markets. This strategy is also typical of branded Chinese consumer-electronics manufacturers such as Skyworth Multimedia International Company, which penetrated smaller RDEs in Asia and the Middle East before launching a broader rollout.

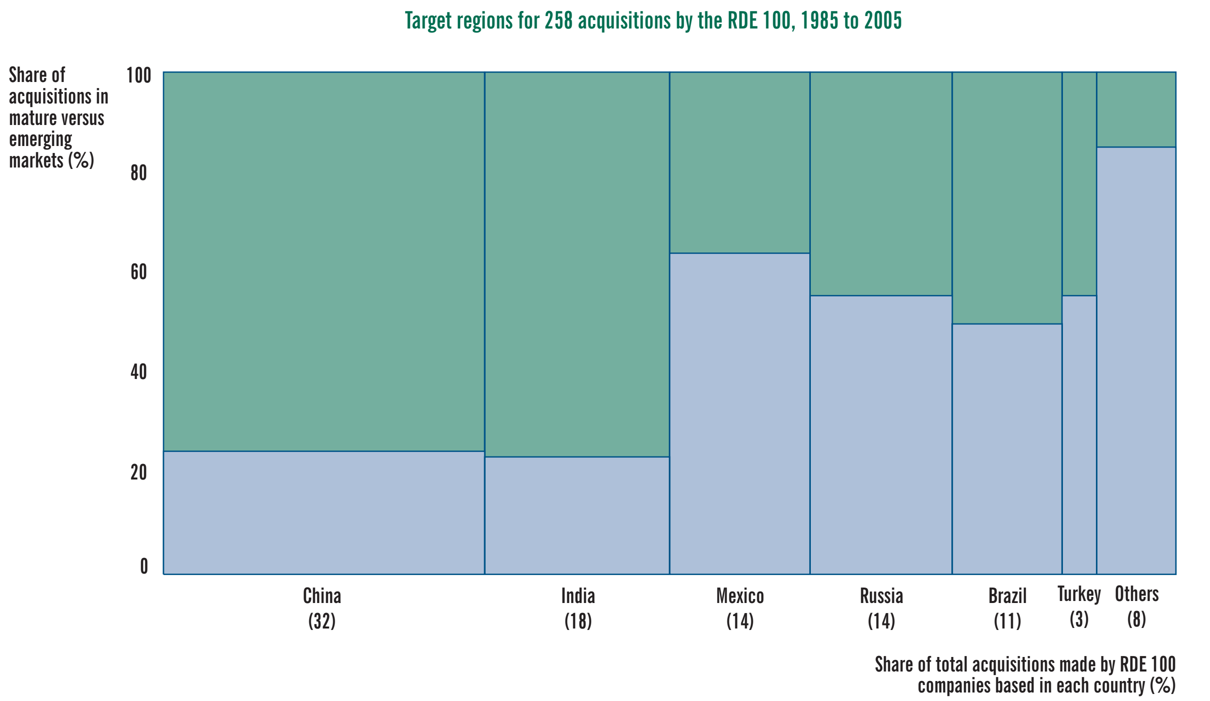
Companies in the food and beverage industry and in household appliances take two basic approaches. Companies pushing their own brands, such as Mexico's Grupo Modelo (beer) and China's Haier (household appliances), start with other RDEs or niche markets, whereas OEM suppliers such as Turkey's Koç (household appliances) go directly to mature mass markets (in this case, Western Europe). In contrast, RDE-based players specializing in engineered products, such as Johnson Electric, are pursuing global scale and therefore target large industrial customers in multiple countries.

The RDE 100 aim their M&A activity both at companies based in mature markets (57 percent of transactions) and at companies based in other developing countries (43 percent of transactions). The Chinese and Indian companies on our list have been directing their efforts at competitors in the developed world, whereas challengers based in other RDEs have been focusing on assets in emerging markets. (See Exhibit 8.) Among the latter companies, most have targeted regions immediately adjacent to their home countries rather than more distant locations.

EXHIBIT 8

THE RDE 100 TARGET DIFFERENT REGIONS FOR M&A ACTIVITY

	Share of total (%)
Acquisitions in mature markets	57
Acquisitions in other RDEs	43



SOURCES: Thomson Financial Securities Global Mergers and Acquisitions Database; BCG RDE Challengers Database.

The Competitive Strengths and Weaknesses of Emerging Global Challengers

The global success of RDE-based players will depend on the competitive advantages they develop and maintain in the international marketplace. Clearly, one core advantage is access to low-cost resources. Other advantages that many share include products that appeal to price-conscious customers, relatively modern and efficient plants and equipment, and access to huge talent pools. Potential constraints on global success for some of these companies include a lack of deep relationships with overseas customers, a slow rate of innovation, a lack of strong brands and customer franchises, a dearth of in-house intellectual property, a lack of access to effective distribution channels, and limited experience managing international business portfolios.

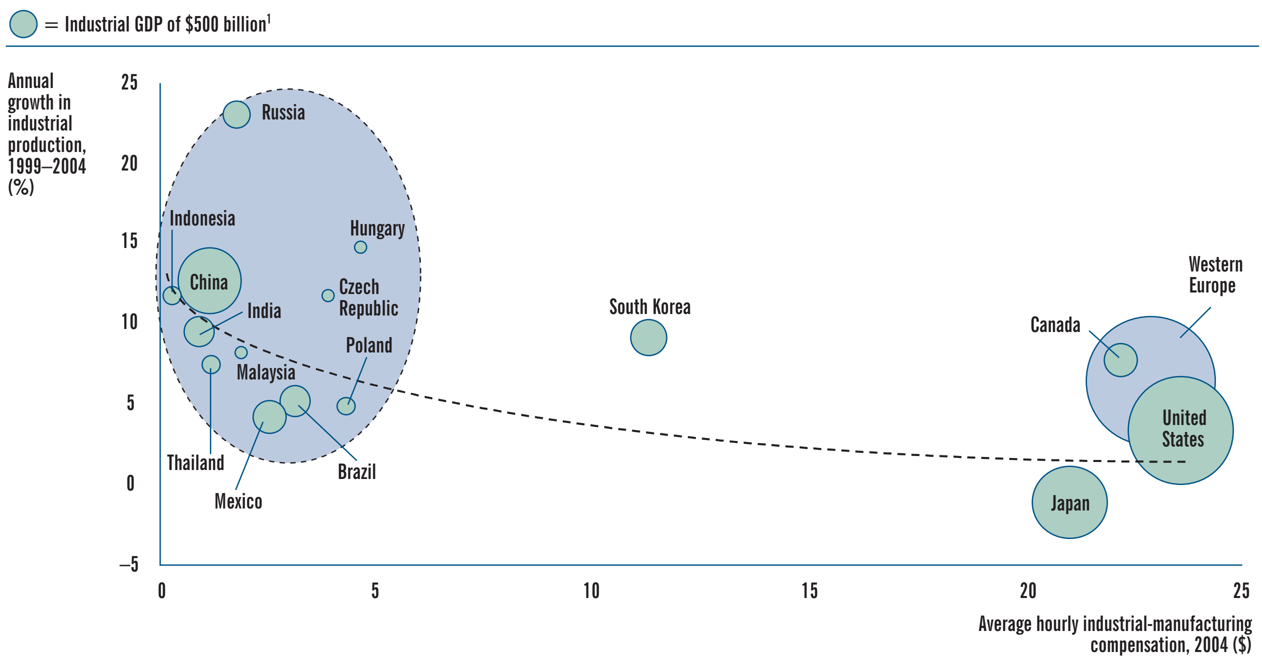
Low-Cost Resources

The major source of advantage for RDE-based companies is low-cost access to key resources. While established multinationals that migrate to RDEs might, in principle, have access to similarly low-cost resources, our experience indicates that RDE-based players typically retain an overall cost advantage. In addition, for many MNCs, RDE-based operations represent a relatively small part of their global activities, whereas it is the reverse for RDE-based players. The RDE cost advantage pertains primarily to labor, property and equipment, raw materials, and capital.

Low-Cost Labor. RDE-based labor typically costs 10 to 20 times less than labor in highly developed markets. This advantage alone translates into a net savings of 20 to 40 percent in the cost of many end products and services landed into most target markets. Fully loaded RDE labor rates for manufacturing workers run anywhere from about $1 per hour (the average rate in China) to $4 to $5 per hour (the typical rate in Eastern Europe)—a fraction of the average rate of $20 to $25 per hour in North America, Western Europe, and Japan. (See Exhibit 9.) Similar

EXHIBIT 9

LABOR COST ADVANTAGES IN RDEs ARE SIGNIFICANT



Sources: Economist Intelligence Unit; BCG analysis.

[1]Industrial GDP excludes agriculture and services.

differences apply to labor rates for many service functions, such as software programming, call center operations, and basic engineering services.

Low-Cost Property and Equipment. In many RDEs, setting up a manufacturing site complete with grounds, buildings, roads, power, and water lines can cost 60 percent of the price tag for a comparable facility in a developed country. Savings come not only from substantially less costly construction labor, engineering, and architectural services but also from less expensive construction materials. Another area of savings is machinery and equipment, which often cost 20 to 60 percent less than items of comparable quality in developed markets. This advantage will grow as more locally made state-of-the-art equipment becomes available over the next few years. In addition, local communities within RDEs compete fiercely for investment and often make land available on favorable terms.

RDEs' local markets are often very large and among the fastest-growing in the world.

Low-Cost Raw Materials. Depending on the country, raw materials and energy can be abundant or quite limited. Of the 12 countries we screened in depth, only Brazil and Russia are building a major part of their global advantage on the basis of low-cost natural resources. Brazilian companies share privileged access to low-cost hydroelectric power. Brazil also has a broad resource base, ranging from rich and low-cost iron ore (the major source of global advantage for domestic mining companies such as CVRD) to low-cost agricultural feedstock (which underpins a thriving food-processing industry). Russia, meanwhile, markets its rich energy resources either through direct exports of energy such as natural gas (Gazprom) or indirectly through exports of aluminum (Rusal).

Low-Cost Capital. Financing options for RDE-based companies vary widely. Some, such as those in the raw-material sector, generate significant cash flows that they can reinvest. Many have access to relatively generous debt markets (although approval standards are becoming more rigorous in all RDEs). No fewer than 60 of our RDE 100 have access to equity markets in Hong Kong, London, Mumbai, New Delhi, and New York. In addition, some companies are championed by governments eager to promote the international growth of key industries; an example is China's telecommunications-equipment industry. In combination, these factors should put most RDE challengers on at least an equal footing with their Western competitors.

Home-Market Environments

The operating environment in many RDEs is difficult, a fact that can arguably provide real advantages for indigenous companies. Local markets are often very large and among the fastest-growing in the world. In China, for instance, steel consumption is 2.3 times that of the United States; car sales are currently an impressive 29 percent of U.S. levels and are growing at 10 to 12 percent per year. The markets in Brazil, India, and Russia, although much smaller than China's, are also significant.

These large home markets, with hard-to-please, price-sensitive customers, provide a strong foundation for creating export businesses in the future. In addition, many key sectors, such as China's aerospace, telecommunications-equipment, and automotive-equipment industries, get substantial help from the government. Many RDE markets also give their indigenous players the opportunity to compete directly with foreign incumbents on their home turf, helping to prepare them for expansion abroad.

Operations

Many RDE-based companies have surprisingly strong operating platforms. Their assets are often much younger than those of established multinational players. A survey by the U.S.-based Manufacturing Performance Institute found that the average age of the assets of the surveyed Chinese companies was 7.2 years, compared with 16.9 years for those of their U.S. counterparts. Similarly, RDE-based production systems tend to be more flexible than those in highly developed countries because RDE-based players often use labor instead of machinery in their plants. For example, rather than installing automated packing lines, they use human workers to do the packaging. And they tend to buy their machinery from domestic manufacturers, whose products are 20 to 60 percent less expensive than comparable Western equipment.

In addition, RDE-based companies often achieve higher capital productivity through a longer workweek and fewer fixed assets than are typical of their Western counterparts. These factors may also provide more flexibility to cope with demand swings, speed new-product launches, and permit smaller orders.

Innovation

Only a handful of RDE-based companies operate at the cutting edge of innovation. Their general weakness in intellectual property is reflected in the small number of patents they hold. From 1999 through 2003, all the companies based in the five largest RDEs obtained only 3,900 U.S. patents, whereas companies based in Japan and Germany obtained 166,000 and 54,000, respectively.

However, other factors are beginning to offset this apparent weakness. First, RDEs are fast developing R&D talent. For example, in 2010 China is expected to graduate 800,000 engineers, mathematicians, technicians, and scientists, while India will graduate 600,000. Together, this pool of graduates is 12 times the output of the U.S. university system in the same disciplines.

In addition, R&D resources are far less expensive in RDEs than in highly developed countries. With approximately one-fifth the development costs of its Western competitors, a company such as India's Ranbaxy Pharmaceuticals can achieve much with its $87 million R&D budget. Little wonder, then, that MNCs are already rushing to RDEs to establish R&D centers.[2] RDE-based companies, however, may well have an advantage when it comes to leveraging local talent effectively. For example, China's Haier claims to develop two new household appliances every day. While few current RDE-based innovations are cutting edge, the most successful RDE-based companies will become true innovators over time.

Supply Chain Management

Effectively connecting RDE sources with remote markets remains a challenge. The Asia-U.S. supply chain, for example, takes an average of 60 to 90 days from order entry to arrival at the point of sale and adds 10 to 30 percent to manufacturing costs, eliminating up to half the manufacturing cost savings afforded by the RDE.[3] Our experience indicates that 20 to 60 percent of these supply-chain costs are caused by stockouts, emergency shipments, and permanent backups built into the system. Optimizing the total performance of a long-distance supply chain requires considerable skill, top-notch processes, and organizational discipline. A few RDE-based companies, such as China's Li & Fung Group (textiles), have mastered this art and turned it into their main business. For many RDE-based players, however, supply chain management is still a bigger challenge than it is for established multinationals, which have well-developed supply-chain functions.

Optimizing a long-distance supply chain requires considerable skill and organizational discipline.

One way to address the supply chain issue is by establishing production beachheads inside the target markets. Of our RDE 100, 39 companies have already done this. The strategy is particularly beneficial when products have high transportation costs relative to their value, when products are exposed to extreme demand volatility or short lead times, when trade barriers are significant, or when being "local" still provides a strong selling proposition.

Going to Market

Getting traction in a new market, particularly a highly developed one, is still tough for most RDE-based companies. The hurdles are manifold: becoming intimate with customers and channels, understanding their needs, designing the right products, and building competitive distribution capabilities. Although many RDE-based compa-

2. See *A Game Plan for China: Rising to the Productivity Challenge in Biopharma R&D,* BCG Focus, December 2005, and *Harnessing the Power of India: Rising to the Productivity Challenge in Biopharma R&D,* BCG Focus, May 2006.

3. See *The China Rip Tide: Threat or Opportunity?* BCG white paper, January 2006.

nies have adjusted well to new requirements in their home countries, playing this game abroad usually means joining a different league of competitors.

The most successful RDE-based players are aware of this issue and are employing one or more of the following approaches in order to improve their ability to go to market abroad:

- Making acquisitions intended to gain access to the market and to the required commercial capabilities (for example, the acquisition by Dr. Reddy's Laboratories, an Indian pharmaceutical company, of Germany's betapharm Arzneimittel in 2006)
- Building deep relationships with a limited number of large retailers (for example, sales of air conditioners by China's Midea Holding Company through Home Depot and Wal-Mart)
- Targeting high-volume sales to a relatively small number of large industrial and OEM buyers (for example, sales of mobile-phone batteries by China's BYD to Motorola, Nokia, and Sony Ericsson)
- Concentrating on developed markets that are a lower priority for incumbents (for example, sales by China's Konka Group Company in Australia, where it ranks number two in the TV market)
- Serving other RDE markets that have characteristics similar to the home market before moving into highly developed markets (for example, the development by China's Skyworth of a strong position in consumer electronics in Malaysia, Mexico, and Russia before it entered Western Europe)

Management Talent

In our study of the globalization patterns of the RDE 100, the quality of management emerged as an important success factor. The shortage of managers with international experience constitutes a major constraint for RDE-based companies. The need is great both for people who can develop global business strategies at the corporate level and for those who can operate effectively on the ground in the target markets. Only a handful of the RDE 100 have foreigners among their directors, and few have foreigners in senior management positions.

Most RDE-based companies recognize this shortage and are grooming management talent inside their organizations. Many have established international job-rotation programs for their local managers and are now hiring managers with international experience, often tapping into the pool of native-born executives working abroad.

Rigorous Strategy and Road Maps

As mentioned earlier, many of the RDE 100 are still in the early stages of globalization. For these companies, in particular, it will be important to move beyond opportunistic steps toward globalization and develop more coherent strategies.

Vital elements for success include a well-defined, long-term globalization strategy coupled with solid financial management and a road map with concrete milestones. For example, Brazil's Natura (cosmetics) has a long-term globalization road map that guides the company's international moves. Combining its operating capabilities with a planned approach to accessing new markets, the company aims to spread its value proposition and strengthen its brand recognition abroad.

Looking Ahead

Until recently, only a dozen or so RDE-based companies could have been described as emerging global challengers. Today these challengers number in the hundreds. Among them, the RDE 100 will play important roles in shaping the global marketplace. While some of these companies are already in positions of relative strength, many are still gearing up for major global-growth campaigns. All are hungry for global expansion. They are increasingly cash rich. They are aware of their advantages and know how to deploy them. At the same time, they are actively working to overcome their traditional weaknesses. In this effort, many are receiving the strong support of their home governments.

We expect that by 2010 our RDE 100 will have doubled their international revenue. Meanwhile, the portion of revenue they derive from international operations will likely rise from the current 28 percent to more than 40 percent. Perhaps 20 or more of them will be among the top five companies in their categories globally, up from only a handful today. We also expect that the number of prominent RDE-based globalizers will expand into the hundreds in the years ahead. The implications are massive—both for emerging challengers and for incumbents.

Implications for Challengers

As noted above, many of the RDE 100 are well along on the path to globalization. In general, the more advanced companies on our list already have most of the essential capabilities in place. But other companies on the list are still in the early stages of globalization. In order to successfully advance their international growth, they will need to strengthen their positions in the following ways.

Establish clear, long-term globalization targets and road maps. All companies need to clarify why and how they are globalizing. Some of the players on our list have begun to globalize only opportunistically. To succeed in the longer term, they will need a clearer vision and purpose, set from the top, and detailed road maps for their globalization endeavors.

Create internationally capable management teams. Whereas some of the RDE 100 already have global management teams, others have only begun to address this issue. For example, very few of the Chinese companies profiled have any foreigners in their senior-management ranks. A globally capable management team will be essential to success abroad.

Enhance overseas selling, marketing, and supply-chain capabilities. RDE-based companies need to go beyond being secondary suppliers to global customers and become primary suppliers. Moving up to this level will require matching or beating incumbent suppliers in selling, marketing, and supply chain capabilities.

Go beyond low cost. As RDE-based challengers seek sustainable global positions, they will need to move beyond cost-based differentiation. Otherwise they will face incumbent competitors that are cutting their own costs while building market barriers based on innovation and other advantages. Just as leading Japanese and South Korean companies have become true innovators, so must our current crop of RDE-based challengers innovate their way to long-term success. The abundance of affordable engineering talent in markets such as China, India, and Russia gives companies based in these locations the potential to become innovation powerhouses.

Develop expertise in partnering, M&A, and leveraging suppliers. In the race to compete, the most successful RDE challengers will include those that leverage other companies. Some will create this leverage through successful M&A activities. Others will do it by forming strategic partnerships or by taking advantage of the innovation of suppliers at home and abroad.

Implement an effective global organization. For long-term success, RDE-based challengers—like incumbent MNCs—must redesign their entire organizations to be truly global. This effort requires making difficult decisions regarding the composition of the management team, the centralization or decentralization of various key functions, and the extent to which the company organizes geographically rather than by business line.

Implications for Incumbents

The impact of emerging RDE-based challengers on individual incumbents varies by industry and also reflects a company's current competitive position. Many incumbents are successfully riding the wave of globalization by sourcing, manufacturing, selling, and conducting R&D both at home and around the world. Others, however, have not yet adapted to the challenges of globalization, and the emergence of strong RDE-based competitors will both raise the stakes of the game and reshape the playing field. How to respond?

Strong RDE-based competitors will both raise the stakes of the game and reshape the playing field.

Know your challengers. The first step seems obvious: you need to identify and understand the RDE-based challengers in your industry. Who are they? Where are they operating today? What are their strengths and vulnerabilities? How are they changing the competitive landscape? Which steps in the value chain are affected? How big an impact do you expect? Will the impact create threats, opportunities, or both? RDE-based challengers are sometimes hard to get to know. They are based far away, they may not be well covered by the business media, they may not publish financial results, and they are evolving rapidly. So you need to make an extra effort simply to understand them.

Take a hard look ahead. Envision your global priorities in an environment inhabited by successful RDE-based competitors. What are the implications for the segments and businesses you can defend? Which segments and businesses might you want to exit? What new growth opportunities and competitive imperatives do you see?

Design a strategy for the new reality. Answering those questions will trigger important decisions about how you will contend with the new challengers. Your choices might include the following:

- Competing head-on with the challengers, erecting obstacles to keep them out of key markets, or attacking their home markets
- Partnering with one or more challengers in order to strengthen your global competitive position and defend that global position against other challengers
- Creating your own challenger by establishing a subsidiary in an RDE designed explicitly to capture the same kinds of advantages that RDE challengers possess
- Exiting some lines of business or some value-added steps and moving those activities into a joint venture with a challenger company; for example, you might build a new business model that would benefit from the joint venture through royalties and service fees in one or more markets

Hone your operations and reinforce customer ties. For most incumbents, the main arena of competition with RDE-based companies will be product markets. Here, in our experience, most incumbents still have considerable room for improvement in their key operations: developing new cutting-edge products, manufacturing them efficiently, getting them to market effectively, and servicing customers well. In their home markets, incumbents are often closer to customers than challengers are. They should take full advantage of those relationships. While incumbents focus on improving performance in their domestic operations, they should also systematically assess options to relocate production to low-cost countries.

Find ways to ride the wave. Incumbents and challengers alike should also consider opportunities to create value by acquiring, investing in, or partnering with each other. Many are already systematically assessing and pursuing options to cooperate as a way to advance their own growth objectives. Opportunities exist in many areas. In sourcing, for example, RDE-based companies can become suppliers to incumbents (as exemplified in the market for automotive equipment) or partners in exploiting raw-material resources (as is happening in the oil industry). Conversely, the RDE 100 challengers are already purchasing huge volumes of materials, parts and components, and services, and therefore should be regarded as potential customers of incumbents.

Similarly, partnerships between incumbents and challengers figure prominently in the globalization of R&D (for example, in the pharmaceutical industry, where global giants are starting to conduct joint research programs with companies in India and China). In operations, subcontracting and outsourcing are now common in almost every industry. Indeed, the business models of some challengers are built entirely on serving multinational players in this way (for example, in the technology equipment, household appliance, and IT services and business-process-outsourcing industries). Many incumbents also enter into joint ventures or distribution partnerships with RDE-based companies to tap into their growing home markets (for example, in the Chinese automotive-equipment and consumer-electronics industries).

RDE-based companies can also be partners in incumbents' exit strategies. When an incumbent's management team decides to retreat from a segment of a mature market, partnerships with RDE-based players can help stage the exit. In the case of an outright sale, an RDE-based company might be willing to pay more for a business than a domestic competitor would because the purchase might provide exactly the sort of assets the company needs to offset its current weaknesses (for example, in intellectual property, brands, or distribution channels in mature markets). In other cases, a temporary partnership with an RDE-based acquirer might create more value than an outright sale. Incumbents have recently pursued this model in M&A deals with Chinese companies, generally in the form of joint ventures.

From the incumbent's perspective, partnerships make sense for at least three reasons. First, sometimes the assets of the acquisition target need to be carved out of the seller's operations, so it is not possible to complete an immediate sale. Second, the incumbent may want to retain some of the most attractive assets—such as intellectual property, including brands and patents, or jointly used operations such as sales channels—and provide them to the acquirer for a fee. Finally, the acquirer may be an attractive partner for the seller in penetrating an RDE market or may even serve as a client.

Ultimately, incumbent companies in global industries must quickly become comfortable with a world full of RDE-based challengers. It will be critically important to know these challengers well and to use that knowledge in making key business decisions. Decisions made without such insights certainly risk failure.

Closing Thoughts

We are fast entering a new era in which RDE-based challengers populate the world's largest industries. These challengers will be major players, reshaping many markets and forcing incumbent companies to respond.

The rise of these challengers takes place amidst the rise of RDE economies generally—and of China and India in particular. By 2050 China and India will be two of the world's three largest national economies. At that point, any truly global company must, by definition, be a major player in China, India, or both, as well as in North America, Europe, or Japan. And by then, many global companies will indeed be based in China, India, and other countries that are today's RDEs.

Our list of 100 companies represents just a small sample of the RDE-based challengers that will ultimately emerge on the world stage. Of course, not all will survive. Success will require correct strategic decisions and the building of capable, competitive organizations.

Survival for today's incumbent companies is not guaranteed either. Clearly, one success factor will be the ability to identify the new wave of RDE-based challengers and understand the rich array of threats and opportunities they present. These companies are no longer poised on some far horizon; they are globalizing fast and are determined to stay the course. The leaders of today's global companies must be prepared to meet their challenge.

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