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## The Globally Integrated Enterprise

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Summary: A new corporate entity based on collaborative innovation, integrated production, and outsourcing to specialists is emerging in response to globalization and new technology. Such "globally integrated enterprises" will end up reshaping geopolitics, trade, and education.

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### BEYOND MULTINATIONAL

The multinational corporation (MNC), often seen as a primary agent of globalization, is taking on a new form, one that is promising for both business and society. From a business perspective, this new kind of enterprise is best understood as "global" rather than "multinational."

The corporation has evolved constantly during its long history. The MNC of the late twentieth century had little in common with the international firms of a hundred years earlier, and those companies were very different from the great trading enterprises of the 1700s. The type of business organization that is now emerging -- the globally integrated enterprise -- marks just as big a leap.

Many parties to the globalization debate mistakenly project into the future a picture of corporations that is unchanged from that of today or yesterday. This happens as often among free-market advocates as it does among people opposed to globalization. But businesses are changing in fundamental ways -- structurally, operationally, culturally -- in response to the imperatives of globalization and new technology. As CEO and chair of the board of IBM, I have observed this within IBM and among our clients. And I believe that rather than continuing to focus on past models, regulators, scholars, nongovernmental organizations, community leaders, and business executives would be best served by thinking about the global corporation of the future and its implications for new approaches to regulation, education, trade, and commerce.

### CORPORATE EVOLUTION

In its early forms, the corporation was a creature of the state. Governments chartered and sanctioned corporations to perform specific duties on behalf of the nation and its rulers. This changed somewhat during the nineteenth century, when the United Kingdom, the United States, and other countries granted company owners limited liability, and corporations gained a more liberated status as independent "legal persons."

The mid-nineteenth century saw the emergence of what can be called the international corporation. An entrepreneurial joint-stock company, organized in simple hub-and-spoke networks, it established and controlled international trade routes, often relying on its home state's armed forces for protection. In some industries, corporations used these routes to import raw materials (diamonds, rubber, tea, and oil) and export finished products (chocolate, soap, margarine, and other manufactured consumer goods). The basic structure of home-country manufacture and international distribution applied across almost every industry.

A second phase in the corporation's life began in 1914, with the conflagration of World War I and the subsequent collapse of economies in the United States and Europe. International corporations found their

trade-based networks blocked. The spread of protectionism in the 1920s and 1930s led to the rise of tariffs, exchange controls, and other trade barriers. In response, businesses began to evolve into what is today recognized as the MNC. The MNC was a hybrid. On the one hand, it adapted to trade barriers by building local production. American MNCs such as General Motors and Ford, for instance, built auto plants in Europe and Asia, thus allowing them to sell to important local markets without incurring tariff penalties. On the other hand, the MNC performed some tasks on a global basis, such as research and development (R & D) and product design.

There were, of course, many recognizably global products throughout the twentieth century, from Coca-Cola to the Sony Walkman, products whose worldwide success underlined the growing importance of branding and marketing. But by and large, corporations continued to organize production market by market, within the traditional boundaries of the nation-state.

During the last three decades of the century, however, some important changes began to play out across the world economy. First, economic nationalism abated, and so trade and investment barriers receded. The liberalization of trade and investment flows changed companies' perceptions of what sorts of globalization were permissible. Second, starting in the early 1970s, the revolution in information technology (IT) improved the quality and cut the cost of global communications and business operations by several orders of magnitude. Most important, it standardized technologies and business operations all over the world, interlinking and facilitating work both within and among companies. This combination of shared technologies and shared business standards, all built on top of a global IT and communications infrastructure, changed the sorts of globalization that companies found possible.

Together, new perceptions of the permissible and the possible have deepened the process of corporate globalization by shifting its focus from products to production -- from what things companies choose to make to how they choose to make them, from what services they offer to how they choose to deliver them. Simply put, the emerging globally integrated enterprise is a company that fashions its strategy, its management, and its operations in pursuit of a new goal: the integration of production and value delivery worldwide. State borders define less and less the boundaries of corporate thinking or practice.

## GLOBAL INTEGRATION

The shift from multinational corporation to globally integrated enterprise has assumed two distinct forms. The first has involved changes in where companies produce things; the second, changes in who produces them. Until recently, companies generally chose to produce goods close to where they sold them. As a consequence, most foreign investments targeted specific foreign markets. Today, overseas investments continue to be made with a view to gaining access to important sources of foreign demand, but companies are investing more to change the way they supply the entire global market. The global integration of production cuts costs and taps new sources of skills and knowledge.

The most visible signs of this change can be seen in China and India. By one estimate, between 2000 and 2003 alone, foreign firms built 60,000 manufacturing plants in China. Some of these factories target the local Chinese market, but others target the global market. European chemical companies, Japanese carmakers, and U.S. industrial conglomerates are all building (or have declared their intention to build) factories in China to supply export markets around the world. Similarly, banks, insurance companies, professional-service firms, and IT companies are building R & D and service centers in India to support employees, customers, and production worldwide.

But these changes reach far beyond China and India. American radiologists send x-rays to Australia for interpretation. Customer-service centers in Nova Scotia handle warranty inquiries for U.S. shoppers. Procurement centers in Manila process corporate purchasing decisions on behalf of firms big and small around the world. Back offices in Dublin process derivatives transactions for global investment banks. In the United States, European biotech and pharmaceutical companies, such as Roche, Boehringer Ingelheim, and Eppendorf, are building manufacturing and R & D centers to support global research and production. Chipmakers, such as Samsung and Infineon Technologies, and chip-manufacturing-equipment companies,

such as Tokyo Electron, are tapping U.S. engineers and know-how to advance their manufacturing technologies. Everywhere, economic activity is turning outward by embracing shared business and technology standards that let businesses plug into truly global systems of production.

These shared standards, meanwhile, have given companies options in terms of whom they choose to produce things. As shared business practices spread, along with shared modes of connecting business activity, companies can hand over more and more of the work they had previously performed in-house (from back-office support work, such as invoicing and employee-benefits administration, to R & D, sales, and customer support) to outside specialists.

Heretofore, the corporation was seen as a collection of country-based subsidiaries, business units, or product lines. (The IBM of 30 years ago, for example, was in many respects an emblematic multinational. Over the past decade, IBM and its clients have changed structurally, operationally, and culturally in response to globalization and new technology.) Now the spread of outsourcing is encouraging companies to view themselves as an array of specialized components: procurement, manufacturing, research, sales, distribution, and so on. For each of these components, the global integration of operations is forcing companies to choose where they want the work to be performed and whether they want it performed in-house or by an outside partner. (Procter & Gamble, for example, relies on outside specialists in nearly all areas of its business.) The corporation, then, is emerging as a combination of various functions and skills -- some tightly bound and some loosely coupled -- and it integrates these components of business activity and production on a global basis to produce goods and services for its customers. This simple change in the corporation's purpose and mission has many ramifications.

## SYSTEMIC CHANGES

The globally integrated enterprise will require fundamentally different approaches to production, distribution, and work-force deployment. This is already happening. Because new technology and business models are allowing companies to treat their different functions and operations as component pieces, firms can pull those pieces apart and put them back together again in new combinations, based on strategic judgments about which operations the company wants to excel at and which it thinks are best suited to its partners.

These decisions are not simply a matter of offloading noncore activities, nor are they mere labor arbitrage. They are about actively managing different operations, expertise, and capabilities so as to open the enterprise up in multiple ways, allowing it to connect more intimately with partners, suppliers, and customers. The extraordinary growth of service firms providing specialized expertise makes this possible. For example, IMS Health manages products for pharmaceutical companies; Celestica manufactures electronics equipment; State Street manages financial assets; Industrial Light & Magic creates advanced technical effects for films; and International Flavors & Fragrances makes flavors and fragrances for other companies' consumer products. New forms of collaboration are everywhere: from increasingly complex intercompany production networks to the open-source software movement, which has helped transform the traditional model of innovation. Today, innovation is not led by lone inventors in their garrets but is the product of a collaborative process that also combines technological and marketing expertise. And such open approaches affect far more than software and IT: they also apply to education, governance, and many industries.

Sustainable competitive advantage has never come only from productivity or inventiveness. Today more than ever, the premium comes from the fusion of invention and insight into how to transform how things are done. Real innovation is about more than the simple creation and launching of new products. It is also about how services are delivered, how business processes are integrated, how companies and institutions are managed, how knowledge is transferred, how public policies are formulated -- and how enterprises, communities, and societies participate in and benefit from it all.

Technology scholar Carlota Perez believes that a golden age for this deeper kind of innovation is now beginning. Over the past 250 years, she argues, the advent of each of five groups of technological

innovations -- canals; the steam engine and railways; steel, electricity, and heavy engineering; automobiles, oil, and mass production; and computing and telecommunications -- initially prompted wild growth, then a corrective phase, and then several decades of steady implementation as the revolutionary technologies became integrated into the fabric of business and society. After causing a period of explosive growth and then the dot-com bust, information and networking technologies are now entering the period of integration. This linkage between global integration and innovation is no accident, given the inherently global nature of the technologies involved. In turn, as the twin imperatives of integration and innovation render the old MNCs' networks of national hubs inefficient and even redundant, it is becoming increasingly clear that the twentieth-century corporate model is no longer optimal for innovation.

## OPPORTUNITIES AND CHALLENGES

The globally integrated enterprise can deliver enormous economic benefits to both developed and developing nations. The integration of the work force in developing countries into global systems of production is already raising living standards, improving working conditions, and creating more jobs in those countries. Small and medium-sized businesses everywhere, particularly, are benefiting: as new services -- from back-office administration to sales support -- create infrastructures once only affordable to large organizations, these businesses can now participate in the global economy.

Consider Bharti Enterprises, which has become India's largest private-sector telecommunications provider by leveraging a ubiquitous network and the expertise and capabilities of outside partners. Bharti outsources the heart of its operations, freeing up its investment capital to pursue growth opportunities. From the way it plans for growth to the way it serves its customers and deploys new networking capabilities, the company is embracing entirely new ways of working. As a result, Bharti's revenue increased by more than 60 percent in 2005, and its subscriber base has grown from around 7 million to around 18 million in the last two years.

The opportunities for more such stories are enormous. But shifting to the model of globally integrated enterprises also presents big challenges for leaders in every sector of society. The very fact that so many more people all over the world are gaining equal access to the production process and the marketplace means much more trade and competition. Although this will create wealth and opportunity, it will also bring disruption and fear, both of which could threaten global integration. Legitimate concerns about job loss and skill shortages must be addressed in realistic and constructive ways.

The single most important challenge in shifting to globally integrated enterprises -- and the consideration driving most business decisions today -- will be securing a supply of high-value skills. Nations and companies alike must invest in better basic educational and training programs. New kinds of managerial skills are also needed. Hierarchical, command-and-control approaches simply do not work anymore. They impede information flows inside companies, hampering the fluid and collaborative nature of work today.

A second important step will be the sensible regulation of intellectual property worldwide. On the one hand, piracy deprives individual inventors of their rights and incentives, and it must be curtailed. On the other hand, collaboration between corporations and their partners, suppliers, and customers -- a key feature of contemporary innovation and of the integration of technologies and business models -- must be encouraged and protected. A balance between these two interests must be struck -- and it must be enforced consistently worldwide. Otherwise, the huge innovative potential of a globally integrated economy will be diluted. Intellectual property will become one of the key geopolitical issues of the twenty-first century. Fortunately, some promising new approaches are being tested. Already, focus has begun to shift from protecting intellectual property, which calls for limiting use, to maximizing intellectual capital, which is based on shared ownership, investment, and capitalization.

A third challenge will be to figure out how to maintain trust in enterprises based on increasingly distributed business models. A company's standards of governance, transparency, privacy, security, and quality need to be maintained even when its products and operations are handled by a dozen organizations in as many countries. A reliance on hierarchies contained within one function, enterprise, or nation must be supplemented by new ways of establishing trust, based on shared values that cross borders and formal

organizations.

Finally, global corporate integration will involve significant changes in organizational culture, new forms of partnership among multiple enterprises and segments of society, and many new standards for managing a much more complex marketplace. These changes -- which are as momentous as the shift from the vertical integration and mass production of a century ago to today's integrated supply chains -- will take time. The globally integrated enterprise is an inherently better and more profitable way to organize business activities, but capital markets are awash with money invested for short-term returns. Moving toward the globally integrated enterprise will require long-term vision and continuous investment from business leaders -- as well as a focus not on prospective returns but on real earnings that generate capital for growth and innovation. It will also call for patience and understanding from stockholders.

## GLOBAL COLLABORATION

The spread of shared technologies and business standards is creating an unprecedented opportunity for further global integration, not just within each sector of society, but across them all. As the boundaries between the traditional "estates" become more porous, new businesses can contribute new forms of commerce, learning, and good governance. Government leaders will find in business willing partners to reform health care and education, secure the world's trade lanes and electronic commerce, train and enable the displaced and dispossessed, grapple with environmental problems and infectious diseases, and tackle the myriad other challenges that globalization raises.

Among the most urgent of the challenges facing emergent global institutions in all spheres of society is global security and order. Without them, nothing is possible. Companies will only invest in global systems of production if they believe that the geopolitical relationships that enable their investments will be stable and lasting. Without such confidence, investment will collapse.

One promising trend toward greater global stability is the growth of horizontal, intergovernmental networks among the world's regulators and legislators. Built on shared professional standards and relationships among cross-national communities of experts, these networks are interesting analogues to new forms of organizing work in business, such as globally integrated supply chains, commercial "ecosystems," and open-source communities.

The alternative to global integration is not appealing. Left unaddressed, discontent with globalization will only grow. People might ultimately choose to elect governments that impose strict regulations on trade or labor, perhaps of a highly protectionist sort. Worse, they might gravitate toward more extreme forms of nationalism, xenophobia, and antimodernism. The shift from MNCs to globally integrated enterprises provides an opportunity to advance both business growth and societal progress. But it raises issues that are too big and too interconnected for business alone or government alone to solve.

The globally integrated enterprise is a promising new actor on the world stage. Now leaders in business, government, education, and all of civil society must learn about its emerging dynamics and help it mature in ways that will contribute to social, economic, and human progress around the planet.

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