

How U.S. Multinational Companies **Strengthen** the U.S. Economy



Matthew J. Slaughter

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Matthew J. Slaughter

Executive Summary

The contribution to the American economy of U.S. multinational companies is increasingly being called into question.* Critics contend that these companies have “abandoned” the United States, and that policy needs to rebalance their domestic and international operations.

This report demonstrates that U.S. multinational companies are, first and foremost, American companies. They perform large shares of America’s productivity-enhancing activities—capital investment, research and development, and trade—that lead to jobs and high compensation.

The central role of U.S. multinational companies in underpinning U.S. economic growth and jobs creation is even more important today as the United States seeks to address the challenges presented by the current economic environment. Strong U.S. multinational companies that are able to compete effectively in foreign markets will be better positioned to help lead America out of recession. The ability of U.S. multinational companies to stem job losses in the United States and eventually return to hiring more American workers depends on the health, vitality, and competitiveness of their worldwide operations.

- *The worldwide operations of U.S. multinationals are highly concentrated in America in their U.S. parents, not abroad in their foreign affiliates.* The idea that U.S. multinationals have somehow “abandoned” the United States is not supported by the facts. They maintain a large presence in America, both relative to the overall U.S. economy and relative to the size of their foreign affiliates.
- *International engagement drives the overall strength of U.S. multinational companies.* Although the United States is still the world’s largest single-country market, in the past generation it has been a slow-growth market compared with much of the world. Even with today’s worldwide recession, this means that the overall strength of U.S. multinationals is increasingly tied to their success in both America and abroad. It also means that viewing the domestic and foreign operations of U.S. multinationals as unrelated is increasingly incorrect. U.S. multinationals must make strategic investment and employment decisions from a truly global perspective, with links across all locations and with dynamic variation in successful strategies both across companies at a point in time and within companies over time.
- *Foreign-affiliate activity tends to complement, not substitute for, key parent activities in the United States such as employment, worker compensation, and capital investment.* Being globally engaged requires U.S. multinationals to establish operations abroad and also to expand and integrate these foreign activities with their U.S. parents. The idea that global expansion tends to “hollow out” U.S. operations is incorrect. Rather, the scale and scope of U.S. parent activities increasingly depends on successful engagement abroad. Expansion by U.S. parents and their affiliates contributes to the productivity and average standard of living of all Americans.

* A U.S. multinational company is any U.S. enterprise, called the “parent,” that holds at least a 10% direct ownership stake in at least one foreign business enterprise, called the “affiliate.” In 2006 there were 2,278 U.S. multinational parents that controlled 23,853 majority-owned foreign affiliates. For additional details, see Chapter One.

Key Facts[†]

U.S. parent companies perform large shares of America's productivity-enhancing activities that lead to high average compensation for American workers.

- **Output:** Parent companies accounted for 24.9% of all private-sector output (measured in terms of gross domestic product)—over \$2.5 trillion.
- **Capital Investment:** Parent companies purchased \$442.6 billion in new property, plant, and equipment—31.3% of all private-sector capital investment.
- **Exports:** Parent companies exported \$495.1 billion of goods to the rest of the world. This constituted nearly half—48.0%—of the U.S. total.
- **Research and Development:** To discover new products and processes, parent companies performed \$187.8 billion of research and development. This was 75.8% of the total R&D performed by all U.S. companies.

All these productivity-enhancing activities contribute to larger average paychecks for the millions of employees of U.S. multinationals.

- Parent companies employed over 21.7 million U.S. workers. This was 19.1% of total private-sector payroll employment.
- Total compensation at U.S. parent companies was over \$1.36 trillion—a per-worker average of \$62,784. This average was \$12,163—fully 24.0%—above the average for the rest of the private sector of \$50,621.

U.S. parents purchased a total of \$5.76 trillion in intermediate inputs. Of this total, 89.1%—\$5.14 trillion—was bought from other companies in the United States.

The worldwide operations of U.S. multinational companies are highly concentrated in America in their U.S. parents, not abroad in their foreign affiliates.

- **Employment:** Parent companies account for 69.6% of worldwide employment of U.S. multinationals—21.7 million parent workers versus 9.5 million at affiliates. This translates into a ratio of almost 2.3 U.S. employees for every one affiliate employee.
- **Output:** Parent companies account for 71.6% of worldwide output (in terms of value added) of U.S. multinationals—over \$2.5 trillion versus about \$1.0 trillion.
- **Capital Investment:** Parent companies undertake 74.3% of worldwide capital investment by U.S. multinationals—\$442.6 billion versus just \$153.2 billion. For every \$1 in affiliate capital expenditures, parents invested \$2.89 worth in the United States.
- **Research and Development:** Parent companies perform 86.8% of worldwide R&D by U.S. multinationals: \$187.8 billion versus just \$28.5 billion, or \$6.59 in parent knowledge discovery for every \$1 by affiliates.

Foreign affiliates are located primarily in high-income countries that in many ways have economic structures similar to the United States, not in low-income countries.

- Affiliates in high-income countries accounted for 79% of total affiliate output—and a similar 90% of output by all affiliates newly established or acquired.

[†] All statistics reported on this page are for 2006, the most recent year of data available on U.S. multinational companies from the Bureau of Economic Analysis of the U.S. Department of Commerce.

How U.S. Multinational Companies Strengthen the U.S. Economy

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Chapter One

Overview

A. The Central Message of This Report

The central message of this report is that U.S. multinational companies strengthen the American economy through a combination of their domestic activity and their international engagement.

Strong U.S. multinational companies that are able to compete effectively in foreign markets will be better positioned to help lead America out of recession. The ability of U.S. multinational companies to stem job losses in the United States and eventually return to hiring more American workers depends on the health, vitality, and competitiveness of their worldwide operations.

The strength of the American economy is driven by the productivity and competitiveness of the companies operating in America. Innovative and efficient companies in the United States that profitably create goods and services, in full partnership with their workers and their broader communities, are the foundation of a globally competitive U.S. economy that can deliver productivity growth and rising standards of living.

U.S. multinational companies enhance the American economy by their capital investment, their research and development, and by supporting good-paying American jobs. This report develops its central message in three parts.

- *U.S. multinational companies are, first and foremost, American companies.* As a group, U.S. multinationals perform large shares of America's productivity-enhancing activities that lead to high average compensation for American workers. And the worldwide operations of U.S. multinationals are highly concentrated in America in their U.S. parents, not abroad in their foreign affiliates. The idea that U.S. multinationals have somehow "abandoned" the United States is not supported by the facts. They maintain a large presence in America, both relative to the overall U.S. economy and relative to the size of their foreign affiliates.
- *International engagement drives the overall strength of U.S. multinational companies.* Although the United States is still the world's largest single-country market, in the past generation it has been a slow-growth market compared with much of the world. Even with today's worldwide recession, this means that the overall strength of U.S. multinationals is increasingly tied to their success in both America and abroad. It also means that viewing the domestic and foreign operations of U.S. multinationals as unrelated is increasingly incorrect. U.S. multinationals must make strategic investment and employment decisions from a truly global perspective, with links across all locations and with dynamic variation in successful strategies both across companies at a point in time and within companies over time.
- *Foreign-affiliate activity tends to complement, not substitute for, key parent activities in the United States such as employment, worker compensation, and capital investment.* Being globally engaged requires U.S. multinationals to establish operations abroad and also to expand and integrate these foreign activities with their U.S. parents. The idea that global expansion tends to "hollow out" U.S. operations is incorrect. Rather, the scale and scope of U.S. parent activities increasingly depends on successful engagement abroad. Expansion by U.S. parents and their affiliates contributes to the productivity and average standard of living of all Americans.

B. Setting the Stage: Is America Losing Its Economic Strength?

Historically, rising U.S. standards of living have been driven by companies becoming more productive—i.e., raising their output per worker by creating new products and processes. Nobel laureate in economics Paul Krugman describes the importance of productivity thus:

Productivity isn't everything, but in the long run it is almost everything. A country's ability to improve its standard of living over time depends almost entirely on its ability to raise its output per worker... Compared with the problem of slow productivity growth, all our other long-term economic concerns ... are minor issues. Or more accurately, they matter only to the extent that they have an impact on our productivity growth.[‡]

What forces drive companies to be more productive? There is a wealth of evidence from many industries and countries that a central driving force is competition. Companies exposed to high competitive intensity—in not just their output markets but the markets for labor and capital as well—tend to be more productive. It is also well established that the forces of *international* competition—via trade and investment—spur productivity growth the most. This is because globally engaged companies themselves tend to create and use the world's most efficient and innovative methods and organizations. Companies that export or, even more so, are multinational tend to have higher productivity than their purely domestic counterparts do.[§]

The economic success of the United States over the 20th century was founded on extended periods of strong productivity growth. For example, in the post World War II generation of 1948 to 1973, annual growth of productivity in the non-farm business sector averaged 2.8%. It slowed dramatically then, averaging just half that rate—1.4%—for the generation from 1973 to 1995. This generation of “lost” productivity saw many more economic and broader political-economy challenges. Productivity growth then sped up again, averaging 2.5% from 1996 through 2008.

Throughout much of this time, U.S. multinationals have been among America's productivity leaders. Indeed, one recent study calculated that since 1977, labor productivity in their U.S. parent operations has grown at at least twice the rate of the overall economy. From 1977 to 1995, parent productivity growth averaged 2.8% per year vs. just 1.4% per year in the overall non-farm business sector. From 1995 to 2000, these respective average growth rates were 6.0% and 2.8%. Indeed, the post-1995 parent productivity performance was so strong that it accounted for nearly half of the economy-wide acceleration.** As this report will document, for decades parent operations have undertaken vast investments in the United States—in human capital, in physical capital, and in research and development—that make their workers and the overall U.S. economy more productive and competitive.

So how globally competitive is the United States today? On the one hand, some would answer, “strong.” In its most recent 2007-2008 analysis, the World Economic Forum ranked the United States #1 in overall global competitiveness. In its 2007 report, *Competitiveness Index: Where America Stands*, the Council on Competitiveness concluded that America's business productivity remains a key strength.

[‡] Krugman (1990), p. 9.

[§] Two useful surveys of the productivity-international competition nexus appear in Baily and Solow (2001) and in Lewis (2004).

** Corrado, Lengermann, and Slifman (2009).

Recently, however, America's economic strength is being called into greater question. This partly reflects the much faster growth of countries such as China, India, and central and eastern Europe. For the generation of 1990 through 2008, growth in U.S. gross domestic product averaged 2.7%—in contrast to 1990-2007 averages of 3.4% for the overall world, 4.6% for emerging and developing countries as a whole, 6.3% in India, and a remarkable 9.9% in China.^{††} Forecasts now abound projecting when fast-growing economies will be larger than the U.S.

But it also reflects warning signs at home.

- Today the United States is in the middle of the worst financial crisis since the 1930s, together with a lengthy and in many ways deepening recession.
- After accelerating from 1995 into early this decade, U.S. productivity growth in the non-farm business sector has decelerated since 2002—to annual rates in 2005-2007 of just 1.7, 1.0, and 1.4 percent, respectively. There is now greater uncertainty about the underlying structural rate of U.S. productivity growth, with commensurate greater concern of slipping back to slow rate of the pre-1995 generation.
- Alarms are also being sounded about the waning competitiveness of key sectors, with ongoing large U.S. trade deficits often presented as evidence of this slide.

Many of these rising concerns about America's competitiveness are especially focused on the competitiveness of U.S.-based multinational companies. As explained above, the performance of U.S. multinationals is especially important for the U.S. economy overall because these companies (along with the U.S. affiliates of foreign multinationals) have long been among America's most productive. And as will be explained below, for the overall success of these companies, it has long been essential to engage in the global economy—both by serving fast-growing markets abroad and by drawing on productive strengths there as well.

Despite all this, *the contribution to the American economy of the global success of U.S. multinationals is increasingly being called into question.* In recent years, an increasing number of voices have been arguing that these companies succeed only by “exporting jobs” abroad, hollowing out their U.S. operations to the detriment of the overall U.S. economy.

At the same time that their contributions to the U.S. economy are increasingly questioned here at home, U.S. multinationals are increasingly challenged by companies from around the world—not just from other high-income countries. The most recent *Fortune 500* list of the world's largest companies lists 62 from emerging economies—double from just 31 in 2003. Outward cross-border M&A transactions by these companies are exploding; for example, foreign direct investments out of China and India now exceed \$20 billion per year, up more than tenfold from just a few years ago.

The purpose of this report is to document how U.S. multinational companies enhance the American economy by supporting American capital investment, research and development, employment, and wages.

This thesis will be explained in this report using a blend of three types of evidence. One is official government statistics collected by the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce. By design and legal mandate, BEA statistics track all multinational companies headquartered in the United States. No other U.S. government or private-sector data matches the BEA's breadth, depth, and rigor. A second type of evidence will be research findings from peer-reviewed academic studies of the performance of multinational companies. And the third is case studies, to amplify the comprehensive statistics and research findings with concrete examples.

^{††} These average rates of growth of gross domestic product were calculated from annual rates of GDP growth reported in International Monetary Fund (2008), Tables A1-A4.

One critical dimension of the breadth of this study will be its industry coverage. Many of today's policy discussions address globalization of goods only. But today's reality is that while manufacturing of goods remains a critical part of the U.S. economy—31% of all U.S. output in 2007—services now constitute the majority of the U.S. economy.^{††} U.S. economic strength depends ever more critically on the global competitive success of *all* multinationals—not just in manufacturing, as has long been the case, but their counterparts in services as well.

What Is a U.S. Multinational Company? The Bureau of Economic Analysis Data

Before proceeding, it is important to understand the structure and scope of the BEA data used in this report. Each year since 1977, the BEA has tracked U.S.-headquartered multinationals through legally mandated surveys (with penalties for non-compliance) that collect and publicly disseminate operational and financial data. By design, BEA statistics track all multinational companies headquartered in the United States. There is no other U.S. government or private-sector data source on U.S. multinationals that matches the BEA's breadth, depth, or rigor.

In accord with the statistical practice of many countries, the BEA defines a U.S. multinational company as any U.S. enterprise that holds at least a 10% direct ownership stake in at least one foreign business enterprise.

The U.S. enterprise is the U.S. "parent." It is a person, resident in the United States, that owns or controls 10% or more of the voting securities, or the equivalent, in a foreign business enterprise. Person is broadly defined to include any individual, branch, partnership, associated group, association, estate, trust, corporation, or other organization (e.g., a government entity).

The foreign business enterprise is the foreign "affiliate," over which the U.S. parent is presumed to hold and exert some degree of managerial control. The 10% stake is defined broadly: it is the ownership or control, directly or indirectly, by one U.S. person of 10% or more of the voting securities of an incorporated foreign business enterprise or the equivalent interest in an unincorporated business enterprise.

All data in this report excludes banks. The BEA collects and disseminates very little information about affiliates whose main line of business is banking. This is because banking subsidiaries already disclose substantial information to other government agencies, such as the Federal Reserve System. Also, data in this report cover majority-owned foreign affiliates, not all foreign affiliates—i.e., those affiliates owned 50% or more by the U.S. parent(s). This is because the BEA collects and disseminates far less information about minority-owned affiliates, over which U.S. parents hold a more ambiguous degree of control. That said, majority-owned affiliates constitute the large majority of total affiliate activity: in 2006, 86.9% of total employment and 87.2% of total sales. And this majority-owned share has recently been rising: e.g., the employment share in 1999 was just 84%.

All publicly available BEA data on U.S. multinationals are aggregated to avoid identifying individual companies: by primary industry of operation; by affiliate country; or by various combinations of these criteria. Finally, note that at the time of writing 2006 is the most recent year for which BEA data are publicly available (where data items are reported for either year end or year average, where year is fiscal year ending in that calendar year). In 2006 there were 2,278 U.S. multinational parents that controlled 23,853 majority-owned foreign affiliates.

BEA data used in this report can be accessed both in print and on-line. On-line data (with documentation, as well as the actual survey forms), and also publication information, are all available at www.bea.gov.

^{††} BEA reports in Table 1.2.5 of its National Income and Product Accounts, "Gross Domestic Product by Major Type of Product," that 2007 U.S. output of goods was \$4.27 trillion, out of total 2007 U.S. output of \$13.81 trillion. This table can be found at www.bea.gov.

Chapter Two

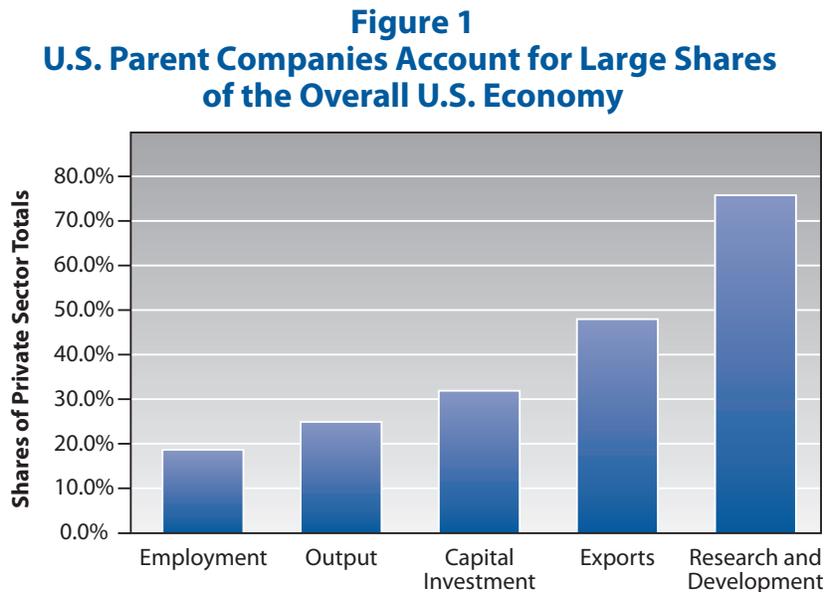
U.S. Multinational Companies are American Companies

It is increasingly asserted that U.S. multinationals have abandoned the United States—i.e., that they have little activity left in their American parents, having “hollowed out” parent employment, capital investment, and other key activities for relocation abroad. The drumbeat of recent layoff announcements might seem to bear out this view.

So is it true that the operations of U.S. parents are no longer substantial? No. U.S. multinational companies are, first and foremost, American companies. As a group, U.S. multinationals perform large shares of America’s productivity-enhancing activities—capital investment, research and development, and international trade—that lead to jobs and high average compensation for American workers. And the worldwide operations of U.S. multinationals are highly concentrated in America in their U.S. parents, not abroad in their foreign affiliates. The idea that U.S. multinationals have somehow “abandoned” the United States is incorrect. They maintain a large presence in America, both relative to the overall U.S. economy and relative to the size of their foreign affiliates.

A. U.S. Parent Activities Are Large in the Overall U.S. Economy

U.S. parents strengthen America through their own extensive operations in the United States. Beyond employing millions of Americans, parent companies perform large amounts of the crucial activities that make their workers and the overall economy more competitive and productive. For 2006, the most recent year for which comprehensive government data on the operations of U.S. multinationals are available, Figure 1 reports the share of U.S. private-sector economic activities accounted for by U.S. parents.^{§§}



The key message of Figure 1 is that U.S. parent companies perform large shares of America’s productivity-enhancing activities that lead to high average compensation for American workers.

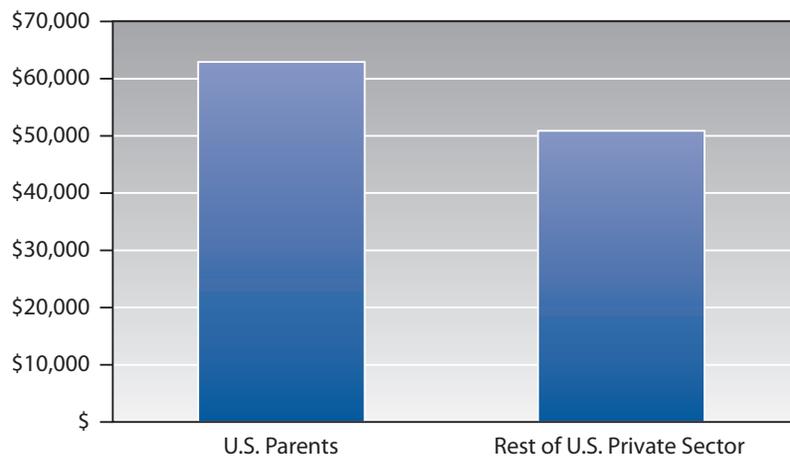
^{§§} In the BEA surveys, parent (and affiliate) employment is measured as the number of full-time and part-time employees on payroll at yearend. If at that time employment of a parent (or an affiliate) was unusually high or low because of temporary factors (e.g., a strike), survey instructions then request reporting either of employment during “normal operations” or of an annual average. Capital investment consists of property, plant, and equipment. Please see the Data Appendix for details on how U.S. parent activity was matched with that of the overall private sector for each item in Figure 1.

- *Employment:* Parent companies employed over 21.7 million workers in the United States. This was 19.1% of total U.S. private-sector payroll employment.
- *Output:* Parent companies accounted for 24.9% of all U.S. private-sector output (measured in terms of gross domestic product)—over \$2.5 trillion.
- *Capital Investment:* Parent companies purchased \$442.6 billion in new property, plant, and equipment—31.3% of all U.S. private-sector capital investment.
- *Exports:* Parent companies exported \$495.1 billion of goods to the rest of the world. This constituted nearly half—48.0%—of the U.S. total.
- *Research and Development:* To discover new products and processes, parent companies performed \$187.8 billion of research and development. This was 75.8% of the total R&D performed by all U.S. companies.

Moreover, the size of U.S. parent operations in the overall U.S. economy has been quite stable for decades. For example, a generation ago in 1988, U.S. parents' capital investment and R&D spending were 31.4% and 72.5%, respectively, of the economy-wide private-sector totals—very close to the 2006 shares cited above. This stability over time contradicts the idea that U.S. multinationals have been “abandoning” the United States in recent years, and instead demonstrates their ongoing contributions to the overall U.S. economy.

All these productivity-enhancing activities contribute to larger average paychecks for employees of U.S. multinationals. Figure 2 shows this, which reports 2006 average annual compensation for workers at U.S. parents and their counterparts in the rest of the U.S. private sector.

Figure 2
U.S. Parent Companies Pay Higher Average Compensation Than the Rest of the U.S. Private Sector



Total 2006 compensation at U.S. parent companies was over \$1.36 trillion—a per-worker average of \$62,784. This average was \$12,163—fully 24.0%—above the 2006 average for the rest of the private sector of \$50,621. Much of this compensation differential stems from the nexus of competition advantages achieved by these multinational companies. ***

***Employee compensation as measured in the BEA surveys of multinationals includes wages, salaries, and benefits—mandated, contracted, and voluntary. See Data Appendix for details on the calculations in Figure 2. Academic studies for the United States and many other countries have repeatedly found that multinational companies pay higher average compensation than do non-multinationals, even when controlling for observable company differences such as size and capital intensity. For a detailed discussion of the facts and interpretation of these performance differences, see, e.g., Lewis and Richardson (2001) and Council of Economic Advisers (2007).

U.S. parent companies also contribute to the U.S. economy through their interactions with other domestic U.S. firms and, more broadly, the schools and other institutions that foster skills, talents, and overall productivity. The performance of domestic competitors is enhanced by exposure to new techniques and practices of parent companies. Parent companies can also strengthen domestic suppliers and customers—e.g., by sharing information with and placing standards on suppliers. The scope for these links from parents to other domestic companies is very large.

- *In 2006, U.S. parents purchased a total of \$5.76 trillion in intermediate inputs. Of this total, 89.1%—\$5.14 trillion—was bought from other companies in the United States.*^{†††}

Contrary to the common assumption that the global engagement of U.S. multinationals has eliminated their links to domestic suppliers, over 89 cents out of every dollar spent by U.S. parents on intermediate inputs is paid to other companies in the United States, not abroad. And this heavy reliance on domestic suppliers has been virtually unchanged for decades: in 1977, U.S. parents purchased 91.3% of their inputs from other companies in the United States.

The key message here is that although small in number at just 2,278 companies in 2006, U.S. multinationals play a substantial role in the U.S. economy. They employ millions, invest billions in R&D and capital, and buy from vendors and ultimately produce trillions of dollars in goods and services. These activities constitute sizable shares of the overall private sector today, as they have for decades, and they are a key pillar of strength for the overall U.S. economy.

^{†††} Total purchases of intermediate inputs by parent companies are calculated as total sales less value-added output. Imported intermediate inputs are measured as total parent imports of goods. This implicitly assumes that all imported goods by parent companies are intermediates rather than final goods. Because some of these imports are final goods and services rather than intermediates, the calculated share of inputs bought from domestic suppliers that is reported above lies below the true domestic-supplier share.

Case Study: Microsoft Corporation

The contribution of U.S. multinationals to the overall U.S. economy often extends beyond their main business practices of hiring and paying workers, buying inputs, and investing in capital and R&D. Many of these multinationals interact with schools, governments, and other institutions in ways that foster the human capital and institutions that help underpin U.S. productivity.

Since its inception in 1975, Microsoft Corporation has believed in the power of technology to enable individuals and communities to realize their full potential. Using technology as a catalyst, Microsoft works to create worldwide networks through which key education leaders and innovators share experiences, ideas, and approaches that can be applied around the world. Microsoft and its partners also share expertise with local governments, industries and educators, providing the tools and opportunities required to stimulate local software economies and equip citizens for success in the 21st century.

In 2003, Microsoft launched Partners in Learning, a global initiative designed to increase technology access for schools, foster new approaches to teaching and learning, and provide education leaders with the proper tools to create and influence change. To date, Partners in Learning programs have reached more than 80,000 teachers and 3 million students in the United States. Building on these efforts, in January 2008 Microsoft renewed its commitment to Partners in Learning, extending the company's global investment to nearly \$500 million over 10 years.

Other examples of initiatives include DigiGirlz, a set of programs that provide free opportunities for high-school girls to learn about careers in technology, talk with Microsoft employees about their life experiences, and enjoy hands-on computer and technology workshops.

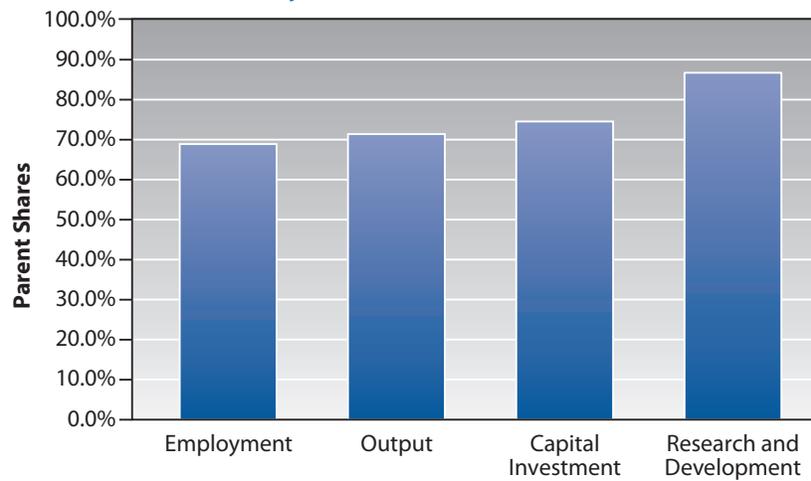
Research is another area to highlight. Microsoft Research balances an open academic model with an effective process for transferring its research to product development teams. Microsoft Research has invested more than \$50 million over the past four years in support of academic research in the United States, a sum that has established collaborative institutes at schools including Carnegie Mellon University, Georgia Tech, the Massachusetts Institute of Technology, and University of Maryland.

B. By Several Measures, U.S. Parent Activities Are Large Relative to Their Foreign Affiliates

What about the magnitude of U.S. parent activities relative to the scale of their foreign affiliates? Do affiliates loom much larger than parents, such that U.S. multinationals have a far larger footprint outside the United States than inside?

Figure 3 answers this question by showing the share of U.S. multinationals' 2006 worldwide employment, output, capital investment, and R&D that was accounted for by their U.S. parent operations.

Figure 3
U.S. Parents Account for the Large Majority of Worldwide Activity of U.S. Multinationals



The key message of Figure 3 is that the worldwide operations of U.S. multinational companies are highly concentrated in America in their U.S. parents, not abroad in their foreign affiliates.

- **Employment:** U.S. parents account for 69.6% of worldwide employment of U.S. multinationals—21.7 million parent workers versus 9.5 million at affiliates. This translates into a ratio of almost 2.3 U.S. employees for every one affiliate employee.
- **Output:** U.S. parents account for 71.6% of worldwide output (in terms of value added) of U.S. multinationals—over \$2.5 trillion versus about \$1.0 trillion.
- **Capital Investment:** U.S. parents undertake 74.3% of worldwide capital investment by U.S. multinationals—\$442.6 billion versus just \$153.2 billion. For every \$1 in affiliate capital expenditures, parents invested \$2.89 worth in the United States.
- **Research and Development:** U.S. parents perform 86.8% of worldwide R&D by U.S. multinationals: \$187.8 billion versus just \$28.5 billion, or \$6.59 in parent knowledge discovery for every \$1 by affiliates.

The data clearly show that the United States, not abroad, is where U.S. multinationals perform the large majority of their operations. Indeed, this U.S. concentration is especially pronounced for capital spending and R&D, which reflects America's underlying endowments in skilled workers and institutions such as intellectual property rights that together support investments in human and physical capital.

Have there been changes over time in this much larger scale of U.S. parents relative to foreign affiliates? Some, but not much. A generation ago, the share of U.S. parents in the worldwide activity of U.S. multinationals was slightly higher than that cited above. In 1988, U.S. parents accounted for 78.8% of U.S. multinationals' worldwide employment and 79.2% of their worldwide capital investment. So over the past generation, the foreign-affiliate share of employment has risen by an annual average about 0.5 percentage points, with a similar per-year increase in investment share of about 0.3 percentage points.

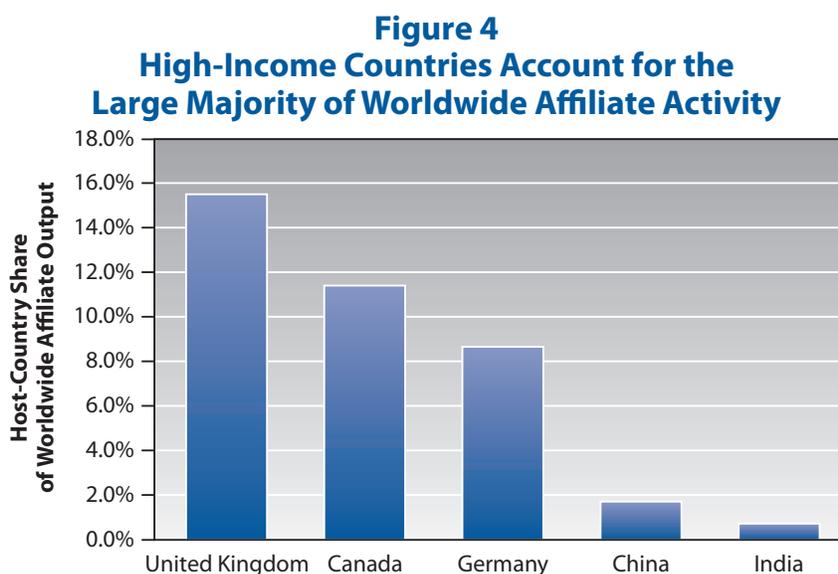
Why has the worldwide share of multinationals' activity gradually shifted from U.S. parents to foreign affiliates? As will be detailed in Chapter 4, this shift has been driven by continued expansion of parents that was outpaced by even faster expansion of affiliates, not by parent contraction. For example, in 1988 U.S. parents employed just 17.7 million workers and undertook \$177.2 billion in capital investment—just 81.6% and 40.0% of the respective 2006 U.S. parent totals underlying Figure 1. The long-term trend has been for parents to continue growing in the United States (which accounts for their steady shares of the overall U.S. private sector documented above), but for affiliates to grow even faster.

This faster affiliate expansion, in turn, has largely reflected faster growth abroad in overall output and incomes and thus in customers to be served. Recall the growth statistics from introduction: from 1990 through 2008, growth in U.S. gross domestic product averaged 2.7%—in contrast to 1990-2007 averages of 3.4% for the overall world, 4.6% for emerging and developing countries as a whole, 6.3% in India, and a remarkable 9.9% in China.⁺⁺⁺ Forecasts now abound projecting when the world's fast-growing economies will be larger than the United States.

Thus, the correct reading of the data is expanding business activity by both parents and affiliates as well. The notion of a fixed amount of business activity being reallocated from parents to affiliates is not borne out by the facts.

C. Foreign Affiliates are Located Mostly in High-Income Countries, Not Low-Income Countries

Foreign affiliates are located primarily in high-income countries that in many ways have economic structures similar to the United States, not in low-income countries. For example, in 2006 affiliates in high-income countries accounted for 79% of total affiliate output—and a similar 90% of output by all affiliates newly established or acquired in that year.^{§§§} Figure 4 documents this fact by showing the share of selected countries in total 2006 affiliate output (value added) of \$995.6 billion.



⁺⁺⁺ These average rates of growth of gross domestic product were calculated from annual rates of GDP growth reported in International Monetary Fund (2008), Tables A1-A4.

^{§§§} Mataloni (2008); the country income classifications used there and followed in this sub-section are constructed by the World Bank.

The three countries that in 2006 accounted for the largest shares of affiliate output were the United Kingdom (15.5%), Canada (11.5%), and Germany (8.6%). China and India, despite their very fast overall GDP growth of the past generation, respectively accounted for just 1.8% and 0.5% of total affiliate output. This concentration of affiliate activity in other high-income countries is consistent with U.S. multinationals expanding abroad mainly to gain global competitiveness by serving foreign customers, a theme Chapter 3 explores in greater detail.

It is true that affiliate activity is spreading from high-income to low-income countries. For example, the latter's share of all-affiliate output rose by six percentage points from 1999 to 2006. But like with the gradual shift from U.S. parents to overall foreign affiliates discussed above, here, too, the shift in activity from high-income-country affiliates to low-income-country affiliates has been driven mainly by faster economic growth in the latter.

The bottom line of this chapter is that the facts demonstrate that U.S. multinationals make substantial contributions to the overall U.S. economy. The magnitude of U.S. parent activities is very large—both relative to the overall U.S. economy and relative to the scale of their foreign affiliates—in ways that strengthen America's productivity and average standard of living.

It is often asserted that U.S. multinationals are somehow “abandoning” the U.S. economy. Such claims simply do not square with the facts.

Chapter 3 next explores how the overall success of U.S. multinational companies depends increasingly on their global competitiveness.

Chapter Three

The Success of U.S. Multinationals Depends on Their Global Engagement

Chapter 2 documented the large role that U.S. multinationals play in the U.S. economy. *This chapter addresses the critical question of why these companies expand abroad at all. The short answer is to enhance their global competitiveness and, thereby, to strengthen their business in the United States.*

The overall success of U.S. multinational companies depends increasingly on their global competitiveness. Before the onset of recession in many countries in 2008, the world had experienced some of the strongest, most widely shared growth in history. This means that the overall success of U.S. multinationals is increasingly tied to their success in both America and abroad.

It is critical to understand that strategic investment and employment decisions by U.S. multinationals are undertaken from a global perspective. These decisions link across all locations, with dynamic variation in successful strategies both across companies at a point in time and within companies over time.

A. Global Engagement to Access Foreign Customers

One of the main drivers of the global engagement of U.S. multinationals is accessing foreign customers. New customers abroad can expand a company's revenues and profitability much more than can the U.S. market alone.

The numbers here are striking. Today the United States remains the world's largest single-country market, with 2008 GDP of \$14.3 trillion. Serving this immense market remains a powerful imperative for U.S. multinationals—as the statistics of the previous chapter underscored. Despite the still-large size of the U.S. economy, in the past generation the United States has been a slow-growth market compared with much of the world.

From 1990 through 2008, growth in U.S. gross domestic product averaged 2.7%. Although respectable relative to earlier U.S. periods, this was slow compared to what much of the world achieved during this time: 1990-2007 averages of 3.4% for the overall world, 4.6% for emerging and developing countries as a whole, 6.3% in India, and a remarkable 9.9% in China.

These growth-rate differentials carry significant implications for the evolving size of national markets and thus prospective customers. At an annual rate of growth of 2.8%, the U.S. market doubles in size every 25 years. The comparable doubling periods for India and China are just 11.4 and 7.3 years, respectively. And despite the recession in many parts of the world today, these growth-rate differentials are widely forecast to persist into the future. If past becomes prologue, then in the time it takes the U.S. market to double from its current size the Chinese market will expand more than tenfold. *The bottom line here is that to achieve strong revenue growth, U.S. multinationals must expand their access to foreign customers.*

How exactly do U.S. companies access customers abroad? Exporting is often the first (and often only) mode that comes to mind. But is exporting the full story? Not for multinational companies, which also access foreign customers via host-country affiliate sales. Indeed, accessing foreign customers via affiliate sales rather than exporting is a business imperative for the many U.S. multinationals.

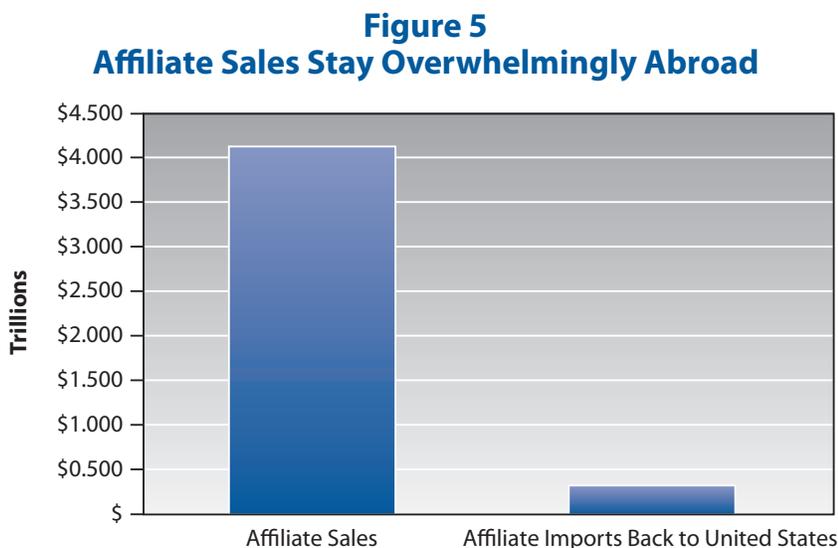
For companies whose main line of business is producing goods, accessing foreign customers via affiliate sales rather than exporting often makes good sense for many reasons. One is avoiding the costs of political or natural barriers to exporting, such as host-country import tariffs and quotas or prohibitive transportation costs (for high value and/or high-density goods). Another is after-sales maintenance and support. Many goods made by U.S. multinationals are technology- and/or capital-intensive, a reflection of America’s relative abundance in these factors of production. These intricate goods—aircraft engines, elevators, earth movers—often require extensive after-sales maintenance and support services provided via affiliates. Indeed, this is a compelling reason that foreign-affiliate expansion boosts (not reduces) parent exports. And a third is proximity to customers and local markets: on-the-ground presence is often required to understand the needs of key customers and the evolving market dynamics.

Next, consider companies whose main line of business is producing services. Wholesale trade, distribution, retail trade, or financial services: the inherent nature of these and many other services means they cannot be cost-effectively exported—if exported at all. Indeed, many services can be made only when the producing firm is physically co-located with the producer: retail-sales operations need the customer to walk through the proverbial door, financial advice is often best delivered in person with the client, and so forth.

U.S. multinationals in many services lines of business simply must establish on-the-ground foreign affiliates if they want to access foreign customers. And these service-oriented businesses constitute the majority of U.S. multinational activity. In 2006, non-manufacturing parents accounted for 58.3% of total parent value-added output (\$1.46 trillion of \$2.51 trillion); that same year, non-manufacturing affiliates similarly accounted for 54.2% of total affiliate value-added output (\$540.1 billion of \$995.6 billion).

Beyond U.S. multinationals producing goods and services, there are also those involved in resource exploration and extraction—such as petroleum, natural gas, and other commodities—and also agriculture. For these companies, not only are their customers often spread around the globe—but so, too, are the basic materials they need to access and add value to. Expansion abroad for these firms is essential for all parts of their business.

Figure 5 demonstrates how important affiliate sales are for accessing customers abroad. It reports the 2006 values for total sales by foreign affiliates and for imports from these affiliates of goods back into the United States.****



**** The export data in Figure 5 do not include exports of services, because the BEA collects less and less-frequent data on services trade than it does goods and services. This omission does not drive the overall pattern of Figure 5.

Sales by majority-owned affiliates in 2006 were over \$4.1 trillion, of which just \$280.3 billion was imported back into the United States. *The key message of Figure 5 is striking: 93.2% of affiliate sales are into the host-country market or other foreign markets, and only 6.8% of affiliate sales are imported back into the United States.* The overwhelming majority of what affiliates sell abroad stays abroad, rather than being imported back to the United States in a way that might somehow displace U.S. activity.

Another notable fact is that affiliate sales, not parent exports, are the predominant way that U.S. multinationals access foreign markets. Recall from Chapter Two that in 2006, U.S. parents exported \$495.1 billion to foreign markets. That was a lot—but that same year the majority-owned affiliates controlled by these parents realized \$4.1 trillion in total sales. *For every dollar that parents exported abroad in 2006, their foreign affiliates sold \$8.33.*

The optimal blend of parent exports and affiliate sales varies widely both across companies and over time. For example, for U.S. multinationals altogether the relative importance of affiliate sales has been rising over the years. In 1999, for every dollar (of goods) that parents exported abroad their foreign affiliates sold \$6.30. Looking across companies, today some multinationals serve foreign customers almost entirely via parent exports while others do it almost entirely via affiliate sales.

One additional notable feature of U.S. parent exports is how many are sent directly to foreign affiliates: 41.1%—\$203.4 billion—of 2006 parent exports were shipped to foreign affiliates. This high share is consistent with the idea that U.S. multinationals have very integrated operations across borders, such that affiliate sales help boost parent exports and vice versa, and it is at odds with the idea that parents and affiliates operate largely independent of or in opposition to each other.

The bottom line here is that U.S. multinationals access foreign customers as a cornerstone of attaining and maintaining global competitiveness. And they do so not just through exporting from parents, but also through local sales of affiliates—with a rich range of options among which each company continually seeks its own best mix.

Case Study: Procter & Gamble

With operations in 90 countries and sales in more than 150 countries, Procter & Gamble is a globally-integrated enterprise with linked operations and supply chains around the world. To gain and maintain global competitiveness, for P&G it has long been critical to expand abroad. Non-U.S. operations now generate over 60% of P&G's revenue. Developing markets have been especially important here. Today, P&G generates over \$25 billion in sales from developing markets, up from \$8 billion in 2001 and en route to an end-of-decade target of \$30 billion.

P&G has long made its products close to the consumer, due to the structure of the consumer-goods market. But global engagement directly contributes to P&G's U.S. operations. Indeed, one in five P&G U.S. jobs—and two in five Ohio-based P&G jobs—depends directly on its global business. Beyond exports of finished products, U.S.-based P&G people contribute high-value services such as consumer research, product development, engineering, logistics, finance, and marketing.

All this global engagement also supports P&G's U.S. supplier base. Of particular note here are its minority- and women-owned suppliers, from whom P&G purchased over \$1.9 billion in 2007. P&G is a member of the Billion Dollar Roundtable, a forum of 14 corporations that spend more than \$1 billion annually with diverse suppliers.

Global expansion lies at the heart of P&G's success—both abroad and in the United States. In the words of P&G Chairman and CEO A.G. Lafley, "We are focusing on achieving disproportionate growth in fast-growing developing markets. Nearly 40% of P&G's sales growth came from developing markets this past fiscal year, and we expect that contribution to be ever greater in the year ahead.

B. Global Engagement to Best Configure Worldwide Operations

A second important driver of the global engagement of U.S. multinationals is their success at configuring the location and scale of their worldwide operations. Thanks to declining trade and investment barriers, U.S. multinationals can increasingly deploy different firm-wide functions in different countries more efficiently—with linkages across these functions that create opportunities for lower-cost, higher-quality, and faster-response production capabilities.

The United States offers several strengths that are well suited to many operations: e.g., highly educated and motivated workers, deep capital markets, and a culture that supports innovation and risk-taking. In the same way, foreign countries each have their own special areas of expertise. Many high-income countries offer concentrations of R&D talent that, similar to the United States, have grown out of decades of support via universities and other institutions. Many lower-income countries offer motivated and able workers well matched to lower-value labor-intensive tasks.

This rich diversity of production capacities around the world enables U.S. multinationals to locate different operations in different countries. This allows companies to better compete globally, thanks both to lower costs and also to better-diversified risks. What results are more globally integrated companies with many strengths linked across many places.

As with accessing customers, here, too, there is no single strategy that works best for all companies at all times. The optimal global production configuration varies widely both across companies and over time. The production arrangements that make one company globally competitive today can be very different from what works for other firms. Some firms heavily concentrate employment and other activities in the United States, others abroad.

Data for 2005, a year in which there were a total of 2,237 U.S. multinationals, show this variation quite clearly. That year, in 24% of these companies employment at foreign affiliates accounted for less than 10% of total worldwide employment. At the other end of the spectrum, in 3% of these companies employment at foreign affiliates accounted for over 90% of total worldwide employment. And for every company, successful arrangements today are very likely to differ both from what worked well yesterday and also from what will work well tomorrow.

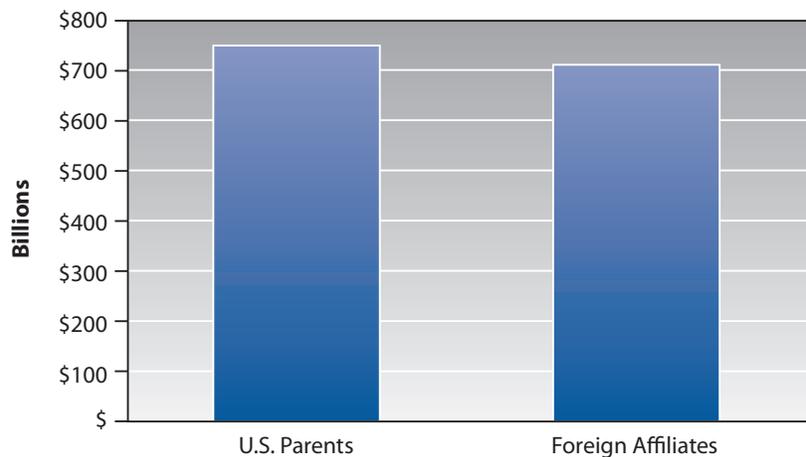
This rich variation can also be seen looking across broad industry groups. Recall from Figure 3 that in 2006, 71.6% of the total global output of U.S. multinationals was accounted for by U.S. parents—with just 28.4% total accounted for by foreign affiliates. This total masks substantial variation in the production strategy of different industries. Multinationals in the broad industry groups of information and finance displayed an even greater U.S. concentration, with 87.6% and 85.9% of their global output, respectively, accounted for by U.S. parents. The very-strong U.S. orientation of these companies likely reflects the underlying U.S. strengths of strong intellectual-property protection and deep capital markets. In contrast, multinationals in the broad industry groups of wholesale trade and mining produced more in their affiliates than in the parents, with U.S.-parent shares of output of just 48.2% and 33.4%, respectively.

C. The Bottom Line of Global Engagement: Profitability Abroad As Well As at Home

The key point of the above discussion is that U.S. multinationals must make strategic investment and employment decisions from a truly global perspective. Moreover, globally competitive business models are not “one size fits all”—neither at a point in time across companies nor even over time within each company itself. Each company has a uniquely rich history that informs its current structure and strategies. As such, each multinational needs the freedom to respond differently to the evolving opportunities and pressures of globalization. Indeed, this dynamic process of discovery—where and how to hire, invest, research, and sell—is critical for U.S. multinationals achieving and sustaining global competitiveness.

Achieving global competitiveness shows up clearly in the bottom line of profits—profits that are earned not just in the United States but also abroad. Figure 6, which reports 2006 net income for both U.S. parents and foreign affiliates, shows clearly the critical role of affiliate profitability in overall global competitiveness.

Figure 6
Net Income of Foreign Affiliates Now Rivals That of U.S. Parents



The key message of Figure 6 is that today, the global competitiveness of U.S. multinationals depends as much on profitability of foreign affiliates as it does profitability of parents. In 2006, the net income of all foreign affiliates was \$705.8 billion. Total U.S. parent net income that year was \$747.0 billion, which means that foreign affiliates accounted for nearly half—48.6%—of the worldwide net income of U.S. multinationals. And consistent with the notion that foreign success comes only with sustained effort, this affiliate net-income share has been rising over time: from just 17% in 1977 and 27% in 1994. Indeed, U.S. multinationals across many industries have recently offset slowing U.S. sales and profits with stronger sales and profit growth outside America—especially in fast-growing countries such as China and India.

This competitive success of foreign affiliates supports the global competitiveness of U.S. multinationals, all of which in turn redounds to operations of these companies everywhere—including in the United States. Indeed, a company that is not globally competitive and profitable over the long term will not be able employ any workers—in the United States or abroad.

Chapter 4 examines in greater detail this complementarity between affiliate and parent success.

Chapter Four

The Global Engagement of U.S. Multinationals Generally Complements Their U.S. Activities

Global engagement of U.S. multinational companies tends to support their operations in America. Foreign-affiliate activity tends to complement, not substitute for, key parent activities in the United States such as worker compensation and capital investment. The idea that global expansion tends to “bollow out” U.S. operations is not supported by the facts. Rather, the scale and scope of U.S. parent activities increasingly depends on successful presence abroad. Enhanced U.S. activities of U.S. multinationals, such as capital investment, contribute to the productivity and average standard of living of all Americans.

A. A Framework for Understanding the Links Among Activities of Parents and Affiliates

Much of the public-policy discussion surrounding U.S. multinationals presumes that expansion and engagement abroad necessarily substitutes for U.S. activity—in particular, for employment and capital investment. Some have argued that as multinational affiliates expand operations abroad, they simultaneously reduce activities in parent operations back in the United States. Is this substitution idea an accurate description of the operation decisions of U.S. multinationals?

The short answer is no. There are three crucial features of company operations that the substitution idea alone misses: *complementarity, scale, and scope*. Consider the effect of each on employment.

- For some given level of firm-wide output, when firms employ many kinds of workers and many non-labor factors of production as well then affiliate and parent labor can often be *complements*, rather than substitutes, in which more hiring abroad means more hiring in the United States as well.
- As discussed in the previous section, affiliates generally expand to access foreign customers and/or to save costs. Both these motives allow multinationals to expand their *scale* of output—both abroad and also in U.S. parents, which can often mean more hiring in the United States as well.
- Affiliate expansion is likely not only to boost firm scale but also to refine the mix of firm activities across parents and affiliates. U.S. parent employment can rise as they expand their *scope* into higher value-added tasks such as R&D, finance, and general management.

The total impact of affiliate expansion on U.S. parent activity is clearly more complex than the overly simplistic story of straight substitution. The net impact depends on the predominance of substitution versus complementarity, on scale effects, and on scope changes.

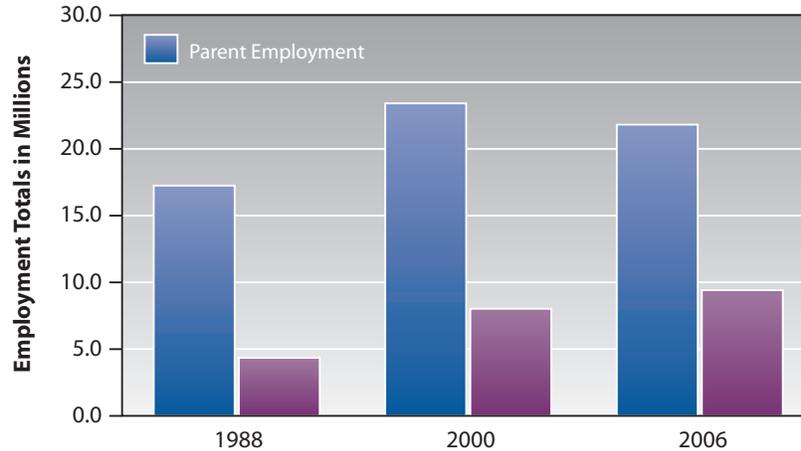
For many businesses there is no inherent substitution possibility between foreign expansion and U.S. operations, but rather an inherent complementarity. This is particularly true for many services: e.g., the distribution activities of wholesale and retail trade must be performed in close proximity to final customers, and affiliate expansion here tends to boost many parent activities like logistical management and technology support. This complementarity often arises in manufacturing as well: e.g., in cross-border networks, in which different stages of production are located in different countries with output levels moving in tandem in all locations.

But the ultimate proof lies in the empirical evidence. Both aggregate and company-level statistics show that foreign-affiliate expansion tends to complement U.S. parent employment, investment, and sales as well.

B. Aggregate Evidence on Dynamic Complementarity Between Parents and Affiliates

Figure 7 reports total employment in U.S. parents and majority-owned foreign affiliates over three years spanning the past generation: 1988, 2000, and 2006.

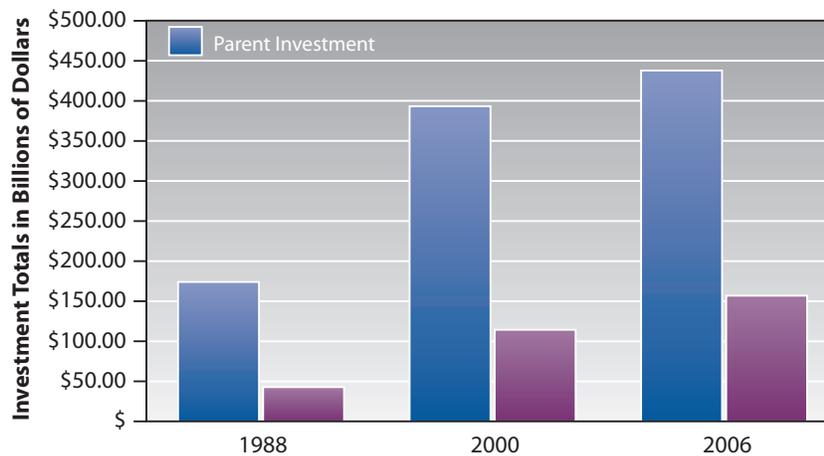
Figure 7
Employment at U.S. Parents and Foreign Affiliates



From 1988 through 2006, affiliate employment rose by 4.7 million workers, from 4.8 million in 1988 to 9.5 million. Over that same period parent employment in the U.S. rose by nearly as much: 4.0 million, from 17.7 million to 21.7 million. *This broad pattern of rising employment globally suggests that employment at U.S. parents and foreign affiliates tend to be complements.*

A similar picture of complementarity is given by capital expenditures in Figure 8.

Figure 8
Capital Investment at U.S. Parents and Foreign Affiliates



From 1988 through 2006, affiliate capital spending rose by \$106.6 billion, from \$46.6 billion to \$153.2 billion. Over that same period parent capital spending in the U.S. rose by two and a half times that amount: \$265.4 billion, from \$177.2 billion to \$442.6 billion. *This broad pattern of rising capital investment globally suggests that investment at U.S. parents and foreign affiliates also tend to complement each other.*

The broad evidence of the above figure is not to say that every single expansion abroad by U.S. multinationals leads to expanded home activity. It is also not to say that every single year, affiliate and parent activity moves in tandem. The employment statistics of Figure 7 show this quite clearly. 1988 to 2000 was a period in which the total affiliate employment increase of 3.3 million (from 4.8 million to 8.1 million) was nearly doubled by U.S. parents as their total payrolls rose by 6.2 million (from 17.7 million to 23.9 million). 2000 to 2006 was a different period, however. As overall affiliate employment rose by 1.3 million, overall parent employment fell by 2.2 million.

What accounts for the fact that from 2000-2006, aggregate U.S. parent employment has fallen while aggregate foreign-affiliate employment has continued to rise? Disaggregating by industry reveals a pattern not of affiliates hollowing out parents, but rather of different business cycles and overall business environments facing U.S. parents and affiliates.

First, 67.5% of the 2000-2006 employment increase in foreign affiliates was accounted for by just three industries—retail trade (+340,900), business administration and support services (+288,600), and food and accommodation services (+265,500)—that are the very sort of businesses discussed earlier in this chapter where reaching foreign customers necessarily happens through affiliates, not exporting, and where foreign expansion tends to complement parent activity, not substitute for it. Indeed, over this time period U.S. employment was rising for parents operating in both retail and food/accommodations, and was down only slightly for parents operating in business administration and support services.

In the U.S. parents, several major industries experienced moderate employment declines post-2000. Manufacturing parents experienced a very large fall: by over 1.6 million workers, or 76.0% of the all-parents decline 2.2 million. But contrary to the common assertion that falling U.S. manufacturing employment is being caused by U.S. parents exporting these jobs to their foreign affiliates, it is notable that during this same period foreign-affiliate employment in manufacturing moved very little: rising by 128,300, or just 2.9%.

Instead of jobs being exported, widespread U.S.-parent employment declines since 2000 were likely driven by two major forces. One was the U.S. recession in 2001, which continued to pressure the U.S. labor market until mid-2003 and which was not experienced by much of the rest of the world. Indeed, overall U.S. manufacturing employment during this time fell by slightly over 3 million. The other major force was the strong productivity performance of U.S. parents discussed in Chapter 1. Productivity gains can reduce short-term employment when sales growth is not strong enough to keep pace with the innovations. Indeed, since 2003 when the economic recovery was well underway, total U.S. parent employment has risen slightly: from a trough of 21.1 million to the 21.7 million reported in Figure 7.

C. Company-Level Evidence on Dynamic Complementarity Between Parents and Affiliates

Some of the most compelling evidence of complementarity between U.S. parents and foreign affiliates comes from analysis of the raw company-level data collected in legally mandated surveys of the BEA. These raw data permit analysis of changes in affiliate and parent activity within each company, rather than aggregating these changes across all companies. As such, the company-level evidence is particularly illuminating.

1. Company-Level Changes in Activity Abroad and in the United States

In recent years, a small number of studies using these company-level data have been conducted. One study, in particular, carefully analyzed all U.S. multinationals in manufacturing from 1982 to 2004.^{††††} It found that a 10% increase in foreign-affiliate capital investment causes an average response of a 2.6% increase in that affiliate's U.S. parent capital investment. It similarly found that a 10% increase in foreign-affiliate employee compensation causes an average response of a 3.7% increase in that affiliate's U.S. parent employee compensation. Growth in affiliates tends to bring growth in parents as well.

^{††††} Desai, Foley, and Hines (2009). As explained in Chapter 1, the BEA company-level data are not publicly available and so research on these data can be performed only by scholars granted special clearance by the BEA.

How do these percentages translate into actual dollars? Strikingly, *each additional dollar in an affiliate's employee compensation generates an average increase in its parent employee compensation of about \$1.11. And each additional dollar in an affiliate's capital investment cause an average increase in its parent's capital investment of about \$0.67. Accordingly, more affiliate activity tends to cause more, not less, parent activity.*

The authors of this study concluded, "These results do not support the popular notion that expansions abroad reduce a [multinational] firm's domestic activity, instead suggesting the opposite." *The perspective of a fixed amount of activity being reallocated between parents and affiliates is not accurate. Rather, the correct perspective is one of parallel changes over time in both affiliates and parents—driven by considerations of complementarity, scale, and scope.*

Case Study: IBM

Global engagement has long been a cornerstone of competitiveness for IBM, with many complementarities between its operations at home and abroad.

Today, although the U.S. remains IBM's single largest market, it earns roughly two-thirds of its revenue abroad, operating in about 170 countries. IBM's Growth Markets unit, which comprises many emerging markets with high growth potential, grew 10 percent last year and made up 18 percent of IBM's revenues. Within this group, revenue increased 18 percent in Brazil, Russia, India and China. A great deal of these foreign sales comes from U.S. exports or from products that are designed or developed here. For example, over half the IT hardware IBM manufactures in the United States is exported—to over 120 countries.

IBM's global presence generates revenue and profits that strengthen its U.S. operations. Indeed, IBM annually brings back to the U.S. billions of dollars from its operations throughout the world. In the last two years, IBM repatriated over \$20 billion, which helped to support domestic operations in many ways.

Jobs are just one such way. The IT-hardware exports mentioned above were directly linked with over 10,000 jobs in production facilities in New York, Vermont, and Minnesota—jobs including everything from hardware design and manufacturing to planning, accounting, and logistics. More generally, firm-wide IBM manages its workforce as a global talent pool, matching the right expertise to clients' needs no matter where the client or the employee may be located. For example, in 2008 over 2,000 US-based IBM services employees supported foreign clients outside of the U.S. Annually, about 20,000 U.S.-based IBM employees travel abroad to work with clients or to support the company's globally integrated business operations. Most of IBM's over-100,000 U.S. jobs (located in all 50 states) are high-skill, high-wage jobs, including thousands of technical positions in software engineering, hardware development, technical services, consulting, research and manufacturing, as well as a broad range of business and support functions. IBM's U.S. employees earned in excess of \$17 billion in 2008 in total compensation and benefits. In the last two years, IBM invested over \$500 million in U.S.-employee training, beyond which IBM also established Personal Learning Accounts so employees can save for training not related to their current job, with the help of a 50% match from IBM.

Beyond jobs and training, IBM's U.S. investments remain substantial. In 2008 over 70% of IBM's \$6.3 billion in R&D spending was in the United States. And from 2002 through 2008 IBM totaled over \$11 billion in U.S. capital expenditures. Recent large investments include \$1.5 billion in its East Fishkill, New York semiconductor facility (bringing total investment there since 2000 to over \$5 billion); \$360 million in Research Triangle Park, North Carolina, to build the most energy-efficient data center in the world; and a \$350 million "green" data center in Boulder, Colorado. In 2009, IBM announced the location of a new service delivery center in Dubuque, Iowa, where the company expects to create 1,300 new jobs, invest more than \$800 million and spend over \$100 million in education over the next 10 years.

2. Company-Level Industry Classification of Affiliates

A second piece of company-level evidence on parent-affiliate complementarity is differences between parent and affiliate industry classifications. Worldwide in 2006 there were 23,853 majority-owned foreign affiliates of 2,278 U.S. multinationals. Each can be classified in an industry one of two different ways: based on the primary activity of the affiliate itself or the primary activity of its U.S. parent. The top row of Figure 9 counts affiliates classified by industry of parent for three broad groups. The bottom row repeats this exercise using industry of affiliate.

Figure 9
Complementarity Between Affiliates and Parents

	Manufacturing	Wholesale Trade	Other Sectors
# of Affiliates when Classified by Industry of Parent	15,683	1,355	6,815
# of Affiliates when Classified by Industry of Affiliate	8,319	4,265	11,269

There is a dramatic difference in the industrial composition of affiliates between these two classifications. When classified by their parents' primary activity, the majority of affiliates is in manufacturing. But when classified by their own primary activity, the majority of affiliates is outside manufacturing. This substantial swing—7,364 affiliates, or 30.9% of the total—is driven by differences in the activities of parents and affiliates drive. Although the majority of parents—and thus their affiliates when classified by parents' industry—operate mainly in manufacturing, the majority of affiliates operate in services. ^{***} This is strong evidence that parents and affiliates perform complementary activities.

One clear example of this complementarity highlighted in Figure 9 is wholesale trade. In 2006 there were just 1,355 affiliates—just 5.7% of the total—owned by parents whose main line of business was wholesaling. But looking at the affiliates themselves, 4,265—17.9% of the total—were wholesalers. This difference accounts for 39.5% of the difference in manufacturing counts, and it indicates that an important dimension of global engagement for many manufacturing parents is to establish foreign affiliates that distribute manufactures into host-country markets. *Cross-border links like these revealed by Figure 9 are not about substitution, but rather about rich patterns of dynamic complementarity and breadth of scope.*

3. Company-Level Employment Changes in Parents and Affiliates

A third piece of company-level evidence on parent-affiliate complementarity is the pattern of within-company employment changes at both parents and affiliates. In principle, across any two years a U.S. multinational can experience one of four kinds of net employment changes across the parent and affiliate(s): increases in employment both at home and abroad; decreases in employment both at home and abroad; rising U.S. employment and falling abroad employment; falling U.S. employment and rising abroad employment.

^{***} Of the 2,278 parent firms in 2006, 1,132 were primarily in manufacturing. BEA classifies the main line of activity for each parent and affiliate based in terms of the industry composition of sales.

Figure 7 showed these employment changes for all parents and all affiliates aggregated together. But looking instead company-by-company can reveal rich variation across companies obscured by these aggregates. Figure 10 reports tabulations of this company-by-company perspective. For the subset of U.S. manufacturing multinationals that were in existence throughout the full generation of 1982 through 2004, Figure 10 reports what fraction of these continuing multinationals fell into each of the four possible employment-change categories.^{§§§§}

Figure 10
Company-Level Employment Changes in U.S. Multinationals, 1982-2004

		Affiliate Increase	Employment Decrease
Parent Employment	Increase	35.9%	14.2%
	Decrease	22.3%	27.6%

Over the generation of 1982 through 2004, only 22.3% of continuing U.S. multinationals experienced a fall in U.S. employment with a rise increase in foreign-affiliate employment. That is, little more than one in five multinationals exhibited the stereotypical “exporting jobs” pattern of reducing U.S. employment while increasing employment abroad. Instead, the most-common outcome was the 35.9% of multinationals that realized employment growth both at home and abroad. And in fully 63.5% of all continuing multinationals—the 35.9% just described plus the 27.6% with falling employment both at home and abroad—parents and affiliates changed employment in the same direction.

Figure 11 repeats the company-level calculations of Figure 10 for a more-recent time period: 1999-2004, which Figure 7 revealed to be a period that combined rising affiliate aggregate employment with falling parent employment.

Figure 11
Company-Level Employment Changes in U.S. Multinationals, 1999-2004

		Affiliate Increase	Employment Decrease
Parent Employment	Increase	25.4%	11.2%
	Decrease	30.5%	32.9%

Over this 1999-2004 period, only 30.5% of continuing multinationals replicated the post-2000 aggregate pattern shown in Figure 7 of falling parent employment and rising affiliate employment. Instead, the other 69.5% were changing in more-varied, richer ways—indeed, 25.4% were still expanding employment both at home and abroad despite the post-2000 decline in aggregate parent employment. And as with the 1982-2004 period of Figure 10, here, too the majority—now 58.3%—of all continuing multinationals changed parent and affiliate employment in the same direction.

^{§§§§} In certain “benchmark survey” years, the BEA collects and disseminates more and more-detailed data about U.S. multinational companies. Benchmark survey years have included 2004, 1999, 1994, 1989, and 1982. Tabulations in Figures 10 and 11 of company-level employment changes were performed on benchmark-survey years because in these years greater effort is made to track medium- and small-scale multinationals, for which data in non-benchmark years is sometimes interpolated. By construction, the share of U.S. multinationals represented by each of the four categories in Figure 10 (and again in Figure 11) sum to 100%.

There are two important messages of Figures 10 and 11. One is the rich variety of company-level patterns that, by construction, is masked in aggregate statistics. Consistent with the discussion of Chapter 3, here, too, one sees wide variation in the strategies of U.S. multinationals. The other is that, this rich variation granted, the large majority of U.S. multinationals exhibit employment changes consistent with parent and affiliate operations being complements rather than substitutes.

D. Summary

Expansion abroad by globally competitive U.S. multinational companies tends to support their operations in America. Being globally competitive requires U.S. multinationals to establish operations abroad and also to expand and integrate these foreign activities with their U.S. parents. Foreign-affiliate activity tends to complement, not substitute for, key parent activities in the United States such as worker compensation and capital investment.

The idea that global expansion tends to “hollow out” U.S. operations is incorrect. Rather, the scale and scope of U.S. parent activities increasingly depends on successful and expansive presence abroad. Enhanced U.S. activities of U.S. multinationals, in turn, contribute to the productivity and average standard of living of all Americans.

One final point: Regardless of exact movements in parent employment and related activity measures for any particular company and time period, it is important to re-emphasize the many other activities of U.S. multinationals highlighted earlier in this report—compensation, knowledge creation, productivity growth, and links to the broader U.S. economy. Foreign expansion by U.S. multinationals often refines their U.S. operations in ways much more dynamic and nuanced than simply counting jobs—and ways that generally strengthen the overall U.S. economy.

Chapter Five Conclusions

The contribution to the American economy of U.S. multinational companies is increasingly being called into question. Critics contend that these companies have “abandoned” the United States, and that policy needs to rebalance their domestic and international operations. To address these claims, this report has documented the many ways in which U.S. multinationals strengthen the American economy.

U.S. multinational companies are, first and foremost, American companies. They perform large shares of America’s productivity-enhancing activities—capital investment, research and development, and trade—that lead to jobs and high compensation. The idea that U.S. multinationals have somehow abandoned the United States is not supported by the facts. They maintain a large presence in America, both relative to the overall U.S. economy and relative to the size of their foreign affiliates.

At the same time, American multinationals are increasingly integrated around the world, with connections among the U.S. parents and the foreign affiliates so dynamic, numerous, and important that thinking of parents and affiliates as differentially competitive is mistaken. The overall success of U.S. multinational companies depends increasingly on their global presence and competitiveness, with dynamic variation in successful strategies both across companies at a point in time and within companies over time.

Being globally competitive requires U.S. multinationals to establish operations abroad and also to expand and integrate these foreign activities with their U.S. parents. Expansion abroad by U.S. multinationals tends to support their operations in America. Foreign-affiliate activity tends to complement, not substitute for, key parent activities in the United States such as worker compensation and capital investment. The idea that global expansion tends to “hollow out” U.S. operations is incorrect. Rather, the scale and scope of U.S. parent activities increasingly depends on successful presence abroad. Enhanced U.S. activities of U.S. multinationals, in turn, contribute to the productivity and average standard of living of all Americans.

The bottom line is that U.S. multinational companies strengthen the American economy through a combination of their domestic activity and their international engagement.

Data Appendix

In various parts of this report, BEA data on U.S. multinational companies have been matched as needed with private-sector economy-wide data from appropriate government sources. Details on the source and definition of these non-multinationals data are as follows, where all data were obtained on-line in January 2009. Other non-multinationals data used in the text of the report are described as needed in relevant footnotes.

Figure 1, Employment. Bureau of Labor Statistics, U.S. Department of Labor: U.S. private-sector non-farm payroll employment excluding depository institutions and private households.

Figure 1, Output. BEA: Private-sector value-added output adjusted to exclude value added in depository institutions and private households, imputed rental income from owner-occupied housing, and business transfer payments.

Figure 1, Investment. BEA National Income and Product Accounts. Table 5.2.5: Gross and Net Domestic Investment by Major Type, Line 10—Nonresidential gross private fixed investment.

Figure 1, Research and Development. National Science Foundation: Total R&D performed by the industrial sector, current dollars.

Figure 1, Exports and Imports of Goods. BEA National Income and Product Accounts, as reported in Mataloni (2008).

Figure 2, Compensation Premium for U.S. Multinational Companies. The national measure of private-sector labor compensation comes from the BEA National Income and Product Accounts. Table 6.2: Compensation of Employees by Industry, Line 3—Private Industries. This was divided into the private-sector payroll employment data from Figure 1.

Figures 3 through 9 rely only on BEA data on U.S. multinationals, as described in the text box on page 5.

Figures 10 and 11 are based on calculations based on company-level survey data that were performed on-site at the BEA. Special thanks here to Fritz Foley for assistance creating and interpreting these calculations.

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