

# INSOURCING JOBS

Making the Global Economy Work for America



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# TABLE OF CONTENTS

**EXECUTIVE SUMMARY**

<b>CHAPTER ONE</b> Insourcing: The Often Overlooked Aspect of Globalization	<i>1</i>
<b>CHAPTER TWO</b> The Rising Contribution of Insourcing Companies to U.S. Economic Growth and Living Standards	<i>3</i>
<b>CHAPTER THREE</b> Insourcing Companies Pay Higher Compensation	<i>11</i>
<b>CHAPTER FOUR</b> Additional Advantages of Insourcing Companies: Their Impact on Domestic Competitors, Customers, and Suppliers	<i>13</i>
<b>CHAPTER FIVE</b> Summary, a Caution, and Policy Recommendations	<i>15</i>
<b>APPENDIX</b> Data Sources and Definitions	<i>17</i>
<b>REFERENCES</b>	<i>19</i>
<b>ENDNOTES</b>	<i>20</i>

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# EXECUTIVE SUMMARY

U.S. subsidiaries of foreign-headquartered multinationals contribute to U.S. economic growth and rising U.S. living standards through their operations that are “insourcing” American jobs. The contributions of these insourcing companies arise through two important channels.

One channel is their own operations. Over the past generation the number of U.S. jobs at these subsidiaries has more than doubled. Beyond job growth, insourcing companies have contributed to the U.S. economy by performing large and rising amounts of the crucial activities that make workers and the overall economy more productive: investment in research and development, investment in physical capital, and international trade. Moreover, U.S. subsidiaries pay their employees higher compensation than domestic U.S. firms. For majority-owned nonbank subsidiaries the data for 2002, the most recent year available, are impressive.

- **Jobs:** Insourcing companies employed over 5.4 million U.S. workers. This was nearly 5 percent of the private-sector total employment—up from just 3 percent in 1987.

- **Research and Development:** The share of U.S. private-sector research and development accounted for by insourcing companies rose from over 9 percent in 1992 to over 14 percent—\$27.5 billion.

- **Capital Investment:** The share of U.S. private-sector capital investment accounted for by insourcing companies rose from over 8 percent in 1992 to over 10 percent—\$111.9 billion.

- **Exports:** For many years insourcing companies have accounted for around 20 percent of U.S. exports of goods—now \$137 billion.

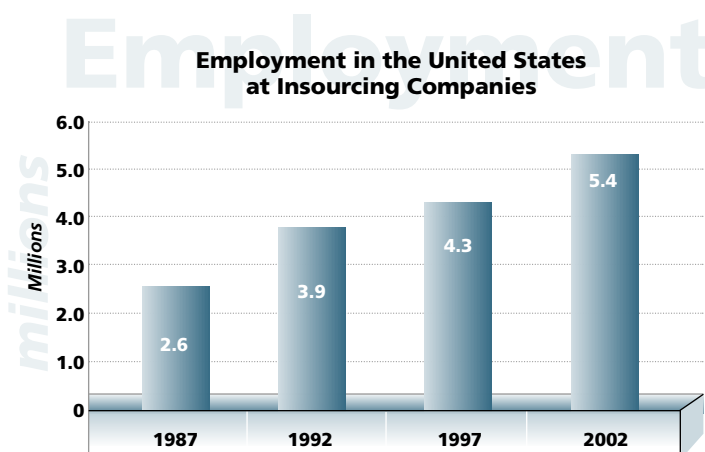
- **Payroll:** Insourcing companies paid their American workers over \$307 billion in compensation. This was more than 6 percent of all U.S. private-sector labor compensation.

- **Higher Compensation:** The average annual compensation at insourcing companies was \$56,667. This was over 31 percent more than the average annual compensation in the non-subsidiary U.S. private sector—a premium that has risen steadily from just 20 percent in 1992.

The other channel by which insourcing companies contribute to the U.S. economy is their interactions with other domestic U.S. firms. U.S. subsidiaries help boost the performance of domestic suppliers and customers—e.g., through sharing information with and placing standards on suppliers. The performance of domestic competitors is enhanced by exposure to new techniques and practices introduced by U.S. subsidiaries.

- **Domestic Suppliers:** For many years, insourcing companies have purchased a high and rising majority of their intermediate inputs from domestic, not foreign, suppliers: nearly 80 cents out of every dollar, or \$1.26 trillion.

The bottom line is that insourcing companies improve the performance of the U.S. economy. It is important that government officials and the business community understand the contribution of insourcing companies, and that these officials formulate policy accordingly.



Source: U.S. Bureau of Economic Analysis. See Data Appendix for details.

**The share of insourcing companies in U.S. private sector employment has also been rising: from just 3% in 1987 to nearly 5% in 2002.**

# INSOURCING: THE OFTEN OVERLOOKED ASPECT OF GLOBALIZATION

*Today in late 2004 there is widespread disagreement about the state of the U.S. economy. After the longest period of economic expansion in recent U.S. history, recession arrived in 2001. Growth in output of goods and services has since resumed. But there remains much discussion about whether this has been a “jobless recovery,” and much disagreement over what policies might address this problem.*

Much of this disagreement centers around globalization and “outsourcing.” Today there is a rising outcry against the global engagement of companies headquartered in America. Critics charge these companies with reducing jobs for Americans by expanding operations abroad. Forecasts abound of the dire impact this global engagement will have on the U.S. economy.

What has been almost entirely absent from this discussion about outsourcing is the converse dimension of globalization. This process is called “insourcing,” i.e., the expansion into the United States by foreign-headquartered multinational firms. This report tells the story of how in recent decades the U.S. subsidiaries of foreign companies have deepened their engagement in the U.S. economy. Yes, these companies have created jobs, but that is just the start of the story. More than just creating jobs, these subsidiaries have contributed to rising U.S. living standards both through their own operations and through their interactions with other domestic U.S. firms.

One channel by which U.S. subsidiaries contribute is through their own operations. *Beyond job growth, insourcing companies have contributed to the U.S. economy by performing large and rising amounts of the crucial activities that make workers and the overall economy more productive: investment in research and development, investment in physical capital, and global engagement through international trade. The bottom-line impact of these growth-enhancing activities is the fact that U.S. subsidiaries pay higher average annual compensation than do domestic U.S. firms.*

The other channel is through their interactions with other domestic U.S. firms. *U.S. subsidiaries help boost the performance of domestic suppliers and customers—e.g., through sharing information with and placing standards on suppliers. U.S. subsidiaries also help boost the performance of their domestic competitors through heightened competition.*

“What has been almost entirely absent from this discussion about outsourcing is the converse dimension of globalization. This process is called ‘insourcing,’ i.e., the expansion into the United States by foreign-headquartered multinational firms. This report tells the story of [insourcing].”

While this report tells the story of the important contributions of insourcing companies, it also carries a note of caution. There has never been a guarantee that the world’s best companies would invest in the United States. This is even more true today, with the new and dynamic engagement of countries like China and India into the world economy. Looking ahead, the United States must increase its efforts to ensure that it remains an attractive place for global companies to invest.

This report’s story of insourcing companies will be told using two complementary types of empirical evidence. One is broad evidence from official government statistics collected by the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce. The other is detailed case studies of individual insourcing companies. By design, BEA statistics track all insourcing companies operating in the United States. There is no other U.S. government or private-sector data source on these subsidiaries that matches the BEA’s breadth, depth, or rigor. Case

studies amplify these comprehensive statistics with concrete examples. The box on the following page highlights key aspects of the BEA data; details appear in the appendix.

# The BEA Data

## WHAT IS AN INSOURCING COMPANY? The BEA Data

**B**efore proceeding, it is important to understand the structure and scope of the BEA data used in this report. The BEA data on U.S. subsidiaries covered in this report is for majority-owned nonbank companies. This represents an important change over previous reports, which focused on U.S. companies that had 10 percent or more foreign ownership. Therefore, all facts presented in this report on insourcing companies represent a conservative measure of the overall impact foreign direct investment has on the U.S. economy.

Each year since 1977, the BEA has tracked U.S. subsidiaries of foreign multinationals through legally mandated surveys that collect and publicly disseminate operational and financial data. Firms face penalties for non-compliance. By design, BEA statistics track *all* insourcing companies operating in the United States. There is no other U.S. government or private-sector data source on these subsidiaries that matches the BEA's breadth, depth, or rigor.

The BEA definition of a U.S. subsidiary is a U.S. business enterprise in which there exists foreign direct investment (FDI), i.e., in which a single foreign person owns or controls, directly or indirectly, 10 percent or more of the voting securities of an incorporated U.S. business enterprise or an equivalent interest in an unincorporated U.S. business enterprise. In the large majority of cases that foreign person is a foreign-headquartered corporation, but it may also be other legal forms including an individual, partnership, estate, or trust. Majority-owned subsidiaries are those with at least a 50 percent foreign ownership stake. In this report, U.S. subsidiaries of foreign-owned multinationals will be interchangeably referred to as "insourcing companies."

At the time of writing this report, the BEA's most recent year of data on insourcing companies is 2002. This was a "benchmark survey" year, meaning a year in which the BEA collects and disseminates more and more-detailed data about insourcing companies. Previous benchmark survey years included 1997, 1992, and 1987. The BEA collects and disseminates very little information about subsidiaries whose main line of business is banking.

This is because banking subsidiaries already disclose substantial information to other government agencies. In addition, starting with its data for 2002 the BEA focused data collection and dissemination on majority-owned subsidiaries. This is because in minority-owned subsidiaries foreign owners hold a more-ambiguous degree of operational control.

Consistent with BEA data practices for 2002 forward, then, in this report BEA data on insourcing companies will be presented for the group of majority-owned nonbank subsidiaries. This report analyzes data for this set of subsidiaries for benchmark years as far back as possible. These were 1992 or 1987, when available—nearly a generation's worth of information. Currently there are no publicly available data on majority-owned nonbank subsidiaries before 1987. Overall data patterns in this report are not sensitive to the starting year for which data are available.

The facts about majority-owned nonbank subsidiaries are representative of the facts for all subsidiaries. This is because this group accounts for the large majority of total nonbank subsidiary activity—e.g., 91.4 percent of employment in 2002. It is also because bank subsidiaries are relatively small in total: in 2002 majority-owned bank subsidiaries had 140,300 workers, just 2.6 percent of the employment of majority-owned nonbank subsidiaries.

"THE BEA DATA ON  
U.S. SUBSIDIARIES  
COVERED IN THIS REPORT  
IS FOR MAJORITY-OWNED  
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THERE IS NO OTHER U.S.  
GOVERNMENT OR PRIVATE-  
SECTOR DATA SOURCE  
ON THESE SUBSIDIARIES  
THAT MATCHES THE  
BEA'S BREADTH, DEPTH,  
OR RIGOR."

# THE RISING CONTRIBUTION OF INSOURCING COMPANIES TO U.S. ECONOMIC GROWTH AND LIVING STANDARDS

*What exactly is the role of insourcing companies in the U.S. economy? How valuable is that role? How many people do they employ? How do their operations compare to the operations of domestic firms in the broader economy? This chapter answers these sorts of important questions with the relevant facts. For many years insourcing companies have contributed to the U.S. economy, not just by employing a rising number of American workers but also by performing large and rising amounts of the crucial activities that make workers and the overall economy more productive: investment in research and development, investment in physical capital, and global engagement through international trade.*

## A. THE RISING EMPLOYMENT OF INSOURCING COMPANIES IN THE U.S. ECONOMY

How large a role do insourcing companies play in the U.S. economy? One way to answer this question is to examine their share of total economic activity. An appropriate yardstick is employment.

For selected years since 1987, Figure 1 documents the rising presence of insourcing companies in the U.S. economy. *U.S. employment at insourcing companies has been rising for nearly a generation, more than doubling from 2.60 million in 1987 to 5.42 million in 2002. Expressed as a share of all U.S. private-sector employment, over the last 15 years subsidiary employment has risen from just 3.0 percent to 4.8 percent.*<sup>1</sup>

### Manufacturing Employment

*Growth in total subsidiary employment has been widespread across many industries. In 2002 subsidiary employment in U.S. manufacturing stood at 1.86 million, just over a third of all subsidiary jobs that year. In recent years there has been widespread concern about the decline in American manufacturing jobs. In reality, the share of all U.S. manufacturing jobs accounted for by insourcing companies has been rising: from 11.0 percent in 1997 to 12.7 percent in 2002.*

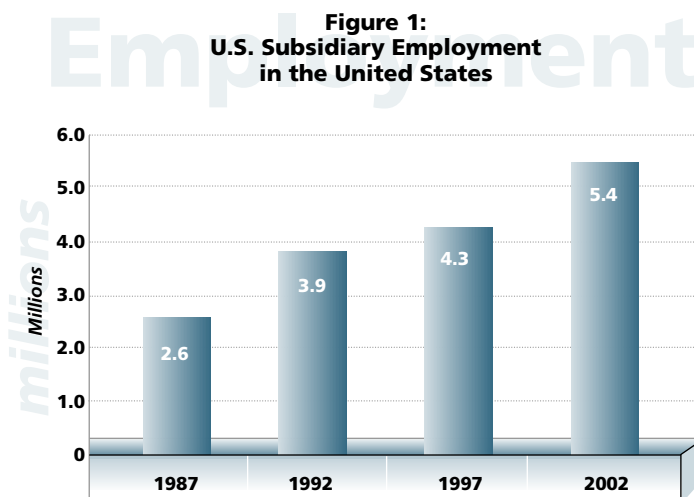
### Services Employment

Within the services sector, employment growth has been strong in many industries including wholesale and retail trade, transportation and warehousing, information, and nonbank finance and insurance. From 1997 to 2002, all four of these industries experienced rising subsidiary employment at a rate faster than other firms in these industries, such that in all four industries the subsidiary share of total U.S. employment rose.

## B. INSOURCING EXPANSIONS, GREENFIELD INVESTMENTS, AND MERGERS & ACQUISITIONS

What changes accounted for the doubling of subsidiary employment in Figure 1? One important source of this increase has been expansion of already existing subsidiaries. Ongoing subsidiaries can expand by building new facilities, or by adding capacity to existing facilities.

But there is a second important source of total subsidiary employment growth: the creation of new subsidiaries. A subsidiary can be created when a foreign multinational builds from a new greenfield business enterprise in the United States. A subsidiary can also be created when a foreign multinational acquires or merges with part or all of an existing business enterprise in the United States in which there does not exist any FDI.



Source: U.S. Bureau of Economic Analysis. See Data Appendix for details.

Just as subsidiaries can be created, they can be closed. A subsidiary closes either when its U.S. operations are shut down or when its U.S. operations continue but are sold to a U.S.-owned business. Subsidiary closures of both kinds tend to reduce the total subsidiary employment reported in Figure 1, as do contractions of existing subsidiaries (that may involve closing or selling parts, but not all, of their operations).

All this means that from one year to the next, net changes in overall subsidiary employment like those shown in Figure 1 can be accounted for by five constituent sources of changes: expansion/contraction of already existing subsidiaries, creations via greenfield investments, creations via mergers and acquisitions, closures via shut downs, and closures via sales.

Can all these sources of changes be tracked? No: the BEA does not collect and disseminate sufficiently detailed data to precisely decompose net employment changes across these different sources. Such decompositions would be interesting and informative. But they simply cannot be performed with the publicly available BEA data. Armed with this information, we can only say that the doubling of subsidiary employment in Figure 1 meant that employment growth

from the combination of subsidiary creations and expansion at ongoing subsidiaries outstripped employment decline from the combination of subsidiary closures and contraction at ongoing subsidiaries.

It is sometimes argued that certain sources of subsidiary employment growth are somehow better than others. In particular, it is argued that employment growth via acquisitions is somehow fictitious, that the only meaningful employment growth arises from greenfield expansions. This argument is incorrect for the following reasons.

First, acquisitions should be evaluated against the hypothetical alternative of what would have happened to employment at the target enterprise had the acquisition not occurred. The implicit assumption in the above argument is that employment at the target enterprise would have remained. Often this is not the case. Many acquired facilities face difficulties that only new owners can overcome, without which closure is a real threat. And even if closure is not imminent, foreign acquisitions can entail fewer redundancies than domestic acquisitions. One example of this is when the foreign acquisition creates a new subsidiary, the foreign parent may want to establish certain U.S. management and support capacities that a domestic counterpart might already have.

# Save Jobs

## HOW ACQUISITIONS CAN SAVE JOBS

Case Study: GKN Aerospace  
Location: St. Louis, Missouri

In early 2000, Boeing Military Aircraft was looking to exit its St. Louis, Missouri, metals and composite structures manufacturing operations. Luckily for the 800 workers at the plant, Britain's GKN Plc, a global supplier of structures, components, assemblies, and engineering services to the automotive and aerospace industries, was looking to expand its aerospace business. GKN's acquisition and subsequent successful operation of the St. Louis manufacturing plant—all in close collaboration with that plant's union—is an excellent example of how insourcing companies can support and grow U.S. employment when they acquire U.S. facilities and firms.

The St. Louis facility of 1.7 million square feet had been open since 1943, originally as a McDonnell Douglas facility. However, the year 2000 was marked by sluggish growth and low productivity, due largely to a difficult labor environment with high labor costs and outdated work practices. The plant was widely expected to be closed, with rising pressures to outsource abroad the shuttered operations.

GKN Aerospace saw an opportunity to reinvigorate the St. Louis operations and expand its U.S. presence. However, it also recognized that a successful acquisition would require a workplace reorganization in cooperation with the unionized workers. In the words of Jimmy Johnson, Senior Vice President, Human Resources, "It was openly discussed by both parties dur-

ing the acquisition process that there would be no acquisition unless the GKN human-resources team could develop a strategy to reduce costs dramatically, increase productivity and efficiencies and then get buy-in from unions to adopt these changes."

The cooperative process between GKN and the unions led to flexible job structures, new responsibilities and substantial investments in employee training. Parallel plans were laid out to add two new core lines of business, in resin transfer molding and engineering services, with substantial technology transfer from GKN's world operations (including its design and development center in Connecticut).

GKN's acquisition was finalized in January 2001. Since then, the St. Louis facility has thrived. A key element of success has been worker productivity gains, which have been fostered by pervasive two-way communication between union membership and GKN management. In 2003 variable overhead costs were reduced by 20%, and product quality and delivery yields increased by several percentage points. Total employment of about 1,200 in 2001 has been increased by approximately 200 jobs—the first growth in over a decade at the facility. Overall St. Louis sales have risen from approximately \$270 million in 2001 to approximately \$340 million today.

*For more information on GKN Aerospace, go to  
<http://www.gkn.com/GroupOverview/>*



Second, the impact of growth via acquisitions often extends far beyond just payroll numbers. As will be documented in the report below, subsidiary expansion of all kinds bring to the U.S. economy investments in physical capital, in R&D, in trade links, and in general management and organization that benefit not just the acquired enterprises but also the economy more broadly through customers, suppliers, and competitors.

### C. WHY DO FOREIGN COMPANIES INSOURCE?

The previous section documented that insourcing companies have deepened their presence in the U.S. economy through rising employment. These increases beg the important question of why these companies invest here to begin with. There are two main reasons.

#### *Serving the U.S. Market*

One reason is to serve the U.S. market. It is important to emphasize that for as long as the BEA has been collecting statistics on insourcing companies, the U.S. economy has been the world's largest. In 2003 U.S. GDP totaled just over \$11 trillion. This constitutes the largest single-country market in the world, and among the world's richest on a per capita basis. In fact, since the mid-1990s the U.S. economy has grown faster than most other advanced economies, such that the U.S. size gap has been expanding, not contracting.

Serving this immense U.S. market—and also nearby markets, such as fellow North American Free Trade Agreement members Canada and Mexico—is a powerful force attracting insourcing companies to expand in the United States. For insourcing companies whose main products are not easily traded across borders, serving the U.S. market necessarily means FDI into the country. But even for insourcing companies with exportable products, it can be that establishing and/or expanding their U.S. operations is the best business strategy.

#### *Producing in the U.S. To Serve World Markets*

The second major reason that insourcing companies establish and expand in the United States is to better structure their global operations. Thanks largely to declining natural and political trade barriers, multinational firms have recently been able to move away from simply replicating home-country operations in each foreign subsidiary. Increasingly, multinationals concentrate myriad firm-wide operations—lines of business, or particular functions such as finance or production stages—in different countries. The United States offers several strengths that can be well suited to various operations: e.g., talented workers across many occupations, deep capital markets, and a culture that supports innovation and risk-taking. So an insourcing company can regard the United States not just as an additional market to serve, but also as a platform for making products for the rest of the world. In addition, U.S.-based operations can be centers of excellence that provide technology, expertise, and talent that can support the company throughout its global operations.<sup>2</sup>

Insourcing companies expand in the United States both to produce for the American market and also for the rest of the world. This trend has led to rising U.S. employment at insourcing companies, per Figure 1.

# Build It Here

## RATHER THAN IMPORTING: BUILD IT HERE, SELL IT HERE

Case Study: Saint-Gobain  
Locations: Covington & Sparta, Georgia

**E**stablishing its first US operations in 1959, Saint-Gobain is now a global leader in industrial materials. Today over two-thirds of its 120,000 employees and about three-quarters of its sales are outside of its home country of France.

In the mid-1990's, Saint-Gobain began considering whether to build new plants in the United States or Mexico as a response to growing North American customer demand. Its final decision: rural Georgia. In 1996 it opened a 200,000 square-foot facility to make perfume bottles in Covington and in 2002, it followed with a 65,000 square-foot facility to decorate these bottles in Sparta.

Saint-Gobain expanded in Georgia for a number of reasons. One was the skill base it was able to tap into, in large part from the declining Georgia textiles industry. "Many of our employees were inspectors at sewing plants, so they already had good eye-to-hand coordination," commented decoration director Rita Poole. These talents have proven very valuable in the Sparta operations, which must meet exacting standards for

global clients such as Lancome and Victoria's Secret. This talent pool has been augmented by SG's partnership with the state's Quick Start program, which provides employees with additional pre- and on-the-job training. World-class logistics were an additional factor, with easy access to transportation options, including non-stop flights from Atlanta to Paris.

Over \$50 million have been invested in the Covington and Sparta plants, and key technologies originally developed in France have been transferred to and improved upon by these Georgia operations. Today they employ over 200 workers, with excellent compensation packages, and service the entire North American market.

For more information on Saint-Gobain, go to  
<http://www.saint-gobain.com/en/html/groupe/panorama.asp>

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## U.S. OPERATIONS AS A GLOBAL PLATFORM

Case Study: Philips Medical Systems  
Locations: Andover, Massachusetts

In 2002, Philips Electronics, headquartered in the Netherlands, made the unique decision to move its worldwide medical systems business to a new global headquarters to Andover, MA.

### Why?

Philips Medical Systems (PMS) is the world's second largest manufacturer of diagnostic-imaging and patient-monitoring equipment. The large U.S. market for medical equipment is among the world's most dynamic and competitive. Accordingly, for many years PMS had invested heavily in its U.S. manufacturing and R&D operations. The decision to move the global headquarters to the United States was based on proximity, both to its best customers and also to the bulk of its capacity and employees.

Today, PMS global business is successfully run from the United States. All country organizations and business lines report to Andover. All senior management, including the division CEO, is located there.

Over 10,000 Americans work for PMS in a wide range of skilled jobs such as engineers, technical sales and service, and marketing. Beyond its U.S. customers, PMS U.S. manufacturing facilities export over a billion dollars of production to regions all over the world. And since locating its global headquarters in the United States, PMS has developed new R&D partnerships with several universities and the Cleveland Clinic.

For more information on Philips Medical Systems, go to <http://www.usa.philips.com/about/company>

But is rising employment the only benefit these companies contribute to the U.S. economy? No: *Insourcing companies have been contributing to the U.S. economy, not just by employing a rising number of American workers but also by performing large and rising amounts of the crucial activities that make workers and the overall economy more productive: investment in research and development, investment in physical capital, and global engagement through international trade.* Insourcing companies bring not only jobs, but a host of crucial activities that make firms and the overall economy more dynamic. Let's go through each in turn.

## D. HOW INSOURCING COMPANIES HELP DRIVE ECONOMIC GROWTH: INVESTMENT IN TECHNOLOGY

The most important process through which most economies grow, and thus living standards rise, is through technological progress.

Production technology is the know-how by which firms combine inputs—i.e., labor and capital—to produce outputs of goods and services. For fixed amounts of labor and capital, the only way firms can produce more is by improving their technology.

Numerous empirical studies have documented that advances in technology were the most important force behind U.S. output growth in the 20th century. For example, Nobel Laureate Robert Solow (1957) calculated that about 75 percent of U.S. growth during the first half of the 20th century was driven by technological gains. Similarly, economists including Chairman of the U.S. Federal Reserve System Alan Greenspan (2004) have reported that technological change accounted for the largest share of output growth over the second half of the 20th century.

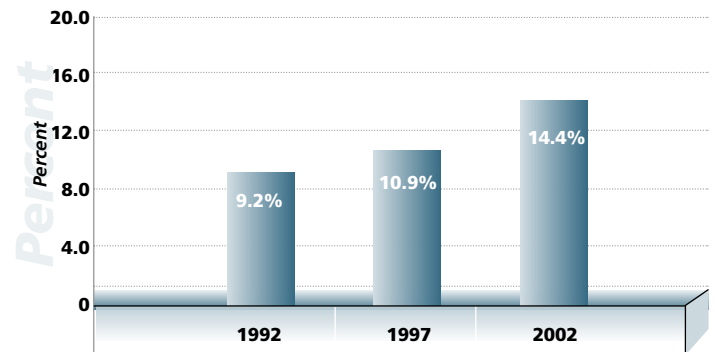
An important question: how do firms improve production technology?

### Research and Development

One activity that drives many improvements in technology is research and development (R&D). Broadly defined, R&D aims to discover both new products and also improved production of existing products. These discoveries lead to more efficient ways to organize labor and capital to produce goods and services. So, R&D spending is a good proxy for overall efforts towards advances in technology.

What do the data show on R&D by insourcing companies? For selected years since 1992, Figure 2 reports the share of total U.S. private-sector R&D accounted for by insourcing companies.<sup>3</sup> *The subsidiary share of U.S. R&D has risen sharply in recent years, to 14.4 percent. In absolute terms this has meant an increase from \$11.0 billion in 1992 to \$27.5 billion in 2002.*

**Figure 2:**  
Research & Development by U.S. Subsidiaries:  
Share of U.S. Private-Sector Total



Source: U.S. Bureau of Economic Analysis and National Science Foundation. See Data Appendix for details.

Comparing Figure 2 with the share information accompanying Figure 1 shows that the subsidiary share of U.S. private-sector R&D has been much higher than the subsidiary share of U.S. private-sector employment. This means that *per worker, insourcing companies perform more R&D than do other firms in the broader U.S. economy.*

Novartis and Michelin offer two excellent examples of insourcing companies that conduct crucial R&D in the United States.

## RESEARCH & DEVELOPMENT

### OUTSOURCING R&D— TO THE UNITED STATES

Case Study: Novartis

Location: Cambridge, Massachusetts

**N**ovartis, headquartered in Basel, Switzerland, is a global pharmaceutical leader. Recently, the company relocated its global research headquarters from Switzerland to Cambridge, Massachusetts. Depending on whether you are reading a newspaper in Basel or Boston, the move can illustrate either outsourcing or insourcing.

Why did Novartis choose Cambridge? One major consideration was the area's entrepreneurial climate and concentration of talent that meets Novartis's needs for innovative drug discovery. The Massachusetts life sciences industry is home to more than 280 firms, employing 30,000 (including 5,000 life scientists). In addition, it is estimated that 8% of the world's total pipeline of new medications comes from Massachusetts-based firms. The Cambridge area enjoys an astonishing concentration of world-class universities and hospitals. This concentration of academic biomedical research, hospitals and biotechnology companies makes Cambridge a particularly fertile ground for the work and collaborations that underpin Novartis's multi-disciplinary approach.

Since selecting Cambridge, the company has made great efforts to develop both its physical and intellectual capital there. Its first laboratory opened in March of 2003, followed by a second facility in April of 2004. Today the two facilities, which combined include 750,000 square feet of laboratory space, are home to 707 employees. The company expects to be fully staffed at approximately 1,000 by the end of 2004. Roughly two thirds of these employees will be scientists, supported by a range of technical and administrative occupations. These employees conduct cutting-edge research in areas including oncology, diabetes, cardiovascular research, and infectious diseases. In their role as global headquarters, these employees also coordinate Novartis's other research operations in Basel; London and Horsham, England; Vienna, Austria; Tsukuba, Japan; and East Hanover, New Jersey. Novartis's commitment to Cambridge has just begun: over the next decade the company expects to invest roughly \$4 billion in its operations there.

*For more information on Novartis, go to [http://www.novartis.com/about\\_novartis/en/index.shtml](http://www.novartis.com/about_novartis/en/index.shtml)*

## EXPANSION

### R&D SUCCESS = U.S. EXPANSION

Case Study: Michelin

Location: Greenville, South Carolina

**M**ichelin, headquartered in France, is the world's largest manufacturer of tires. Michelin's modern-day U.S. presence dates back to 1975, when it built its first plant in Greenville, South Carolina. Today Michelin's U.S. operations span seven states with 16 plants and approximately 18,000 employees. A key element of Michelin's U.S. strategy has been its commitment to research and development here.

Since establishing its U.S. operations, Michelin's North American research and development capabilities have been conducted by Michelin Americas Research and Development Corporation (MARC). Over the last 20 years, MARC has spent more than \$2 billion in R&D efforts. The technology developed at MARC has resulted in better products for customers, leading to a greater demand for Michelin products, which means U.S. employment growth. After years of U.S. research, in 2000 Michelin introduced its X-One single-wide truck tire. Each of these wide X-One tires replaces a traditional pair and thereby offers several advantages: superior handling and thus safety, combined with reduced truck weight and thus

heavier payloads and/or improved fuel economy in excess of ten percent. The X-One has become a commercial success, driven in part by rising diesel fuel prices, and has also garnered several professional awards.

MARC's technology leadership is recognized by the U.S. government, which has been a prominent customer. For instance, Michelin, for well over a decade, is the exclusive supplier of tires for the Space Shuttle—the unique demands of space flight and touchdown require tires among the world's most sophisticated.

One of the reasons insourcing companies put R&D operations in the United States is the opportunity to partner with research universities. For example, in 2004, Michelin announced it would become a partner in the Clemson University International Center for Automotive Research. Its initial role included \$3 million to endow a professorship in Vehicle Electronic Systems Integration.

*For more information on Michelin, go to <http://www.michelin.com>*

## E. HOW INSOURCING COMPANIES HELP DRIVE ECONOMIC GROWTH: INVESTMENT IN CAPITAL

Another important way to boost economic growth and living standards is to accumulate capital, which is broadly defined as the goods and services that help people make other goods and services—e.g., office buildings, machinery, and software.

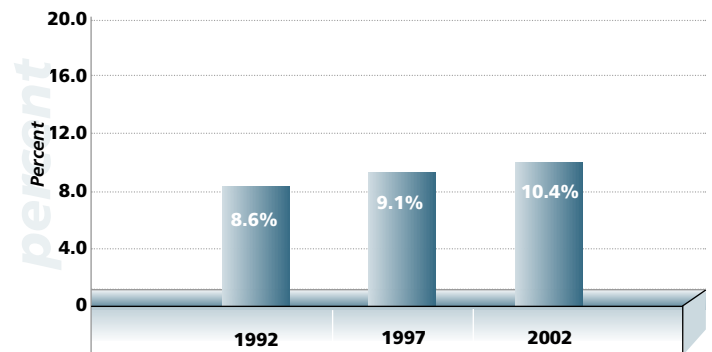
All standard models of economic growth agree on this point. The more capital workers have at their disposal, the more output each worker can produce by using these tools.<sup>4</sup> Noted economist and commentator Paul Krugman (1997, p. 15) summarizes the role of capital this way.

What can we do to speed [growth] up? There is a standard economic answer ... If you want more output, say the economists, provide more inputs. Give your workers more capital to work with, and better education, and they will be more productive.

What do the data show on capital investment by insourcing companies? For selected years since 1992, Figure 3 reports the share of private-sector U.S. investment accounted for by insourcing companies.<sup>5</sup> *The subsidiary share of private-sector U.S. capital investment has been rising steadily over time, most recently reaching 10.4 percent. In absolute terms, this has meant a more than doubling, from \$52.8 billion in 1992 to \$111.9 billion in 2002.*

Comparing Figure 3 with the share information accompanying Figure 1 shows that the subsidiary share of U.S. investment has been much higher than the subsidiary share of U.S. private-sector employment. This means that per worker, *insourcing companies invest in new capital more heavily than do firms in the broader U.S. economy.* And much of this

**Figure 3:**  
Capital Investment by U.S. Subsidiaries:  
Share of U.S. Private-Sector Total



Source: U.S. Bureau of Economic Analysis. See Data Appendix for details.

investment has been financed by the U.S. operations of these subsidiaries—contrary to the idea that subsidiaries simply send their proceeds abroad without ever reinvesting them in the U.S. economy.

Today's concerns about globalization include a widespread perception that companies no longer have any incentive to invest new capital in the United States, as opposed to in emerging low-wage countries. Figure 3 demonstrates this is not true. So, too, do the following two case studies. Infineon Technologies Richmond offers a concrete counter-example of very large U.S. investments in plant and equipment, with associated expansion of employment and other key activities. Dassault Aviation is an acquisition originally focused on serving the U.S. market but later expanded to global scale, all financed through reinvested local earnings.

### INCREASING LIVING STANDARDS THROUGH CAPITAL INVESTMENTS

Case Study: Infineon Technologies Richmond  
Location: Richmond, Virginia

**B**uilt in 1996, the Infineon Technologies Richmond facility uses leading-edge technology to produce dynamic random access memory (DRAM) products around the clock, every day of the year. In 2004, its parent company, Infineon Technologies of Munich, Germany, evaluated a number of locations around the world to expand its capacity for advanced DRAM products. In a testament to local workers and its regional infrastructure, the company selected Richmond as its site for an additional \$1 billion investment in state-of-the-art manufacturing capacity. Overall this investment aims to secure Infineon's global competitiveness, while demonstrating a strong commitment to its U.S. customers by maintaining state-of-the-art manufacturing in the United States.

The Richmond plant is an 800,000 square foot fully-integrated facility with wafer processing and testing and assembly of both components and memory modules. It is leading edge with regard to productivity and efficiency in the company's worldwide cluster of manufacturing sites. It has received a number of industry and state awards for its quality management systems (e.g., ISO 9000 and QS9000 certification), workplace safety (e.g., OSHA Voluntary Protection Program status), and environmental stewardship (e.g., a Virginia and EPA Exemplary Environmental Enterprise core member and awardee).

Capital investment in Infineon Richmond through April 2004 totaled \$1.8 billion. Its \$1 billion expansion will build and equip a 550,000 square foot facility by early 2005. In April 2004, Infineon Richmond employed approximately 1,750 workers in a wide range of occupations including manufacturing associates, technicians, engineers and administrative and management positions. The company's annual payroll exceeds \$100 million, with average wages that are nearly double average Virginia salaries. In May 2002, Infineon's average salary was \$62,644 per year, versus a Greater Richmond average of \$31,292. Its expansion is projected to lead to 800 additional jobs over the next 18 months.

Infineon Richmond has built extensive ties with its customers and suppliers. Semiconductors were a brand new industry to Virginia in 1996. By 2002, semiconductors had become the state's second largest export. Infineon Richmond sells to major customers such as Dell, HP and IBM both in the United States and abroad via exports. A wave of advanced technology suppliers has emerged in Virginia to support Infineon and other semiconductor firms.

For more information on Infineon, go to <http://www.infineon.com>

## GROWING U.S. OPERATIONS THROUGH REINVESTED U.S. EARNINGS

Case Study: Dassault Falcon Jet Corp.  
Location: Little Rock, Arkansas

There is a common misconception that a foreign-owned U.S. company systematically sends its profits overseas, creating the impression that U.S. profitability only benefits external “foreign” interests. That has not been the case for Dassault Falcon Jet, the U.S. subsidiary of France-based Dassault Aviation.

“From the earliest days of the Falcon program, we recognized the need to be near the customer, and that was here in the U.S.” remembered Jean Rosanvallon, President and CEO of Dassault Falcon Jet Corp. He added, “The initial thought was to have Falcon Jet act as a sales and distribution company, but rapid demand for our product and growth in the industry quickly led us to take a more active role.”

In 1974, Dassault Falcon Jet purchased Little Rock Airmotive, a 61,500 square foot hangar and office facility. Dassault saw this operation as a natural fit for the growth of the business jet product line and wanted to integrate this facility into Falcon’s global expansion plans. The plan was quite simple. Western Hemisphere and Pacific Rim customers would have their Falcon jets manufactured in France, without any detailing beyond the bare minimum cockpit controls, seats for pilots and the green exterior primer. This “greenie” would then be flown to Little Rock, stripped of all its minimum detailing, and completely outfitted with controls, interior, and exterior tailored to each customer’s tastes and specifications. So the shell of each Falcon jet would be assembled in France, but its character would be crafted in Little Rock.

Why not produce jets entirely in France? One important reason that Dassault chose Little Rock Airmotive was the base of U.S. skilled workers available in the Little Rock area: craft workers and artisans in cabinetry, carpentry, leather goods, upholstery and a range of related activities. Thanks to its strong performance, since 1975 the Little Rock facility has continually expanded. The largest expansion of the facility, which already covered over 280,000 sq. ft., occurred in 1995 when Dassault decided to centralize its customizing and finishing for *all* Falcon jet sales *worldwide*. What followed was a four-year expansion that added seven new buildings, nearly doubling both the physical footprint and the employment.

By 2003, Dassault Little Rock employed approximately 1,450 workers. This was almost triple 1993 employment, and spanned occupations including engineering, industrial operations, and administration. These workers are highly skilled craftsmen and professionals, combining their talents with Dassault technology. Total Little Rock wages in 2003 exceeded \$71 million, with the per-worker average wage of about \$41,300, far above the state average. At over 522,000 square feet, this facility is Dassault’s largest plant, even bigger than its main plant in France.

All of this growth and additional employment was paid for through reinvesting its American earnings—without ever paying a dividend back to Dassault in France.

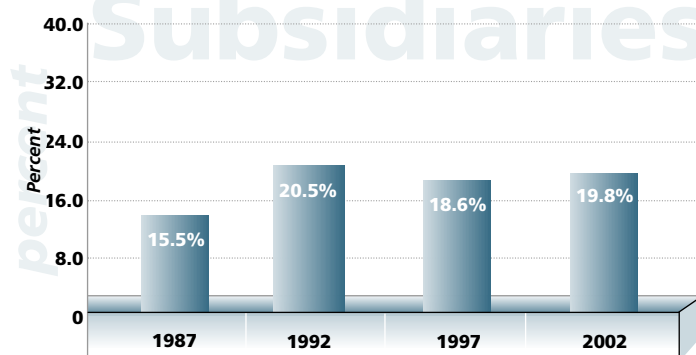
For more information on Dassault Falcon Jet Corp., go to <http://www.falconjet.com/ourstory/company.jsp>

## F. INSOURCING COMPANIES PRODUCE GOODS IN THE U.S. FOR WORLD MARKETS

U.S. living standards are raised through international trade. Exports allow a country’s firms to focus their production on the activities for which they are relatively productive compared to the rest of the world. This concentration on “comparative advantage” activities allows the country to import more of those goods and services it produces less well. Exporting can also boost the productivity of a country’s firms through other channels: by introducing competitive pressures from foreign firms, and by allowing production at more-efficient scales thanks to access to foreign as well as domestic markets.

Do insourcing companies play an important role in U.S. trade flows? Figure 4 indicates the answer is a resounding “yes.” For selected years since 1987, this figure shows the share of total U.S. exports of goods accounted for by insourcing companies.<sup>6</sup> For nearly a generation, insourcing companies have accounted for about 20 percent of U.S. exports—this translated into \$137.0 billion in exports of goods in 2002.

Figure 4:  
Exports by U.S. Subsidiaries:  
Share of U.S. Total



Source: U.S. Bureau of Economic Analysis. See Data Appendix for details.

Comparing Figure 4 with the share information accompanying Figure 1 shows that the subsidiary share of U.S. exports has been much higher than the subsidiary share of U.S. private-sector employment. This means that *per worker*, insourcing companies are much more export intensive than are firms in the broader U.S. economy.

It should be noted that insourcing companies also import goods into the United States. The majority of their imports are actually by firms whose main line of business is wholesale trade—importing finished products that are sold directly to customers. In 2002 insourcing companies in wholesale trade imported \$183.4 billion worth of goods, 56.5 percent of all insourcing-company imports that year. In many cases wholesalers provide U.S. consumers with a wider range of products than are available domestically—e.g., French champagne and Swiss watches.

# Global Reach & Investment

## PARENT COMPANY'S GLOBAL REACH & CAPITAL INVESTMENT DRIVE U.S. EXPORTS

Case Study: Thales Communications, Inc.  
Location: Clarksburg, MD

**T**hales Communications, Inc. (TCI), is a world leader in the design, production and support of portable, secure tactical communications systems. As a proxy division of France-based Thales SA, TCI's recent operations demonstrate how U.S. affiliates of foreign-owned companies contribute to the U.S. economy through technology innovation that leads to new export opportunities.

By mid-2000, when Thales acquired the company, TCI was poised for strong growth based on its new technologies. Since then TCI's total revenues have increased at an annualized rate of almost 40%. Much of this growth has come from a conscious effort to expand exports and leverage the resources of Thales' worldwide operations. Since 2001 TCI's sales into international markets have more than tripled, from roughly \$5 million in 2000 to a projected \$25 million—almost 20% of total revenue—in 2004. This international expansion has included high-profile contracts, such as providing security for the Sydney 2000 Olympics, and today includes a large num-

“THIS SALES EXPANSION HAS MEANT JOB EXPANSION. TCI'S EMPLOYMENT SINCE MID-2000 HAS DOUBLED, FROM 200 TO OVER 400.”

ber of governments, such as Australia, France, UK, Germany and Poland. TCI also provides manufacturing and development services to other European-based Thales companies as a result of its leading technology and efficient manufacturing facility, effectively “insourcing” jobs into the United States.

The U.S. government remains TCI's primary customer. For example, TCI radios are currently in use by all U.S. ground forces in Iraq and Afghanistan.

This sales expansion has meant job expansion. TCI's employment since mid-2000 has doubled, from 200 to over 400. The company estimates that in 2002 and 2003 alone, international expansion added 87 new American employees in a wide range of occupations including assembly, engineering, and testing. Today the average TCI salary exceeds \$75,000 a year.

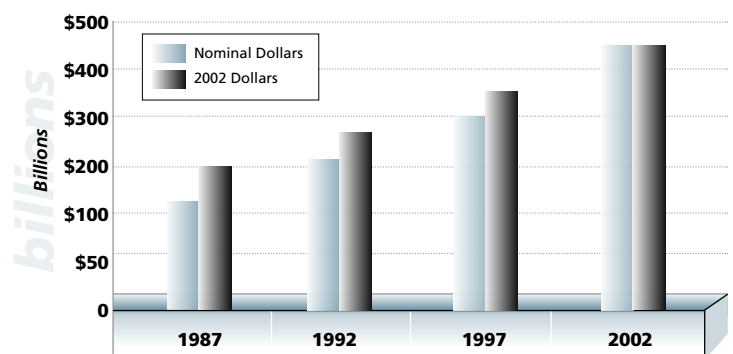
For more information on Thales Communications Inc., go to <http://www.thalesgroup.com/northamerica>

### G. CHAPTER SUMMARY: THE IMPORTANT ROLE OF INSOURCING COMPANIES IN THE U.S. ECONOMY

The central message of this chapter is that insourcing companies benefit the U.S. economy through several channels. While employment at insourcing companies has more than doubled since 1987, these firms also contribute to the U.S. economy by performing large and rising amounts of the crucial activities that make workers and the overall economy more productive: investment in research and development, investment in physical capital, and global engagement through international trade. In addition to jobs, insourcing companies provide a host of crucial activities that make firms and the overall economy more dynamic.

For insourcing companies, the bottom line of all these dynamic activities should be high and rising output. For selected years since 1987, Figure 5 reports the value of U.S. gross domestic product (GDP) accounted for by insourcing companies. For each year this value is reported in both nominal dollars and inflation-adjusted 2002 real dollars, to account for price inflation. *U.S. output by insourcing companies has been rising for nearly a generation, more than doubling in real terms from \$194.8 billion in 1987 to \$453.6 billion in 2002. During this time the subsidiary share of total U.S. private-sector GDP has risen from just 3.4 percent to 5.7 percent.*<sup>7</sup>

**Figure 5:**  
U.S. Subsidiary Output in the United States



Source: U.S. Bureau of Economic Analysis and Bureau of Labor Statistics. See Data Appendix for details.

For workers at insourcing companies, the bottom line of all these dynamic activities should be high and rising incomes. This is hinted at when one compares the share information accompanying Figures 1 and 5, which together imply that every year since 1987, output per worker has been higher in insourcing companies than in firms elsewhere in the U.S. economy. The actual data on worker compensation is the subject of the next chapter.

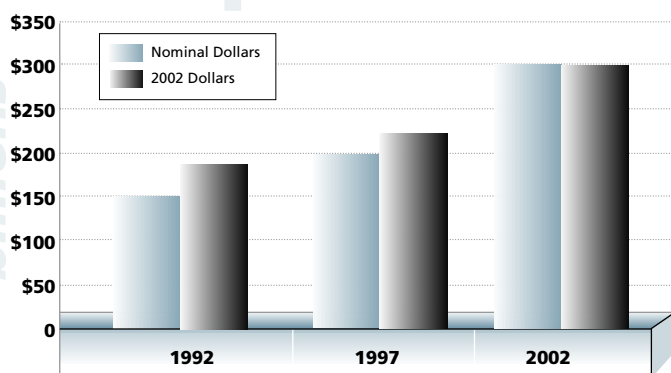
# INSOURCING COMPANIES PAY HIGHER COMPENSATION

*The previous chapter documented how insourcing companies account for high amounts of U.S. R&D, investment, and trade, both in total and per worker, all of which contribute to higher U.S. growth. The bottom line of these advantages shows up in a simple place: higher incomes for employees of insourcing companies than in the broader U.S. economy. This chapter examines the compensation paid by insourcing companies, and documents that U.S. subsidiaries pay higher average annual compensation than do domestic U.S. firms.*

## A. TOTAL U.S. COMPENSATION PAID BY INSOURCING COMPANIES

Figure 6 offers some initial evidence on the compensation paid by insourcing companies. For selected years since 1992 this figure shows total compensation paid to U.S. workers by all insourcing companies, in both nominal and inflation-adjusted real (2002) dollars. *The key message is the steady rise in total subsidiary compensation, in nominal terms doubling over the past decade from \$147.6 billion to \$307.1 billion. The subsidiary share of all U.S. private-sector labor earnings rose steadily as well: from just 5.1 percent in 1992 to 6.3 percent in 2002.*<sup>8</sup>

**Figure 6:**  
U.S. Subsidiary Compensation in the United States



Source: U.S. Bureau of Economic Analysis and Bureau of Labor Statistics. See Data Appendix for details.

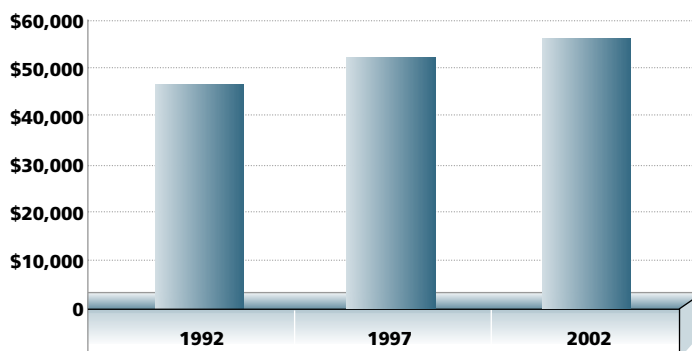
Insourcing companies account for a high and rising share of all U.S. worker earnings. But what about earnings per worker? Have they been rising? And are they higher than in firms elsewhere in the U.S. economy?

## B. PER WORKER U.S. COMPENSATION PAID BY INSOURCING COMPANIES

Growth in earnings per worker is shown in Figure 7. For selected years since 1992 this figure shows average annual compensation per U.S. worker paid by all insourcing companies.<sup>9</sup> To abstract from general

price inflation and focus on living standards, all averages here are in inflation-adjusted real (2002) dollars. *Real compensation of workers at insourcing companies has been rising—with much faster growth in recent years. Since 1997 average real earnings at these companies rose at an annual rate of 2.09 percent, reaching \$56,667 by 2002.*

**Figure 7:**  
U.S. Subsidiary Compensation Per Worker



Source: U.S. Bureau of Economic Analysis and Bureau of Labor Statistics. See Data Appendix for details.

This growth in real compensation since 1992, and its acceleration since 1997, are important to emphasize. To gauge the overall standard of living of a country's citizens, the single most important indicator of well-being is aggregate labor productivity: the average value of output a country produces per worker. When an economy's firms are able to generate more output per worker, its workers tend to join in these gains in rising real compensation, like that shown in Figure 7.<sup>10</sup>

The following quotation emphasizes this point. According to Alan Greenspan, Chairman of the U.S. Federal Reserve System:

[T]he nation's fortunes, to a very great degree, depend on the evolution of the growth of productivity ... It is structural productivity growth that determines how rapidly living standards rise over time ... Productivity growth is an unmitigated good for the large majority of the American people.<sup>11</sup>

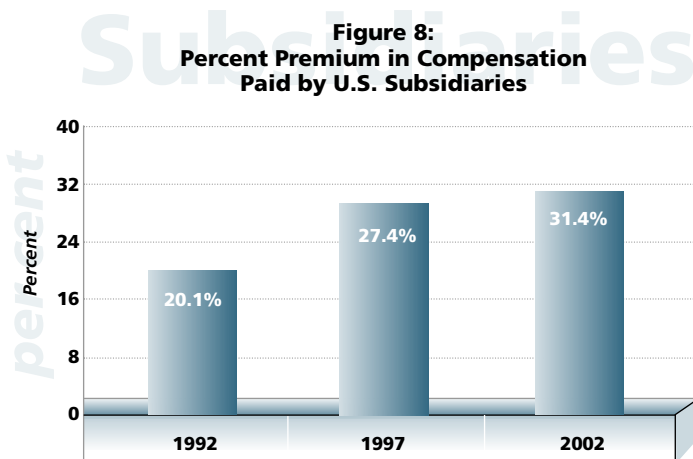
The economics for why productivity matters is very simple. Broadly defined, a country's standard of living rises with the quantity and quality of goods and services its citizens can consume. People achieve economic well-being by consuming goods and services such as food, clothing, and medical care. Consuming these items requires some means to pay for them. For most people, labor compensation is the primary way to pay for consumption (selling assets or borrowing are not sustainable alternatives). In turn, people's income comes from producing goods and services, usually by working with others in firms.

Thus, the more people produce in firms, the more compensation they receive and the more they can consume. Higher productivity means a higher standard of living.<sup>12</sup>

Figure 7 demonstrates that insourcing companies have delivered rising real compensation to their employees, the foundation of rising living standards. The previous chapter demonstrated that per employee, these companies tend to perform more of the R&D, investment, and trade that raise productivity. Does this mean that insourcing companies pay more than domestic firms do?

### C. INSOURCING COMPANIES PAY WORKERS HIGHER COMPENSATION THAN DOMESTIC COMPANIES

The crucial question of whether the productivity-enhancing activities of insourcing companies mean higher compensation for their employees than in the broader U.S. economy is addressed in Figure 8. This figure reports the percent by which average annual earnings in subsidiaries exceeded the average annual earnings in the rest of the U.S. private sector. *The key message of Figure 8 is that U.S. subsidiaries pay higher average compensation than do domestic U.S. firms: a premium that has risen steadily from 20.1 percent in 1992 to 32.7 percent in 2002. This premium squares with the intensity of R&D spending, capital investment, and exporting of insourcing companies—all activities that make workers more productive.*



Source: U.S. Bureau of Economic Analysis and Bureau of Labor Statistics. See Data Appendix for details.

It is important to emphasize that the compensation premium in Figure 8 might also reflect explanations other than higher worker productivity. One might be greater profit sharing: subsidiaries may earn higher profits, and/or share their profits more generously with workers.

It might also reflect unobserved worker quality: subsidiaries may seek workers with especially good characteristics and talents. Or, it might reflect performance characteristics other than foreign ownership per se: size, age, or geographic location (when certain U.S. states pay higher wages for other reasons), or industry of operation (when certain industries pay higher wages for other reasons).

Addressing all these considerations is far beyond the scope of this study. Indeed, a complete analysis would require a prohibitive amount of data for individual firms, workers, regions, and industries. That said, *it is important to point out that researchers who control for some explanations for the subsidiary compensation premium find that, conditional on observable characteristics of firms and workers, insourcing companies still pay higher incomes than do comparable firms elsewhere in the U.S. economy.*

Indeed, one recent study of individual plants in the manufacturing sector controlled for plant size, age, industry, and state; it still found a compensation premium at insourcing companies—and one that was higher for less-skilled production workers than for more-skilled non-production workers. This differential suggests that not only do insourcing companies pay higher earnings, but they also promote a broader distribution of income by paying a higher premium to traditionally lower-paid workers.<sup>13</sup>

### D. THE IMPORTANCE OF INSOURCING EMPLOYMENT TO LABOR UNIONS

It is commonly thought that insourcing companies avoid hiring unionized U.S. workers. This perception is simply wrong. *U.S. subsidiaries employ a larger share of unionized workers than do firms elsewhere in the overall economy.* The most-recent year for which such data are available is 2002. In that year the BEA reports that 14.9 percent of all U.S. employees of majority-owned nonbank insourcing companies—809,000—were covered by collective-bargaining agreements. In the entire U.S. private sector that year, the comparable figure was just 9.3 percent. This higher share of unionized workers for insourcing companies than for all companies was true in a number of broad industry groups. For example, in manufacturing the respective shares were 18.4 percent and 15.4 percent.

The key message? *Insourcing companies have more than a 50 percent greater collective-bargaining coverage than does the overall U.S. private sector.*<sup>14</sup>

### E. CHAPTER SUMMARY: COMPENSATION PAID BY INSOURCING COMPANIES

The central message of this chapter is that the performance advantages of insourcing companies appear in the bottom line of worker compensation. The real annual compensation of workers at insourcing companies has risen steadily for many years. Additionally, subsidiaries pay higher average compensation than do domestic U.S. firms, a premium that has also risen steadily. These facts appear in this chapter's comprehensive data on insourcing companies. These facts also appear in many of the case studies throughout this report.

The next chapter turns to benefits that insourcing companies bring to firms elsewhere in the U.S. economy.



# ADDITIONAL ADVANTAGES OF INSOURCING COMPANIES: THEIR IMPACT ON DOMESTIC COMPETITORS, CUSTOMERS, AND SUPPLIERS

*Chapters Two and Three demonstrated how insourcing companies benefit the U.S. economy through their employment and other dynamic activities like R&D, investment, and trade. But insourcing companies also contribute to the U.S. economy through their interactions with other domestic U.S. firms. They help boost the performance of domestic competitors by spurring heightened competition. They also help boost the performance of domestic suppliers and customers—e.g., through sharing information with and placing standards on suppliers.*

## A. THE IMPACT OF INSOURCING COMPANIES ON THEIR U.S.-BASED COMPETITORS

There is now a wealth of firm- and industry-level evidence for many countries that international competition stimulates the productivity of domestic firms. A repeated finding is that exposure to “global best-practice firms” via international trade and foreign direct investment stimulates firm productivity, and conversely that protection from global best practice retards it.

A clear overview of the globalization-to-productivity link appears in the work of Nobel Laureate Robert Solow and Martin Baily, former Chairman of President Clinton’s Council of Economic Advisors. They summarize the evidence from a wide number of studies as follows:

[T]he more a given industry is exposed to the world’s best practice high productivity industry, the higher is its relative productivity (the closer it is to the leader). Competition with the productivity leader encourages higher productivity. An implication of this finding is that some part of observed productivity disadvantages reflects organizational slack or an unwillingness to change and innovate. This corresponds to the belief, often expressed by managers, that when pressed by competition they can “take some of the cost out of the product.”<sup>15</sup>

Just as international trade can provide the discipline of foreign competition, so, too, can the presence of insourcing companies via foreign

direct investment. A prominent example where insourcing companies have played this role has been the U.S. automobile industry.

## B. THE BENEFIT OF INSOURCING COMPANIES TO THEIR U.S. CUSTOMERS AND SUPPLIERS

The other channel by which insourcing companies benefit domestic U.S. firms is their interactions—both market-mediated and also through “spillovers”—with domestic customers and suppliers. For example, subsidiaries might share technology and other knowledge with suppliers, to improve their quality and reliability. Customers might learn new marketing ideas from insourcing companies.

These upstream and downstream links to insourcing companies are hard to measure. This is especially so when they are not market transactions with observable prices and/or quantities. But on the supplier side, a useful gauge for the possible scope of such linkages is the extent to which insourcing companies purchase their intermediate inputs from domestic rather than foreign suppliers. It is often asserted that U.S. subsidiaries do not embed themselves in the fabric of the U.S. economy because they rely heavily on imports for key inputs. Is this true? Do insourcing companies not engage with potential U.S. suppliers?

Figure 9 reports the fraction of total purchases of intermediate inputs by insourcing companies accounted for by domestic suppliers. These shares are calculated from BEA data under the assumption that all imports by insourcing companies are of intermediate inputs.

# Exportise

## SPURRING COMPETITION BY INSOURCING TECHNOLOGY & EXPERTISE

Case Study: Honda

Locations: Marysville, Ohio; Lincoln, Alabama; and more ...

It is widely acknowledged that by the late 1970s, major U.S. auto firms made low-quality, gas-guzzling cars. Their turnaround to higher-quality, fuel-efficient products was driven largely by foreign automobile “transplants” building and selling cars here in the United States. The first such transplant was established by Honda. Honda, headquartered in Tokyo, Japan, has a 45-year history of U.S. operations and a 25-year history of U.S. manufacturing. In addition to directly supplying high-skilled U.S. jobs, Honda’s ongoing investments in capital and research & development have contributed to rising U.S. living standards through their impact on suppliers and competitors.

Investment in physical capital has been an essential component of Honda’s U.S. growth. From its initial \$35 million outlay in Marysville, Ohio, Honda’s investments have grown dramatically. In 2003 its investment in its eight U.S. manufacturing plants exceeded \$7 billion. Today Honda Manufacturing of Alabama is in the midst of a \$425 million expansion to double its capacity.

Investment in research and development has also been central to Honda’s U.S. strategy. Honda R&D Americas has grown from four associates in 1975 to over 1,200 today, spanning ten centers in five states. Interacting with Honda researchers worldwide, associates at Honda R&D Americas have designed and engineered flagship products such as the Pilot and Element. And in 2003, Honda opened a state-of-the-art, \$30 million safety research center in Ohio.

All these productivity-enhancing activities—capital investment and R&D,—have meant good jobs at good wages. By 2003, Honda employed more than 25,000 American workers. Its employment growth over the decades has never been interrupted by layoffs, which has meant more stable employment opportunities as well. The company experienced substantial employment growth even during the recent economic downturn: in particular, its manufactur-

ing employment rose by 27 percent from 2000 to 2003. Honda’s total U.S. payroll stood in 2003 at \$1.27 billion. Per worker, this meant an average wage of nearly \$51,000, well above the national average.

Honda’s growing U.S. presence has benefited not just its own employees, but also its suppliers and partners. For example, authorized Honda dealers employ more than 100,000 workers nationwide. Its supplier base has grown from 40 companies in 1982 to more than 580 today, spread across 33 states.

In 2003, total Honda purchases of parts and materials from U.S. suppliers exceeded \$12 billion. These inputs constitute the very large majority of U.S.-assembled Honda products. In fact, by EPA methodology Honda’s U.S.-assembled vehicles contain more than 90 percent U.S. content. And suppliers benefit not just from the business, but also from the sharing of expertise and technology with Honda, which makes suppliers more competitive. For example, the company has recently shared with U.S. steel suppliers innovations for stronger, rust-resistant steel.

It is important to recall that when Honda first began manufacturing in the United States, many were claiming that American workers had lost their ability to compete on world markets. Honda disagreed. In Marysville, Ohio, they found an educated, enthusiastic and hard-working American workforce. Honda brought key attributes to Ohio: technology, manufacturing expertise, innovative management skills, and high quality standards. Added together, the company’s know-how and Ohio workers led to skyrocketing car sales. As Honda and other insourcing car companies gained U.S. market share, U.S. automakers realized they needed to work harder and raise standards to compete.

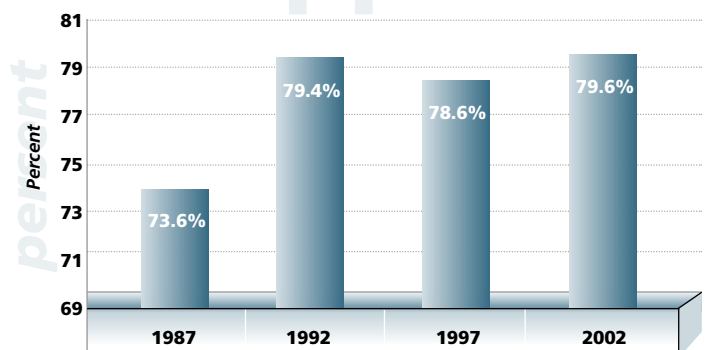
For more information on Honda, go to <http://www.hondacorporate.com/>

Because some imports are of final goods and services rather than intermediates, these calculated shares lie below the true domestic supplier shares.<sup>16</sup>

For nearly a generation, U.S. subsidiaries have obtained a high and rising majority of their inputs from domestic firms rather than through imports. This domestic share has risen steadily, from just over 70 percent to nearly 80 percent today. Insourcing companies in 2002 bought over \$1.26 trillion in intermediate inputs from U.S. companies.

Figure 9 suggests ample opportunity for U.S. suppliers to benefit from serving insourcing companies. These benefits are another channel through which insourcing companies can help raise overall U.S. living standards.

**Figure 9:**  
Share of U.S. Subsidiary Intermediate Inputs  
Sourced From Domestic Suppliers



Source: U.S. Bureau of Economic Analysis. See Data Appendix for details.

# SUMMARY, A CAUTION, AND POLICY RECOMMENDATIONS

## A. SUMMARY

This report has documented the contributions of insourcing companies to the U.S. economy. Amidst current concerns that globalization harms the U.S. economy, it is important to explain and document these contributions.

Of course, the most obvious contribution of insourcing is the “bricks & mortar” and jobs it supports. In the past generation, the number of U.S. jobs at insourcing companies has more than doubled. Beyond job growth, these companies have also performed sizable and rising amounts of the crucial activities that make workers and the overall economy more productive: investment in research and development, investment in physical capital, and global engagement through international trade. The bottom-line impact of these growth-enhancing activities is the fact that U.S. subsidiaries pay higher average annual compensation than do domestic-based U.S. firms.

Another important contribution is the interaction of insourcing companies with other domestic U.S. firms. They help boost the performance of domestic suppliers and customers—e.g., through sharing information with and placing standards on suppliers. They also help boost the performance of domestic competitors by spurring heightened competition.

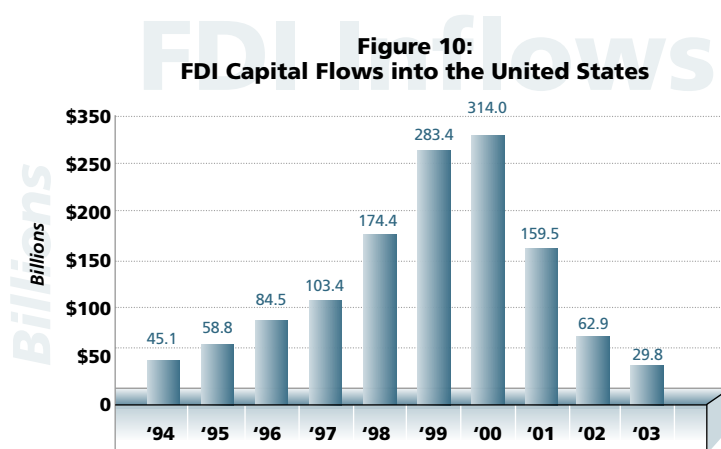
## B. A NOTE OF CAUTION

The statistics and anecdotes laid out in this report establish that insourcing is a vital part of the U.S. economy. But in late 2004, a note of caution is warranted. It has never been guaranteed that the world's best companies would invest in the United States. But as this report has documented, over the past generation these companies have, in fact, expanded their U.S. activities. Will the future repeat the past? There is reason to hope so, as today the United States still maintains many of its traditional advantages such as flexible labor and capital markets. But there is also reason for caution.

In recent years, the world economy has expanded by an extent never before seen. The world's two most populous countries, China and India, have dramatically liberalized their international trade and investment policies. Their integration has come along with similar integration by many other developing countries: think Mexico and the enactment of the North American Free Trade Agreement, or the recent European Union accession of ten formerly communist countries across eastern Europe.

What all this means is that multinational companies today have an even wider range of countries in which they can expand their operations. Is there reason to think that the attractiveness of the United States for these companies is declining? Figure 10 suggests the answer might be, “yes.”

For the previous decade, Figure 10 plots annual flows of FDI capital into the United States as tracked (in nominal terms) by the BEA. Earlier figures in this report documented various activity measures for the *stock* of all insourcing companies in various years; this figure documents the cross-border *flow* of FDI capital by these companies into the United States.<sup>17</sup>



Source: U.S. Bureau of Economic Analysis. See Data Appendix for details.

The important message of Figure 10 is that the flow of FDI capital into the United States has plummeted since 2000. From a peak inflow of \$314.0 billion in 2000, by 2003 the inflow had fallen by over 90 percent to just \$29.8 billion. What accounts for this dramatic drop-off? It appears to be at least partly a cyclical change, a slowdown after the dramatic surge in FDI inflows in the late 1990s during the peak of the previous U.S. economic expansion. Indeed, FDI inflows and economic growth have fallen for many countries, not just the United States.

But the decline in Figure 10 may reflect a structural change as well. In recent years the trade and investment liberalizations of China, India, and other countries have become widely regarded as irreversible. Economic growth in many of these countries has been surging—as have inflows of FDI capital. The data here are striking.

With its post-2000 slump in Figure 10, the United States has lost its status as the world's leader in attracting new FDI inflows. In fact, both the United Nations and the Organization for Economic Cooperation and Development calculate that in 2003, for the first time China attracted more FDI inflows than did the United States. So, too, did France, Luxembourg, and the developing-country region of Latin America and the Caribbean—with many countries like Ireland and Spain just behind U.S. levels. Net inflows of FDI from OECD

countries to developing countries surged six-fold in 2003, from just \$31.7 billion to \$192 billion, the highest net total on record. The bottom line is that the U.S. share of total world FDI inflows fell from 22.6 percent in 2000 to just 5.3 percent in 2003.<sup>18</sup>

*The note of caution, then, is that the United States is facing more competition from other countries to attract and retain insourcing companies and the jobs they support.* Looking ahead, if the recent trend in Figure 10 were to continue, then the data of the previous generation presented in this report would likely not be repeated. Instead, a generation from now, this report would likely show flat or even declining levels of employment, R&D, investment, and trade at insourcing companies.

The U.S. economy would face a declining role for some of its most dynamic firms. The challenge for policymakers is to ensure the United States remains a competitive location for investment.

### C. POLICY RECOMMENDATIONS

This report has documented the benefits that insourcing companies bring to the American economy. What can government officials in the United States do to ensure that these companies continue to invest and hire here? The following are four concrete policy recommendations, ranging from policies targeted specifically at insourcing companies to policies aimed at the overall economy more generally.

1

#### RECOMMENDATION #1:

##### **Actively Promote the United States as an Insourcing Location**

Reportedly, there are 19 federal agencies in the United States that promote American exports and none that work to attract foreign direct investment.<sup>19</sup> In an increasingly competitive world, the United States can not simply assume that it will attract foreign direct investment without effort. Many individual states make their own efforts, but this is not sufficient. A national effort to attract insourcing should be considered.

#### RECOMMENDATION #2:

##### **Ensure National Treatment of Insourcing Companies**

For insourcing companies to continue expanding in the United States, they must know they will receive non-discriminatory treatment under U.S. law. Such non-discriminatory treatment, referred to as “national treatment,” ensures that insourcing companies will face the same legal requirements and enjoy the same benefits as U.S.-based firms. In 1989, President George H. W. Bush reiterated the U.S. commitment to national treatment in a presidential policy statement on foreign investment. Future administrations should update and restate this policy both to ensure that all government agencies respect the principle of national treatment and to signal that the United States welcomes foreign investment and the insourcing of jobs it brings.

2

#### RECOMMENDATION #3:

##### **Continue to Expand Trade and Investment Liberalization**

3 As this report has demonstrated, many insourcing companies expand in the United States not only to serve the U.S. market but also to produce here for world markets. Trade and investment agreements with other countries provide an incentive for insourcing companies to use their U.S. operations as a platform for exports. Accordingly, the United States should continue to pursue trade and investment liberalization.

#### RECOMMENDATION #4:

##### **Assess Competitive**

##### **Advantages and Disadvantages for Attracting Insourcing**

This report has demonstrated that many insourcing companies are drawn to the United States by a set of strengths: America’s talented workforce across many occupations, its deep capital markets, and its culture of innovation and entrepreneurship. But what are America’s weaknesses? Policymakers should examine all factors that business leaders weigh when deciding where to locate new operations. Conventional wisdom is that labor cost is the sole determinant of these decisions. If that were true, then insourcing companies would not be paying higher compensation in the United States and many poor countries would be economic powerhouses.

4

# APPENDIX: DATA SOURCES AND DEFINITIONS

## THE BEA DATA ON U.S. SUBSIDIARIES OF FOREIGN CORPORATIONS

Each year since 1977, the BEA has tracked U.S. subsidiaries of foreign multinationals through legally mandated surveys that collect and publicly disseminate operational and financial data. Firms face civil and criminal penalties for non-compliance. By design, BEA statistics track all insourcing companies operating in the United States. There is no other U.S. government or private-sector data source on these subsidiaries that matches the BEA's breadth, depth, or rigor.

The BEA definition of a U.S. subsidiary is a U.S. business enterprise in which there exists foreign direct investment (FDI), i.e., in which a single foreign person owns or controls, directly or indirectly, 10 percent or more of the voting securities of an incorporated U.S. business enterprise or an equivalent interest in an unincorporated U.S. business enterprise. In the large majority of cases that foreign person is a foreign-headquartered corporation, but it may also be other legal forms including an individual, partnership, estate, or trust. Majority-owned subsidiaries are those with at least a 50 percent foreign ownership stake. In this report, U.S. subsidiaries of foreign-owned multinationals will be interchangeably referred to as "insourcing companies".

The basic BEA data unit is an enterprise, i.e., a firm. Its basic unit is not establishments within firms, as in some other U.S. government data sets. Key BEA data items collected for each subsidiary that are used in this report include sales; value-added output; capital investment in property, plant, and equipment; R&D (value and employment); exports and imports of goods; employment (full- and part-time, unionized and not, that are paid directly by the affiliate); and employee compensation (wages, salaries, and benefits—mandated, contracted, and voluntary). Data items are to be reported for either the year-end or year average, where year is fiscal year falling in the survey year.

For each subsidiary, the BEA requests information on both the foreign parent (i.e., the foreign business that undertakes the FDI) and the ultimate beneficial owner (or UBO, i.e., the foreign business that might have majority control over the foreign parent and any subsequent firms). In the large majority of cases, the foreign parent and the UBO are the same entity. The BEA tracks virtually no information on foreign parents and UBOs, other than their nationality.

All publicly available data on U.S. subsidiaries is somehow aggregated to avoid identifying individual companies: by primary industry of operation; by U.S. state; by nationality of (mainly) UBO. At the time of writing this report in August 2004, the BEA's most recent year

of data on insourcing companies is 2002. This was a "benchmark survey" year, meaning a year in which the BEA collects and disseminates more and more-detailed data about insourcing companies. Previous benchmark survey years are 1997, 1992, 1987, and 1980. At the time of writing this report, the 2002 BEA data available were preliminary, not the final revised version.

The BEA collects and disseminates very little information about subsidiaries whose main line of business is banking. This is because banking subsidiaries already disclose substantial information to other government agencies. In addition, starting with its data for 2002 the BEA has decided to focus its data collection and dissemination on majority-owned subsidiaries. This is because in minority-owned subsidiaries foreign owners hold a more-ambiguous degree of operational control.

Consistent with BEA data practices for 2002 forward, then, in this report BEA data on insourcing companies will be presented for the group of majority-owned nonbank subsidiaries. The facts about this group of subsidiaries are representative of the facts for all subsidiaries. This is because majority-owned nonbank subsidiaries account for the large majority of total nonbank subsidiary activity—e.g., 91.4 percent of employment in 2002. This is also because bank subsidiaries are relatively small in total: in 2002 majority-owned bank subsidiaries had just 2.6 percent of the employment of majority-owned nonbank subsidiaries.

In conclusion, this report's facts about majority-owned nonbank subsidiaries should be interpreted as a "floor," above which lie the data for the broader collection of all subsidiaries.

The BEA data used in this report can be accessed both in print and on-line. On-line data (with documentation), and also publication information, are all available at [www.bea.gov](http://www.bea.gov). It is important to note the BEA makes publicly available a substantial amount of subsidiary information for each of the 50 U.S. states. Highlights of such state totals can be found at the website of the Organization for International Investment, [www.ofii.org](http://www.ofii.org).

## DATA ON THE OVERALL PRIVATE-SECTOR U.S. ECONOMY

In this report, BEA data on insourcing 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-BEA data are as follows, where all on-line data were obtained in late August 2004.

*Data Appendix continued*

## **Chapter 2**

Figure 1, Employment. Bureau of Labor Statistics, U.S. Department of Labor: U.S. non-farm payroll employment excluding the government sector. Available at [www.bls.gov](http://www.bls.gov).

Figure 2, Research and Development. National Science Foundation: Total R&D performed by the industrial sector, current dollars. Available at [www.nsf.gov](http://www.nsf.gov).

Figure 3, 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 4, Exports of Goods. BEA National Income and Product Accounts.

Figure 5, Private-Sector Gross Domestic Product. BEA National Income and Product Accounts.

## **Chapter 3**

Figure 6, Total Compensation. The measure of inflation used to deflate nominal earnings was the Consumer Price Index-All Urban Consumers (CPI-U) from the Bureau of Labor Statistics, U.S. Department of Labor ([www.bls.gov](http://www.bls.gov)). 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.

Figure 7, Real Subsidiary Compensation per Worker. See references for Figures 1 and 6.

Figure 8, Subsidiary Compensation Premium. See references for Figures 1 and 6.

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# ENDNOTES

<sup>1</sup> BEA data on subsidiary employment count workers, full- and part-time, that are paid directly by the affiliate company (“on the payroll” is the phrase on the actual survey). Any people who might work at a subsidiary but through a third-party employment agency, where that agency pays the workers, would not be part of the BEA employment count. To maximize comparability with the BEA data, the private-sector employment totals exclude depository institutions and private households. See Data Appendix for data sources.

<sup>2</sup> Hanson, Mataloni, and Slaughter (2001) analyze BEA data to show this evolution in multinational strategies over the 1980s and 1990s.

<sup>3</sup> The BEA measure of subsidiary R&D activity varied over time. In years since 1992 the BEA has tracked the value of R&D performed by subsidiaries. In years before 1991 the BEA tracked the value of R&D expenditures by subsidiaries, which excluded R&D performed by others under contract. To maximize comparability with the BEA data, the private-sector R&D totals cover R&D performed (i.e., not funded) by firms. See Data Appendix for data sources.

<sup>4</sup> One of the earliest formulations of how capital accumulation raises output per worker was by the Nobel Laureate Robert Solow (1957). He rigorously modeled that investment in physical capital tends to increase productivity. The link from higher investment to higher productivity assumes that an economy has not reached its “steady state” at which capital investment just offsets capital depreciation (i.e., the inevitable wear and tear on capital goods from their use). In the steady state (with constant technology and no population growth), output per worker is constant. Most economists think, however, that countries in the real world tend not to be in steady states.

<sup>5</sup> The BEA measure of capital investment covers gross expenditures for property, plant, and equipment. This data item was not collected by BEA in years before 1987. To maximize comparability with the BEA data, the private-sector investment totals exclude both government investment and also private-sector residential construction, which is a component of overall investment in the U.S. National Income Accounts. See Data Appendix for data sources.

<sup>6</sup> All export data in these figures are for trade in goods only. The BEA data do not consistently track over time subsidiary trade in services. To maximize comparability with the BEA data, the all-U.S. export data are of goods only. See Data Appendix for data sources.

<sup>7</sup> To maximize comparability with the BEA data, the private-sector GDP totals exclude depository institutions and private households. To adjust the data on nominal output for rising general prices over time, the final year of 2002 was chosen as the “base” year to convert to inflation-adjusted, or real, output. See Data Appendix for details.

<sup>8</sup> The BEA measure for compensation includes both wages and salaries and also benefits (mandated, contracted, and voluntary) such as health care and Social Security contributions. To adjust the data on nominal compensation for rising general prices over time, the final year of 2002 was chosen as the “base” year to convert to inflation-adjusted, or real, earnings. A comparably comprehensive measure of compensation for the overall private sector was used for the national totals. See Data Appendix for details.

<sup>9</sup> For each year in Figure 8, nominal compensation per worker was first calculated dividing total compensation from Figure 7 by total employment from Figure 1. These nominal earnings were then converted to real 2002 dollars as described in note 13. See Data Appendix for details.

<sup>10</sup> It is important to clarify that this report is defining productivity as the productivity of labor. Economists sometimes use other productivity measures as well. For example, capital productivity is a measure of the average value of output produced per unit of capital. “Total factor” productivity is a measure of the average value of output produced per bundle of inputs such as labor and capital.

<sup>11</sup> Remarks before the Independent Community Bankers of America, Honolulu, Hawaii, March 13, 2002, and before the Boston College Conference on the New Economy, March 22, 2000.

<sup>12</sup> It is important to emphasize that productivity growth viewed from the output side tends to be matched by real-compensation growth viewed from the income side. Productivity and real compensation do not always move in lock-step year by year, but over longer time periods their growth rates have tracked each other quite closely. For example, several different real-wage measures, Baily (2001) reports a consistently strong pattern of accelerating growth in both real compensation and labor productivity in the United States over roughly 1995-2001. But as in previous U.S. economic recoveries, since then growth in U.S. real compensation has lagged productivity growth.



<sup>13</sup>This study is Doms and Jensen (1998), who analyzed over 115,000 U.S. manufacturing plants in 1987. See, in particular, Table 7.4, p. 244. Similar studies that find persistent wage premia paid by insourcing companies include Howenstine and Zeile (1994).

<sup>14</sup>These 2002 figures were reported in Table 9 of Zeile (2004). Collective bargaining agreements can cover not just workers who are members of unions but also non-unionized workers whose work contracts are covered by union collective-bargaining agreements. That said, the very large majority of workers covered by such agreements are themselves union members.

<sup>15</sup>Baily and Solow (2001).

<sup>16</sup>For each year of data in Figure 9, total intermediate input purchases by insourcing companies are calculated as total sales less value-added output. Assumed imported intermediates come from the data in Figure 6. See Data Appendix for details.

<sup>17</sup>FDI capital inflows are the sum of equity capital inflows, inter-company debt, and reinvested earnings. These data on FDI capital inflows come from BEA (2004).

<sup>18</sup>Statistics in this paragraph are based on data from Organization for Economic Cooperation and Development (2004) and United Nations Conference on Trade and Development (2004).

<sup>19</sup>David J. Rothkopf, "Just As Scary As Terror: Anyone Seen Our Economic Policy?" Washington Post, July 25, 2004, p. B1.