

FDI in U.S. Metro Areas: The Geography of Jobs in Foreign- Owned Establishments

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Findings

This paper advances the understanding of foreign direct investment (FDI)—that is to say, the U.S. operations of foreign companies—in U.S. metro areas in three ways. First, it provides a framing of what FDI is and why it matters for the United States and its regions. Then it presents new data on jobs in foreign-owned establishments (FOEs) across the nation's 100 largest metropolitan areas between 1991 and 2011. It concludes with a discussion of what policymakers and practitioners can do to maximize the amount, quality, and economic benefits of FDI into the United States.

The new data on the geography of jobs in FOEs forms the centerpiece of this report and reveals that:

- **Foreign-owned U.S. affiliates directly employ some 5.6 million workers spread across every sector of the economy.** The number and share of U.S. workers employed in FOEs increased steadily through the 1990s before peaking in 2000 and then stagnating.
- **The nation's largest metro areas contain nearly three-quarters of all jobs in FOEs.** Fully 74 percent of all jobs in FOEs are concentrated in the country's 100 largest metro areas by population, compared to 68 percent of total private employment.
- **FDI supports 5.5 percent of private employment in the average large metro area, with significant regional variation.** This share runs from a high of over 13 percent in Bridgeport, CT, to a low of about 1 percent in Provo, UT, reflecting generally higher shares in the eastern half of the country.
- **Mergers and acquisitions—not establishment openings—drive changes in the number of jobs in FOEs over time.** Increases in the number of jobs supported by FDI in the average year reflect net transfers of jobs into foreign ownership through M&As, not new jobs created in FOEs. The data analysis suggests that FDI itself is not a net source of direct job creation.
- **Jobs in FOEs are relatively concentrated in manufacturing and advanced industries; however they have become more services-oriented over time.** In 2011, FDI employed 18.5 percent of U.S. manufacturing workers and FOEs employed 1.4 million U.S. workers in the nation's technology- and skill-intensive advanced industries. However, the share of jobs in FOEs in services has increased over time, rising from 49 percent in 1991 to 57 percent in 2011 as manufacturing's share of jobs in FOEs fell from 48 percent to 38 percent.
- **FDI contributes to and in some cases drives industry specialization in metro areas.** In several of the nation's most significant regional industry concentrations, the foreign share of total jobs is double the foreign share of all jobs in the metro area. In several other metro areas—especially those specializing in auto manufacturing—FOEs drive regional industry specializations completely.
- **The average large metro area contains FDI from 33 different countries and 77 different city-regions worldwide.** Despite this diversity, in 2011 companies based in the 10 top countries and city-regions accounted for 75 percent and 46 percent of all jobs in FOEs, respectively. In total, companies from 445 different city-regions spread across 115 different countries have direct investments in the United States.

These findings together with the existing empirical literature suggest that good FDI policy does not treat FDI attraction as an end in itself but rather regards it as a tool for strengthening industry clusters, infusing new knowledge and technology into U.S. production systems, and increasing global engagement in U.S. regions. In this sense, the core tenets of a good FDI policy overlap significantly with good economic development policies that stoke innovation, upgrade infrastructure, and augment workforce skills in order to cultivate dynamic regional economies that draw high-quality inward investment naturally.

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I. Introduction

Seven years since its onset, recession's shadow still looms over the U.S. economy, posing a direct challenge to the nation's competitiveness and its long-term prospects. The slow pace of recovery has spurred renewed attention to the basic drivers of economic growth: technology innovation, a skilled workforce, infrastructure, and trade.

As part of that process, many metropolitan regions, the engines of the national economy, are examining the potential contributions of foreign direct investment (FDI) to their economic development efforts.

The allure of FDI stems from some attractive headline statistics. In 2011 majority-owned U.S. affiliates of foreign companies employed 5.6 million American workers, including over 2 million workers in the manufacturing sector and 1.4 million in the advanced industries sector, where research and development (R&D) activity and the nation's science and technology workforce concentrate.¹

The potential contribution of FDI to national and regional economic development extends far beyond the number of jobs it supports, however. Equally, if not more, important are the ancillary economic benefits that typically accompany FDI: higher wages, increases in trade, R&D spending, and productivity.

Yet large information gaps persist around the concept of FDI—what it is, why it matters, and the appropriate role for policy—and on its subnational geography.

Without a complete picture of where foreign companies have chosen to locate their U.S. operations at the metropolitan level, understanding of investment motivations has suffered. States and localities mispend resources on tax incentives and subsidies instead of cultivating environments that draw FDI naturally. Places that wish to take advantage of FDI to complement existing strengths and upgrade their production base remain handicapped in their efforts to differentiate themselves and target their limited resources effectively.

Meanwhile, FDI in the United States is itself highly differentiated. It enters every sector from retailing to advanced manufacturing with motivations that range from accessing skilled workers and research institutions to sourcing technology or increasing sales. Not every investment carries with it equal economic development potential. Exaggerated expectations abound.

Better information is therefore needed, not least because shifts in the global economy mean the United States' position as the largest recipient of FDI is no longer guaranteed. With emerging markets now competing alongside established ones to attract high-value foreign capital to their own countries, the United States can no longer continue to take its competitiveness as an investment destination for granted.

As the nation takes a fresh look at FDI, metropolitan areas will emerge as critical determinants of the amount, quality, and ultimate economic impact of that investment into the United States. As this analysis will show, FDI exhibits clear location preferences and is overwhelmingly attracted to metropolitan areas and the industry clusters within them.

In this regard, policymakers should recognize FDI as inextricably bound up with industry clusters—geographic concentrations of skilled workers, innovation assets, infrastructure, and supply chains. High quality FDI is drawn to such clusters and strengthens them further with infusions of knowledge, technology, and ideas. Clusters also accelerate spillovers and integrate new investors into the economy, ensuring that footloose companies put down roots.

Therefore, instead of narrowly treating FDI as a source of jobs, policymakers should embrace FDI as an important potential force for advancing economic development and engaging globally—and they should design policies accordingly.

"FDI in U.S. Metro Areas" provides new data to inform decision-making and improve understanding of FDI, its potential, and its subnational geography. The report provides a survey of jobs in majority foreign-owned business establishments located across the U.S. landscape with a focus on the 100 largest U.S. metropolitan areas by population. The time-series dataset contains unprecedented geographic detail with analyses by industry, mode of entry, country of origin, and foreign city-region of origin as well as change over time from 1991 to 2011.

This paper begins with a review of FDI and identifies recent global trends in investment. Next, it moves into a brief discussion of the methodology underlying Brookings' novel approach to measuring the geography of jobs in foreign-owned establishments. The heart of the report, Chapter IV, contains the findings from that analysis. "FDI in U.S. Metro Areas" closes by outlining a federal, state, and local agenda for maximizing FDI's economic development potential.

II. What Is Foreign Direct Investment and Why It Matters

Foreign direct investment (FDI) is one of the concrete ways in which economic globalization manifests itself in countries and regions. In an increasingly interconnected global economy, multinational enterprises (MNEs) choose from a world of locations for conducting their business, weaving the world map together with corporate networks and supply chains as they do so. All told, in 2013 companies invested \$1.46 trillion in locations outside their home country—\$193.4 billion of which came to the United States.² Not only does FDI directly employ millions of U.S. workers; it also spreads technologies, facilitates knowledge exchange, and forges new trading relationships—all crucial ingredients to economic development. Nonetheless, FDI, its drivers, and its effects are frequently misunderstood.

What is foreign direct investment?

FDI occurs when an entity based in one country (the home country) invests in a business enterprise in another country (the host country), and this investment gives the former a controlling interest (i.e. majority stake) in the management and operations of the latter.³ Implicit in FDI is a close and active relationship between the two parties, and by extension, the intention of the investing entity to establish a lasting presence in the host market.⁴

At the most basic level, firms invest directly abroad for two reasons: to find new markets for their products or services, or to exploit differences in factor conditions—meaning the prices or relative abundance of inputs into the production process—across countries.⁵ Investors may also be drawn abroad by perceived opportunities to increase the returns on another company's assets through an acquisition. On all three fronts, the United States offers clear appeal as the world's largest economy, with high per capita incomes, a stable investment environment, deep capital markets, strong institutions, and a dynamic innovation system.⁶

Firms that go abroad to access new markets typically have well-honed competitive advantages from their home countries that grant them the financial wherewithal to expand into foreign markets.⁷ Market-seeking FDI is usually driven by a target country's size, growth, or income level, and sometimes preferential access to third-country markets.⁸ Companies engaged in market-seeking FDI concentrate in industries where the economics favor—or require, in the case of many services—producing close to consumers.

By contrast, firms that go abroad to exploit differences in the relative abundance or price of an input to the production process typically aim to secure access to resources or reduce their costs by locating each activity wherever it can be conducted most profitably. This type of FDI is often associated with developing countries but in reality still plays a large role in the United States and other developed economies. The United States has technology and intellectual property in abundance, for example. Companies entering the U.S. market to secure these kinds of strategic assets do so by tapping into the nation's innovation clusters and pools of skilled labor, and also by purchasing intellectual property and sourcing technology through acquisitions.⁹ Although the United States remains a relatively high-wage country, it still attracts foreign investment into more traditional sectors such as natural resources and heavy manufacturing thanks to favorable geology and falling energy costs.¹⁰

In practice, the investment calculus facing firms is complex. Multiple considerations underlie the decision to pursue FDI over alternatives like exporting or licensing to a local producer, and multiple factors come together to determine the ultimate location choice.¹¹

Once a firm decides to invest directly in a foreign country, it can choose to enter the market in two ways: by opening a new establishment through a greenfield investment, or by purchasing an existing company's assets through a merger or acquisition. Establishment openings represent net expansions of employment and investment. Mergers and acquisitions (M&As), by contrast, represent a transfer of ownership of existing productive assets to a foreign company and are not automatically associated with direct employment effects.¹²

Why FDI matters for the United States and its regions

At the most basic level, a capital investment stands behind every job in the economy. At a time when jobs are scarce and corporate investment still trails pre-recession levels, FDI offers a fresh injection

of capital—frequently backed by the latest technology—from outside of the U.S. economy.¹³ However, FDI matters to the United States and its regions for reasons beyond capital and jobs. The sector itself exhibits a number of characteristics that point to an outsized economic impact:

- **U.S. affiliates of foreign companies pay well-above average wages.** Jobs in foreign-owned firms are in general high-quality, high-paying jobs. According to data from the Bureau of Economic Analysis (BEA), the average worker employed by a foreign-owned firm earned more than \$77,000 in compensation in 2011, compared to just \$60,000 for the average U.S. worker.¹⁴ In addition, foreign firms spend well over double the private sector average on benefits per worker.¹⁵ These firms pay higher wages because they tend to be highly productive and concentrate in capital-intensive, high-skilled industries.¹⁶ Even controlling for those characteristics, foreign firms in the United States hire more skilled workers and invest more in worker training than domestic firms.¹⁷
- **FDI increases the country's capital stock and boosts productivity through spillovers.** Beyond accounting for an outsized 15.2 percent of annual investment into the country's capital stock, FDI positively impacts productivity in a number of ways.¹⁸ Productivity spillovers accrue via backward linkages, whereby foreign firms induce supplier upgrading to meet higher standards or share best practices and technologies with other firms in its network.¹⁹ World-class management techniques and production processes also spill over into the broader economy via the normal course of business, labor turnover, and fact-to-face interaction.²⁰ Spillovers from FDI are estimated to have accounted for 12 percent of U.S. productivity growth from 1987 to 2007 alone.²¹ Additionally, FDI often increases competition in its industry, disrupting the status quo and forcing competitors to become more efficient.²² For all these reasons, the relationship between domestic productivity in an industry and foreign-affiliate share of that industry's output is positive and strong.²³
- **FDI bolsters the country's manufacturing base.** In 2012, 48 percent of all FDI dollars destined for the U.S. flowed into manufacturing, shoring up the country's eroding production base.²⁴ The share of U.S. manufacturing jobs in foreign-owned firms rose from 12.5 percent in 1998, when employment in the sector last peaked, to 18.5 percent in 2011.²⁵ This capital not only supported the continued production of goods in the United States, but also served to restructure the sector through the diffusion of product and process innovations, the introduction of new labor practices, and integration into global production networks.
- **FDI increases trade and exports.** Foreign affiliates produced more than one-fifth of all U.S. goods exports in 2011 and accounted for 28 percent of all goods imports, highlighting the sector's complex integration into global production networks.²⁶ In 2011, foreign firms imported \$636 billion worth of intermediate parts and finished products and exported nearly \$304 billion worth of goods from the United States—up 26.6 percent from the previous year.²⁷ What is more, FDI may indirectly boost exporting by influencing domestic firms' decision to export by opening up new distribution channels and by generating information spillovers concerning how to export, tastes in foreign markets, and potential opportunities for trade.²⁸
- **U.S. affiliates of foreign companies conduct a large amount of R&D.** In 2011, the affiliates of foreign-owned companies spent \$45 billion on R&D, accounting for 15.4 percent of all business R&D conducted in the United States that year, and substantially outweighing their share of U.S. private employment or value added.²⁹ Moreover, removing public funds for R&D from the calculation, foreign affiliates' share of all corporate R&D expenditures in the United States stood at over 19 percent in 2011.³⁰
- **FDI transmits knowledge and best practices between clusters.** MNEs themselves serve as key conduits for information exchange in the global economy. Companies with footprints in multiple clusters serve as bridges that carry knowledge and technology from one milieu to another.³¹ With 68 percent of global R&D funds deployed outside the United States, FDI establishes vital transmission lines for some of that knowledge to make its way into U.S. clusters.³² These linkages also expose U.S. companies to both new and simply foreign marketing, management, and workforce best practices.³³ Foreign practices need not always be better; just by being different they can give rise to new and productive ideas. In this sense, FDI serves as a pipeline for fresh injections of technology and techniques to be adapted and redeployed in the United States.

FDI accomplishes all of this not by simple virtue of its foreignness, but rather because it is conducted by MNEs that, regardless of country of origin, enjoy a number of competitive advantages.³⁴

Promoting U.S. Exports: Linkages Between FDI and Exports

Multinational enterprises by definition stand behind global flows of direct investment. They play an outsized role in trade among countries as well. In 2011, the affiliates of foreign companies imported \$636.2 billion worth of intermediate goods and final products for consumption and exported \$303.7 billion of value-added in goods from the United States, accounting for over 20 percent of total U.S. goods exports and illustrating how FDI links the United States to the global economy through multiple channels.

The contributions of FDI to U.S. exports can be categorized into direct and indirect effects. The direct effects refer to exports by foreign affiliates themselves, which the auto industry exemplifies. For nearly the entire history of foreign automaking in the United States—starting with the arrival of Honda near Columbus, Ohio and Nissan near Nashville, Tennessee in the early 1980s—foreign companies have exported varying numbers of their U.S.-made vehicles.

In 2013 Honda became a net exporter from the U.S. market, exporting over 108,700 U.S.-made Honda and Acura vehicles compared to the 88,500 vehicles it imported from Japan. Long a base for export-oriented production, the share of vehicles exported from BMW's Spartanburg, South Carolina plant now stands at over 70 percent. Mercedes-Benz, for its part, exports more than half of the vehicles produced in its Birmingham, Alabama plant to 135 different countries. Of course, these exports contain imported parts as well.

Beyond such direct effects, FDI enhances U.S. exports indirectly through spillovers on the propensity of local firms to export. The presence of multinationals can lower the perceived barriers to exporting that domestic firms often encounter and spread better information on market opportunities abroad. The demonstration effect, whereby domestic firms in the same or related industries imitate multinationals' marketing strategies or learn how to navigate the export process from the new arrival, has power too. New suppliers to foreign firms in the United States may find opportunities for exporting to the downstream company's operations in other countries as well.

M&As offer one particularly advantageous route to boosting exports via FDI by folding the target domestic firm into the parent company's global distribution and production network. This gives the target firm access to parent company's international trade infrastructure and management expertise—including well-honed marketing know-how. For instance, the recent takeover of Kansas City-based Boulevard Brewing Company by Belgium's Duvel not only brought with it a fresh injection of capital to expand Boulevard's production, but also has the potential to increase its exports to Europe and other countries by granting access to Duvel's global distribution system.

Source: International Trade Administration, "Trends in U.S. Vehicle Exports," (U.S. Department of Commerce, July 2013); Stephanie Strom, "Belgian Brewery Buys U.S. Maker of Craft Beers," The New York Times, October 17, 2013.

MNEs are typically large and therefore exhibit economies of scale. MNEs are both capital-intensive and overrepresented in skill- and technology-intensive industries. With global footprints, they can exploit the comparative advantages of many different localities. And they enjoy a number of proprietary advantages, ranging from technology to marketing to management.³⁵

That said, in two key respects the foreignness of FDI itself is important: It brings with it exposure to new knowledge, customs, and practices, and it establishes trade and investment linkages between regions globally.³⁶ In the process, FDI can increase the global fluency—which is itself an increasingly important determinant of regional competitiveness in the modern economy—of host regions.³⁷ The foreignness of FDI therefore serves to integrate its host regions more fully into a rapidly globalizing economy where 85 percent of economic growth through 2019 is projected to occur outside of the United States—even if the capacity to take advantage of the opportunity varies by region.³⁸

For all these reasons, FDI generally brings with it significant opportunities for economic development. However, not every investment carries with it the same opportunities and impact. The decidedly positive macroeconomic picture can and does involve natural variation from one investment to

Importing Best Practices in Workforce Training: The German Apprenticeship Model

Foreign investors often cite a skilled workforce as the topmost criteria in their location decisions. And yet foreign- and domestic-owned companies alike have identified a shortage of appropriately skilled workers, especially in advanced technical fields, as a binding constraint on growth. German companies, for their part, have shown a penchant for filling the skills gap with their own initiative. In doing so, they have piqued public policy interest in the “German model” of workforce development throughout the country.

In Germany, more than half of students receive a technical or vocational education that includes as much applied work as it does classroom time. This “dual-system” includes two to three years of practical employer-provided training that leads directly to a job upon graduation. Employers benefit from obtaining highly specialized talent already familiar with their practices and techniques. Economists attribute the resiliency of the German economy and the flourishing of its manufacturing base to, in part, this system of vocational education.

German multinationals in the United States have begun experimenting with replicating their trusted model from home and adapting it to local contexts—enabling suppliers, educational providers, competitors, and policymakers to learn alongside.

Siemens recently began testing the model in Charlotte, where it recruits high school seniors to work at the company while taking classes at Central Piedmont Community College (CPCC) in a 3.5-year program. The students graduate with an associate’s degree in mechatronics and become Siemens employees with an average starting salary higher than that of the average liberal arts graduate of a four-year college.

Similarly the Volkswagen Academy in Tennessee, a collaboration between Volkswagen and Chattanooga State Community College, offers two three-year programs in automation mechatronics and car mechatronics with paid apprenticeships at the adjacent plant. In nearby South Carolina, Robert Bosch and BMW have set up successful apprenticeship programs with local community colleges to ensure a steady pipeline of skilled workers.

Programs such as these may be small in scale but their potential has caught the attention of policymakers eager to find innovative ways to both upgrade the technical education system and better align programs and offerings with employer needs. Scale-up and experimentation at the state and local level is already underway: North Carolina’s Apprenticeship 2000 program and Michigan’s Advanced Technician Training program are closely modeled on the German apprenticeship system.

Source: Ben Olinsky and Sarah Ayres, “Training for Success: A Policy to Expand Apprenticeships in the United States (Washington: Center for American Progress, 2013); Association for Career and Technical Education (ACTE), “Taking Business to School: Siemens” (Alexandria, VA: ACTE).

another at the region, industry, and firm level.³⁹ Some FDI may be motivated solely by technology acquisition. FDI in consumption-oriented services such as retailing may increase consumer choice and boost national productivity but can offer only few economic dividends for host communities. In addition, FDI can disrupt the status quo in industries—with repercussions for domestic firms and workers.⁴⁰

Despite the generally positive picture of FDI at both national and regional levels, though, the vast majority—the 80 to 95 percent of inflows accounted for by M&As in the typical year—is frequently greeted warily by political and economic development leaders, who can fear downsizing post-acquisition or associate the transaction with a loss of sovereignty.⁴¹ On the ground, assessing the desirability of such transactions is complicated by the problem of the counterfactual, meaning what would have happened had the transaction not taken place.⁴² For example, while in the short term redundant operations may be eliminated after an M&A, the infusion of investment may also preserve jobs by saving the firm from collapse.

Empirical evidence suggests that over the long run and in general foreign M&As do have a positive impact on firm and regional economic performance, although the impact on employment levels

Foreign M&As Can Offer Distinct Advantages

Far from representing straightforward losses of sovereignty or control, foreign M&As carry considerable potential for economic development. By way of illustration, in the instances that follow foreign ownership accelerated the development of a promising pharmaceutical company into a global R&D giant; taught a mid-sized manufacturer the ins and outs of exporting; and preserved thousands of jobs in a major telecommunications company.

MedImmune was Maryland's largest biotech employer and a pillar of the state's burgeoning life sciences cluster when British-Swedish pharmaceutical giant AstraZeneca acquired it in 2007. The announcement stoked anxiety that AstraZeneca would uproot the company from the state. Instead, the opposite happened. MedImmune became a prime node in AstraZeneca's global network. Last year, AstraZeneca announced that it would consolidate its R&D operations into three strategic centers in Cambridge, England, Mölndal, Sweden, and Gaithersburg, MD, where the company still engages in numerous regional collaborations as well as manufacturing.

Foreign ownership has helped Inficon Inc., a Syracuse-based mid-sized supplier of advanced industrial equipment to expand globally so that in 2012, it exported over 70 percent of its products. Under the coaching of its Swiss parent company, Inficon entered its first foreign market in the 1980s, setting off a learning process through which the organization has grown progressively more adaptable and responsive to its foreign customers' ways of doing business. The result: In the four years since 2009, Inficon nearly doubled its export revenue from \$35.5 million to \$69.8 million. Higher global sales enabled it to gain market share, add staff, and pay annual bonuses of nearly 20 percent of salary every year throughout the recession to its 250 skilled workers in Upstate New York.

The future of ailing Sprint Corp., headquartered in Overland Park, KS, and its 7,500 local employees was in question before Softbank, a Japanese telecommunications company, announced that it would acquire Sprint and retain its Kansas City-region headquarters in 2012. At a stroke, the debt-laden struggling third-ranked carrier in the U.S. became part of the world's third largest telecoms group with a large cash balance, increased negotiating clout, and bold ideas. The benefits of this deal may accrue far beyond Kansas City as well. By revitalizing Sprint, Softbank's acquisition preserves—and, given Softbank's history in Japan as a disruptive innovator, may even intensify—competition in the U.S. market, to the benefit of all consumers.

Not all foreign M&As end as success stories, but the transactions entail real economic development potential for regions.

Source: Bloomberg News; Baltimore Business Journal; AstraZeneca Press Release; Interview with Stephen Chabot; Office of Senator Kirsten Gillibrand Press Release; Kansas City Business Journal

is decidedly less clear.⁴³ Foreign M&As often lead to improvement in management practices, open distribution channels for exporting, and provide investment dollars for expansion. Recent research has shown that three years after a foreign acquisition by a firm from another developed country, target companies are more productive and more profitable with more employees and higher sales than peer companies acquired by domestic firms.⁴⁴ What is more, affiliates established through M&As conduct more R&D than those established through greenfield investments, and several studies now suggest that M&As have greater positive spillover effects on local economies than do greenfield investments.⁴⁵

Situating the United States in the changing global market for FDI

The global market for FDI is changing rapidly. Even though the United States remains the world's number one destination for FDI, the country's lead has eroded steadily in recent years. The share of global FDI destined for the United States has fallen from a high of 26 percent in 1999, when the United States led global growth with the internet revolution, to just 12 percent in 2012.⁴⁶ As a result, the United States' share of the global stock of FDI deployed across borders fell to its lowest point in recent

history in 2008, 16 percent—down from a high of 39 percent in 1999—and has since recovered to only 17 percent.⁴⁷ More and more FDI now forgoes the United States in favor of other markets.

A number of short- and longer-term trends lie behind these shifts.

Prolonged economic sluggishness at home and in key investor countries in the wake of the financial crisis explains some of the recent slippage. Global FDI inflows collapsed in 2009, falling by one-third worldwide and by more than 50 percent into the United States. Global flows recovered partially through 2011 before falling back as nascent recoveries stalled across the globe. Ongoing economic malaise in the Eurozone, the United States' largest investment partner, has forced many EU-based multinationals to retrench so that by 2012, the pace of outward investment there had slowed to its lowest level since 2003.⁴⁸

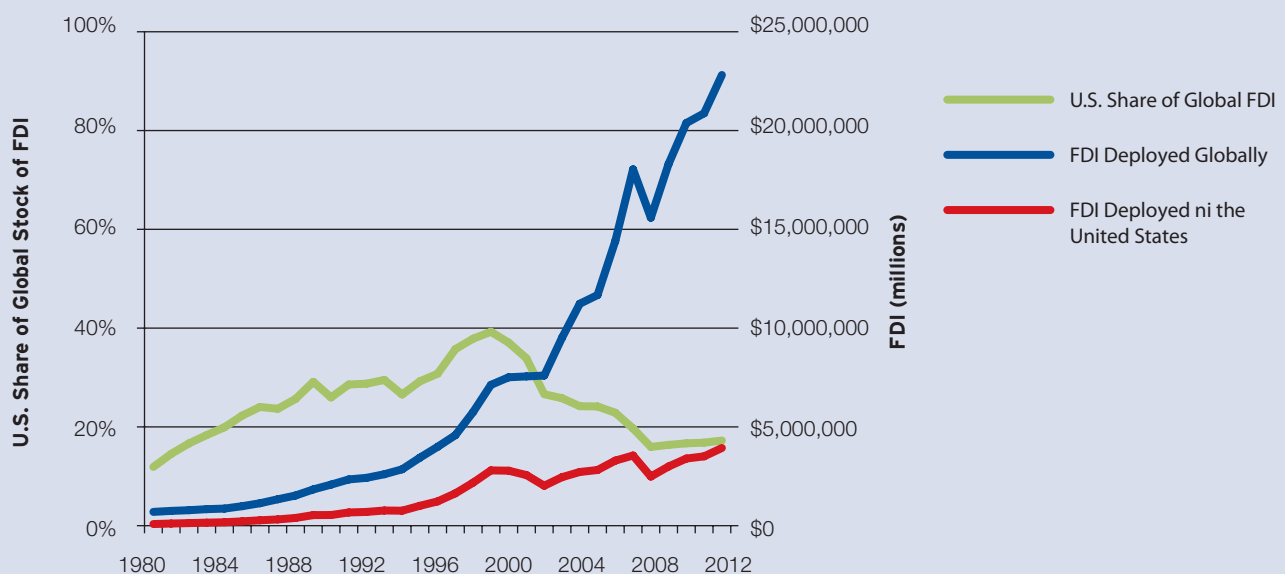
Much of the global slowdown in cross-border direct investment stems from a steep fall-off in M&A activity.⁴⁹ In 2012—five years after the financial crisis—the global value of cross-border M&As remained 70 percent below its 2007 peak. Dollars destined for the United States accounted for more than half of that decline.⁵⁰

Behind the cyclical fluctuations in notoriously volatile FDI flows, however, lie a number of longer term trends that are changing the pattern of global investment—notably the ascendance of developing nations as, collectively, the world's largest recipients of FDI.

Foreign capital has poured into emerging markets over the past two decades, with between \$600 billion and over \$800 billion arriving in each of the past five years.⁵¹ And in stark contrast to the developed world, after the 2009 financial crisis FDI inflows to emerging markets quickly returned to and surpassed peak levels.

Global FDI reached a new milestone in 2012, when developing nations attracted more FDI than developed nations—52 percent of new investment—for the first time and did the same in 2013.⁵² The reasons behind this shift are more complicated than MNEs simply seeking lower production costs or more consumers for their wares. All stages of economic development exist across China's many regions, for example, and often within a single mega-city. Subnational differences in rates of economic growth and

Global Stock of FDI Deployed Across Borders, 1980-2012



Source: United Nations Conference on Trade and Development

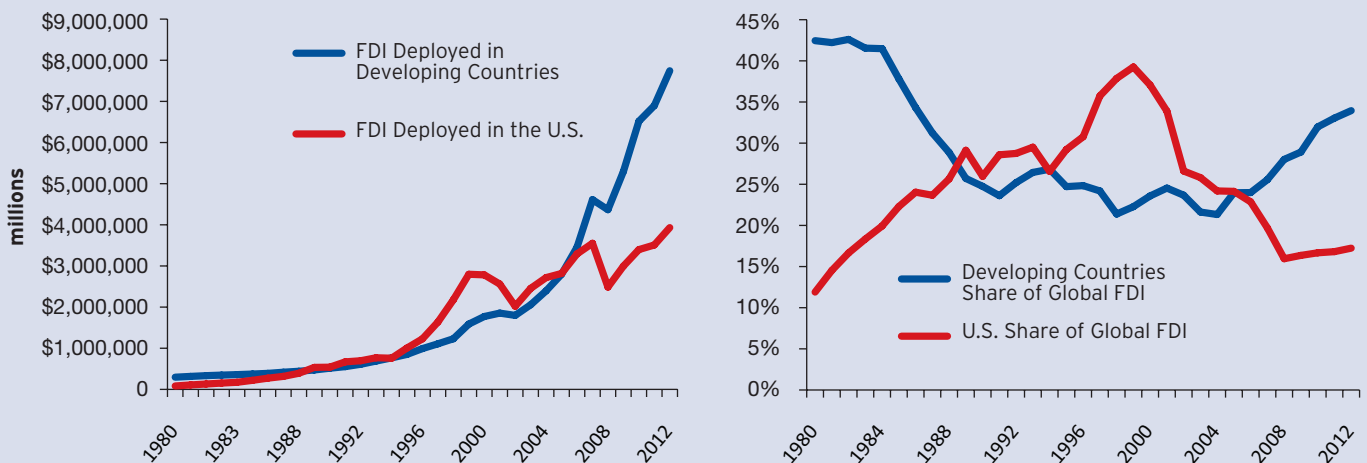
degrees of global engagement combined with rapid urbanization have catapulted a number of metropolitan areas in nominally developing countries—Bangalore in India, Sao Paulo in Brazil, Shenzhen in China, Istanbul in Turkey—into the ranks of the world’s elite global cities as engines of agglomeration, innovation, and wealth creation.⁵³ With South Korea leading the world in STEM education and advanced manufacturers discovering that workers in lower-wage Mexico hold comparable skills to their U.S. counterparts, the simple distinction between high-wage, high-skill developed economies and low-wage, low-skill developing ones is being disrupted.⁵⁴

The upshot: Developed countries no longer have a monopoly on consumer markets, skills, or high-value production. Emerging markets now aggressively compete head-on with the United States for the same investments.⁵⁵ As these markets continue to grow in size and sophistication, they will increasingly produce groundbreaking innovations and new generations of MNEs themselves. As a result, the competition among countries for FDI at all levels of the value chain will only intensify in the years to come. The operative geography of this competition, however, will be regional. While national-level policies shape a market, the assets that investors seek—quality infrastructure, skilled workers, dynamic research institutions, robust supply chains, and specialized industry clusters—all converge at the regional level.

The United States and its regions cannot afford to sit idle and assume that past success in attracting high-value investment guarantees future success. Fortunately, other megatrends bode well for renewed U.S. competitiveness. Recent discoveries of shale gas in the United States have lowered domestic energy prices dramatically. In emerging markets, rising wages combined with slowing growth, more tempered expectations, and heightened perceptions of political and technological risk are leading many firms to rethink their global footprints. And U.S. pre-eminence in software development and application—critical inputs into the increasingly-automated production processes—remains unmatched.⁵⁶

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FDI Inflows into the United States and Developing Countries, 1980-2011



Source: United Nations Conference on Trade and Development

FDI can offer substantial benefits to the United States and its regions. Beyond directly supporting a large number of good jobs, FDI increases productivity, trade, and research activity. It builds pipelines for flows of knowledge, technology, and ideas into the country's innovation clusters, and helps regions forge their own global networks. At a time when major economic forces are reshaping the global distribution of FDI, U.S. regions need a better understanding of where they fit in the global mosaic of locations—and the federal government needs to be better informed on the regional variation of its economy.

III. Measuring the Geography of Jobs in FOEs

Despite the significance of FDI to the economy, little is known about its geography sub-nationally. This study aims to fill the information gaps that currently exist especially at the metropolitan area level—the operative geography for economic development.

This report relies on establishment-level data to provide estimates of employment in the majority-owned U.S. affiliates of foreign companies across the country's states and 100 largest metropolitan areas over the past two decades (1991-2011).⁵⁷ While the economic impact of FDI should not be evaluated on employment terms alone, employment forms the basis of analysis for this report because it provides a meaningful and comparable measure of the magnitude of FDI across places. The rich establishment-level dataset also provides information on detailed industries, investment mode of entry, and investor country and foreign region of origin.

The data underlying this analysis were compiled from two different sources: The National Establishment Time Series (NETS), which stitches the records from Dun & Bradstreet's (D&B) annual survey of business establishments in the United States into a time series; and the Bureau of Economic Analysis' Financial and Operating Data of Majority-owned U.S. Affiliates of Foreign Companies, which provides national, state, and industry benchmark data on total employment in the majority-owned affiliates of foreign companies in the United States.⁵⁸

The approach entailed allocating national detailed and state broad industry data derived from BEA to individual establishments by geography according to the industry codes associated with each establishment and each establishment's size relative to other establishments in the same industry and geography.⁵⁹ In other words, the methodology distributed BEA-derived control totals to individual establishments based on select characteristics to yield estimates of jobs in foreign-owned establishments (FOEs) at lower geographies.

This dual allocation approach was adopted to circumvent the primary drawback of D&B/NETS data—occasionally spurious establishment employment estimates—by relying on relative size and forcing the numbers fall within the bounds of the best available data from the BEA, while still taking advantage of the fine-grained insights attainable with an establishment-based approach.⁶⁰

The methodology is not without its limitations, however. While the approach mitigates errors in the underlying D&B/NETS data by diffusing their impact, it does not eliminate them entirely. Any misestimate of employment at one establishment impacts employment estimates at all establishments in the same industry and state, since relative size determined each establishment's share of BEA-derived control totals.

With this in mind, Brookings took deliberate steps to identify errors and eliminate them with a battery of data checks and corrections to the raw D&B/NETS database before running the allocation process. For a detailed description of the methodology and the actions undertaken to produce the dataset, see the methodological appendix at the end of this report.

The steps outlined above have produced a detailed look at the geography of FDI in the United States measured in terms of jobs in foreign-owned establishments. It enables comparisons of the magnitude of FDI and its characteristics across states and metropolitan areas that were never before possible. It finds that—with significant variation—FDI forms a part of every major metropolitan economy in the country.

For a more in depth discussion of the methodology employed here go to [Brookings.edu/metroFDI](https://www.brookings.edu/metroFDI).

The Novel Aspects of Brookings' Establishment-based Approach

Presently little information exists on FDI in the United States at the sub-national level—i.e. for metropolitan areas, micropolitan areas, counties, and even states.

Local leaders desiring to know more about foreign investment in their areas face few options: Either they can build and maintain custom databases themselves, or they can purchase proprietary data from commercial vendors (states, for their part, benefit from basic coverage by BEA). Both options are costly, entail varying degrees of gaps in coverage, and do not enable any sort of comparison to peer regions, national benchmarks, or over time.

With the exigencies of economic development in mind, Brookings set out to build a dataset with the information that places need to understand the variation in the number and characteristics of jobs in foreign-owned establishments (FOEs) in their areas.

Accordingly, several aspects of Brookings' approach are novel:

- Built from a national database of every FOE in the United States, this dataset allows researchers to construct estimates of jobs in FOEs for any **geography** down to the metropolitan or county level
- The national scope of the dataset ensures that all estimates are **comparable across regions** and can be utilized by places to assess their standing vis-à-vis their peers
- The **time-series** nature of the dataset, which spans the years 1991 to 2011, enables detailed historical trend analyses of jobs in FOE in U.S. regions
- Time-series information combined with the establishment-based nature of the data enable researchers to determine the **mode of entry** (either the opening of a new establishment or the acquisition of a previously existing one) of each investment. It also allows annual changes in the number of jobs supported by FDI to be decomposed by the six possible drivers of change: establishment openings, closings, expansions, and contractions, on the one hand, and foreign or domestic acquisitions of establishments, on the other
- Knowledge about the **industry** of each investment down to the four-digit North American Industry Classification System (NAICS) code level allows places to identify what type of FDI is coming to their regions and measure the contribution of FDI to their top industry clusters
- Parent company information embedded in each establishment record makes it possible to identify not only the **home country** of each foreign investor but also the **home city-region**—information that U.S. regions can use to build deeper ties with their trade and investment partners

The data and analysis contained in this report aim to provide U.S. regions with an increased awareness of the amount and nature of FDI in their economies. With this new information in hand, regions should have an improved understanding of what differentiates them in the global marketplace and be in a better position to harness FDI to advance economic development.

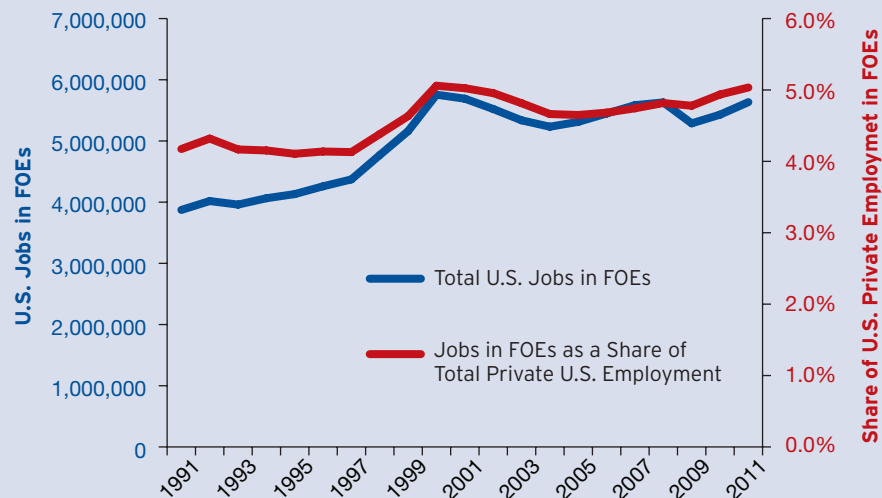
IV. Findings

The analysis of data for all FOEs in the United States reveals a series of key takeaways and trends for the nation and its regions.

1. Foreign-owned U.S. affiliates directly employ some 5.6 million workers spread across every sector of the economy. The number of U.S. jobs in FOEs has risen by 1.7 million over the past two decades, from 3.9 million in 1991, when the dataset used here begins, to 5.6 million in 2011, the latest year for which data is available. These jobs were spread across 109,000 different establishments belonging to over 18,000 different companies in nearly every industry.

And yet, although the number of U.S. jobs in FOEs has increased over the long term, the pace of this rise both in absolute terms and as a share of total U.S. private employment slowed considerably over the past decade. The number of jobs in FOEs in the U.S. economy increased almost uninterruptedly during the 1990s, as did its share of total private employment, with the biggest gains seen between 1998 and 2000. Since its peak in 2000, however, the significance of FDI to domestic private employment levels has changed little. The hiatus predates the recent recession as well: Jobs in FOEs fell for the first four years of the 2000s. The single largest annual decline in jobs in FOEs occurred in 2009, but the impact of the recession on the national economy meant that the share of all U.S. jobs in FOEs barely budged. In the end, 5.6 million workers representing 5 percent of the country's private-sector workforce could be found in FOEs in 2011, compared to 5.7 million and 5.1 percent of the workforce in 2000.

Figure 1. Total Jobs in FOEs and as a Share of Total Private Employment, 1991-2011

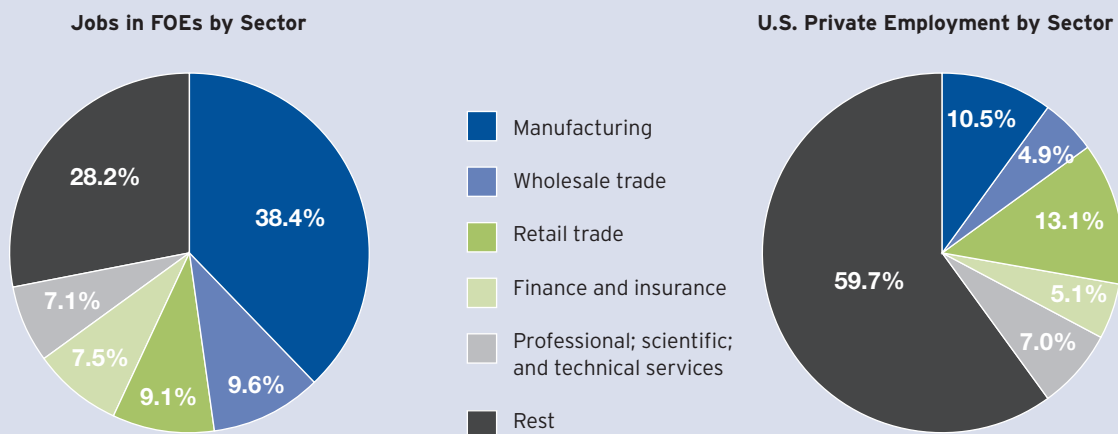


Source: Brookings analysis of D&B / NETS, Bureau of Economic Analysis, and Moody's Analytics data

Although FDI employs U.S. workers in nearly every industry, investment and jobs concentrate in a few sectors. Nearly two out of every five jobs in FOEs—38.4 percent in 2011—could be found in the manufacturing sector, compared to only 10.5 percent economy-wide. After manufacturing, FDI employs the largest number of workers in the wholesale trade; retail trade; finance and insurance; and professional, scientific, and technical services sectors. Relative to the private sector as a whole, FDI supports a disproportionate number of workers in the finance and insurance, transportation, information, and

mining sectors. By contrast, FDI employs proportionally fewer workers in sectors such as healthcare, education, and accommodation and food services. Even in sectors where FDI is relatively under-represented, though, it can remain a powerful force for employment: Over 270,000 U.S. workers are employed in foreign-owned accommodation and food services outlets and over 510,000 in foreign-owned retail establishments.

Figure 2. Total Jobs in FOEs by Sector Compared to Total Private Employment by Sector, 2011



Source: Brookings analysis of D&B / NETS, Bureau of Economic Analysis, and Moody's Analytics data

Underneath FDI's pervasiveness at the national level lies significant sub-national variation in its geography and characteristics.

2. The nation's largest metro areas contain nearly three-quarters of all jobs in FOEs. FDI into the United States is disproportionately metropolitan. Fully 89.3 percent of all jobs in FOEs in the United States could be found in the nation's 366 small, medium, and large metro areas together in 2011, compared to 86.3 percent of all private sector jobs. What is more, fully 73.8 percent of all U.S. jobs in FOEs were concentrated in the largest 100 metro areas by population alone, compared to 68.3 percent of total private sector employment. The share of jobs in FOEs in large metro areas has held consistent over the past two decades, suggesting that large metro areas have always drawn a disproportionate amount of FDI.

The largest metro areas appear to hold particular appeal for FDI. The 10 largest U.S. metro areas by population contained 34.2 percent of all jobs in FOEs in the country in 2011, compared to 27.7 percent of all private sector jobs.

Over the course of the recent economic recovery (2009-2011), over 70 large metro areas saw the number of workers employed in FOEs increase. Large metro areas **Atlanta, GA; Houston, TX; Los Angeles, CA; and New York, NY** each saw the number of jobs in FOEs in their areas increase by over 10,000 workers. Metro areas specializing in technology such as **San Jose, CA** and **Phoenix, AZ** witnessed sizeable increases as well. In **Detroit, MI** and **Toledo, OH**, M&As in the auto sector gave the number of jobs in FOEs a boost. In **Baton Rouge, LA** more than a third of the increase over the two years took place in basic chemical manufacturing. Meanwhile FDI in pharmaceuticals played an important role in increasing the number of jobs in FOEs in **Ogden, UT**, while the mining and information sectors boosted the numbers in **Bakersfield, CA** and **Des Moines, IA**, respectively.

Figure 3. Jobs in FOEs in the 10 Largest U.S. Metro Areas, 2011

Metro Area	Jobs in FOEs	Share of Total U.S. Jobs in FOEs	Share of Total U.S. Jobs
New York, NY-NJ-PA	490,300	8.7%	6.4%
Los Angeles, CA	271,200	4.8%	4.0%
Chicago, IL-IN-WI	223,500	4.0%	3.4%
Dallas, TX	134,100	2.4%	2.3%
Philadelphia, PA-NJ-DE-MD	137,000	2.4%	2.1%
Washington, DC-VA-MD-WV	126,200	2.2%	2.1%
Houston, TX	178,000	3.2%	2.0%
Boston, MA-NH	142,800	2.5%	1.9%
Atlanta, GA	134,600	2.4%	1.8%
Miami, FL	91,700	1.6%	1.7%
10 Largest U.S. Metro Areas	1,929,000	34.2%	27.7%
100 Largest U.S. Metro Areas	4,156,600	73.8%	68.3%
United States	5,634,300		

Source: Brookings analysis of D&B / NETS, Bureau of Economic Analysis, and Moody's Analytics data

Gulf Coast Region Rides a Wave of Investment from the U.S. Shale Gas Boom

Since 2011, the last year of data in this report, a revolution in drilling technologies has enabled the exploitation of previously unreachable oil and gas reserves embedded in shale rock throughout the country. The resulting bonanza has dramatically reduced energy prices in the United States and prompted energy-intensive manufacturers—particularly in the petrochemical sector but also in steel and other industries—to reassess the United States as a production location.

U.S. companies are not the only ones taking advantage of the new energy economics; foreign companies such as Cairo-based Orascom, Ruhr Valley-based Thyssenkrupp, and Luxembourg-based ArcelorMittal are seizing the opportunity too. Already home to world-beating concentrations of activity in the energy and related industries, Gulf Coast states stand to benefit inordinately from the influx of new investment.

Announcements have poured in. Canada-based Methanex Corporation, for example, will relocate two methanol production facilities from Chile back to Louisiana after a decade-plus hiatus from the U.S. market. In summer of 2014 South Africa-based Sasol Ltd. will decide whether to go forward with one of the largest industrial projects in U.S. history to produce simple molecules for industrial use in Louisiana.

Further downstream, Austrian steel manufacturer Voestalpine AG will build a \$700 million steel factory in Corpus Christi, Texas. And Taiwan-based Formosa Plastics Group, Asia's largest chemical company, plans to expand its Texas facilities by \$2 billion. Tellingly, after 54 percent growth in U.S. capital investments in 2012, the German chemical industry trade group now estimates that the U.S. receives 41 percent of its member companies' FDI—up from 28 percent in 2005.

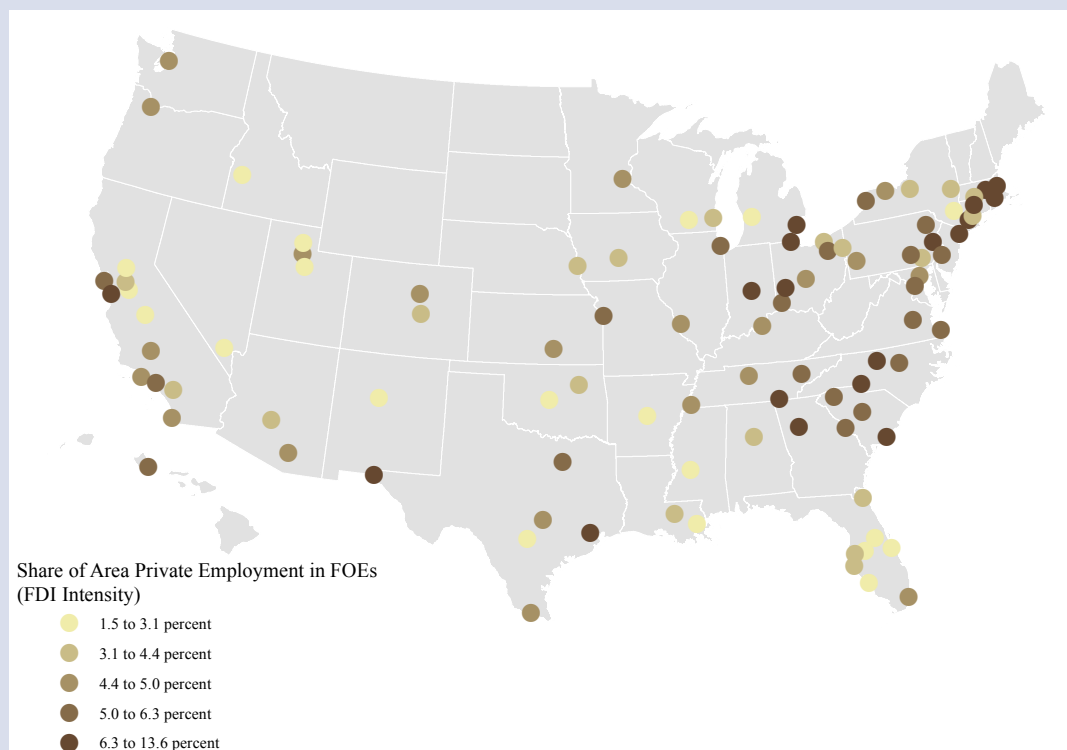
Altogether, more than half of the 136 new plants and major expansions tied to the oil and gas boom tallied by the American Chemistry Council from March to December 2013 were announced by foreign companies. These investments are expected to accelerate the U.S. shift from net importer of chemicals in 2011 to export powerhouse by 2018. The direct employment impact of these investments, however, is likely to be limited by their extreme capital intensity.

Energy prices are not alone in drawing this wave of investment. World-class supply chains, specialized infrastructure, deep pools of skilled labor, and a vibrant cluster of upstream and downstream activities all serve to make the U.S. Gulf Coast a top global location for energy-intensive production.

Sources: Methanex Corporation website, Voestalpine AG website, Bloomberg News, Verband der Chemischen Industrie website, American Chemistry Council, and Financial Times

3. FDI supports 5.5 percent of private employment in the average large metro area, with significant regional variation. Nationally, FOEs employed 5 percent of the private-sector workforce in 2011. In comparison, FOEs employed 5.5 percent of the private workforce in the 100 largest metro areas, making FDI a slightly more significant economic force in the nation's metro areas. Underneath the aggregate number lies significant regional variation.

Figure 4. Share of Total Metro Area Private Employment in FOEs, 2011



Source: Brookings analysis of D&B / NETS, Bureau of Economic Analysis, and Moody's Analytics data

Among the top 100 metro areas, clusters of high FDI-intensity—defined as the share of total private employment in FOEs—can be found in the Northeast, the Piedmont region of the Southeast, corners of Texas, and the Bay Area.⁶² FOEs account for the largest share of employment in **Bridgeport, CT**, where 13.6 percent of all private-sector jobs are in FOEs with a large concentration in banking and finance. Elsewhere in the Northeast, **Allentown, PA** and **Providence, RI** also post some of the highest FDI intensities in the country, boosted by sizeable foreign ownership in locally-serving sectors such as grocery stores, while retail banking contributes to **Worcester, MA**'s high FDI intensity. Metro areas specializing in motor vehicle manufacturing such as **Charleston, SC**; **Detroit, MI**; **El Paso, TX**; and **Greensboro, NC** also exhibit well above-average FDI intensities.

Over the recent economic recovery, the auto industry proved the biggest driver of changes in FDI intensity. From 2009 to 2011, the share of employment supported by FDI in **Detroit, MI** and **Toledo, OH** rose by more than 2 percentage points thanks in large part to the acquisition of Chrysler by Fiat. In **Chattanooga, TN**, that share increased by 1.6 percentage points thanks mainly to Volkswagen's arrival and ramp-up.

The FDI intensity of both the nation and its 100 largest U.S. metro areas rose at the same rate from 1991 to 2011, by 0.9 percentage points. In 81 different metro areas, FDI employed a larger share of the private-sector workforce in 2011 than it did in 1991. FOE share of all private employment increased most in **Bridgeport, CT**, reflecting the rise of global finance over the past two decades, and in other mainly

Northeastern and Midwestern metro areas. The share of all private sector employment supported by FDI fell in 19 major metro areas, primarily in the South. In places such as **Charlotte, NC**; **Nashville, TN**; and **Orlando, FL**, FDI intensities declined only because increases in the number of jobs in FOEs did not keep pace with rapid rates of job growth economy-wide.

Figure 5. Metro Areas in which FOEs Account for the Largest Share of Private Employment, 2011

Metro area	Jobs in FOEs	FDI Intensity	Three Largest Industries by Jobs in FOEs
Bridgeport, CT	50,700	13.6%	Computer systems design and related services Office administrative services Securities and contracts inter. and brokerage
Greensboro, NC	27,000	9.0%	Grocery stores Motor vehicle manufacturing Pharmaceutical and medicine manufacturing
Worcester, MA	24,600	9.0%	Electric power generation; transmission and distribution Electrical and electronic goods merchant wholesalers Insurance carriers
El Paso, TX	18,500	8.8%	Data processing; hosting; and related services Motor vehicle parts manufacturing Semiconductor and other electronic component manufacturing
Houston, TX	178,000	8.0%	Architectural; engineering; and related services Petroleum and coal products manufacturing Support activities for mining
Detroit, MI	124,400	7.8%	Motor vehicle and motor vehicle parts and supplies wholesalers Motor vehicle manufacturing Motor vehicle parts manufacturing
Providence, RI-MA	44,300	7.5%	Depository credit intermediation Grocery stores Other miscellaneous manufacturing
San Jose, CA	57,600	7.3%	Computer and peripheral equipment manufacturing Computer systems design and related services Semiconductor and other electronic component manufacturing
Charleston, SC	17,200	7.2%	Grocery stores Motor vehicle parts manufacturing Traveler accommodation
Allentown, PA-NJ	20,800	6.9%	Cement and concrete product manufacturing Grocery stores Medical equipment and supplies manufacturing
United States	5,634,300	5.0%	Depository credit intermediation Grocery stores Motor vehicle parts manufacturing

Source: Brookings analysis of D&B / NETS, Bureau of Economic Analysis, and Moody's Analytics data

Figure 6. Metro Areas with the Largest Increases in the Share of Total Private Employment in FOE, 1991-2011

Metro Area	Share of Area Private Employment in FOE, 1991	Share of Area Private Employment in FOE, 2011	Percentage Point Change in Share of Area Private Employment in FOE
Bridgeport, CT	7.0%	13.6%	6.5%
Providence, RI-MA	3.2%	7.5%	4.3%
Worcester, MA	5.0%	9.0%	4.0%
Greensboro, NC	5.2%	9.0%	3.9%
Harrisburg, PA	2.8%	6.1%	3.3%
Dayton, OH	3.2%	6.4%	3.3%
Indianapolis, IN	3.7%	6.5%	2.8%
McAllen, TX	2.2%	4.7%	2.6%
Boston, MA-NH	4.2%	6.7%	2.5%
Kansas City, MO-KS	3.2%	5.6%	2.4%
100 Largest Metro Areas	4.6%	5.4%	0.9%
United States	4.2%	5.0%	0.9%

Source: Brookings analysis of D&B / NETS, Bureau of Economic Analysis, and Moody's Analytics data

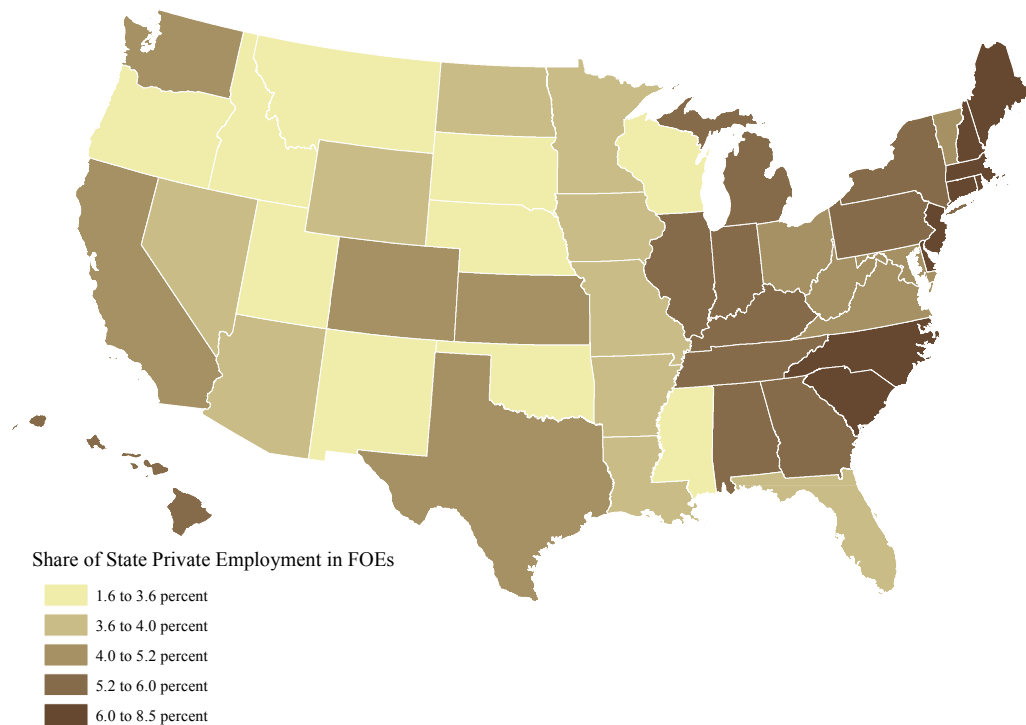
FOEs Account for the Largest Share of All Private Sector Employment in Eastern States

The number of jobs in foreign-owned enterprises (FOEs) exhibits significant variation at the state level. As expected given the size of their populations, **California**, **Texas**, and **New York** contained the largest number of jobs in FOEs in 2011, followed by **Illinois** and **Pennsylvania**. California alone contained nearly 600,000 jobs in FOEs in 2011, far ahead of Texas, with 462,000 jobs in FOEs, and New York, with 412,500 jobs in FOEs. Together these three states were home to 26 percent of all jobs in FOEs in the United States, slightly above their share of total national employment. In total, foreign-owned companies employ more than 100,000 workers in 18 U.S. states.

Relative to total private sector employment, **Delaware** and **South Carolina** hosted the largest concentrations of jobs in FOEs in the country in 2011. In Delaware, 8.5 percent of all jobs could be found in FOEs and in South Carolina, 7.5 percent could be. The share of total private sector employment in FOEs also exceeded 7 percent in **Connecticut**, **New Hampshire**, and **New Jersey** along the eastern seaboard. Nearly a third of Delaware's jobs in FOEs were concentrated in pharmaceutical and medicine manufacturing, with significant representation in the insurance industry as well. In South Carolina, the auto industry employed the largest number of workers in FOEs. In both Connecticut and New Hampshire the largest share of jobs in FOEs could be found in grocery stores and in New Jersey, in pharmaceutical and medicine manufacturing.

The 10 states in which FOEs accounted for the largest share of private employment could all be found in the South and Northeast. Across the continental United States, in no Western state did the FOE share of all private employment exceed the national average, and FOEs accounted for the smallest share of total employment in the northern Plains states and the Mountain region.

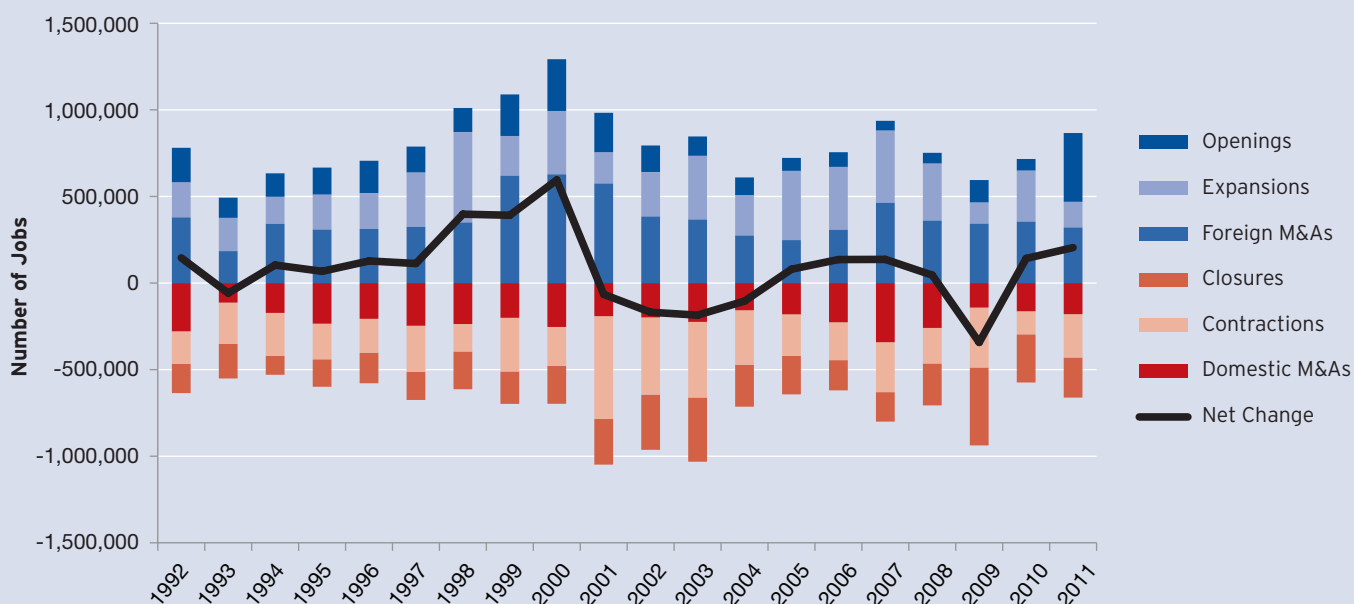
Figure 7. Jobs in FOEs as a Share of Total State Private Employment, 2011



Source: Brookings analysis of D&B / NETS data

4. Mergers and acquisitions—not establishment openings—drive changes in the number of jobs in FOEs over time. In the average year from 1991 to 2011, the number of U.S. workers employed in FOEs increased by just 88,000 after 802,000 jobs entered into foreign ownership through establishment openings, M&As, and expansions, and 714,000 jobs exited foreign ownership through closures, domestic reacquisitions, and contractions. These numbers attest to the magnitude of churn in the economy—of which FDI in general and M&As in particular are a critical part.⁶³

Figure 8. Components of Year-on-Year Changes in the Number of Jobs in FOEs, 1991-2011



Source: Brookings analysis of D&B / NETS, Bureau of Economic Analysis, and Moody's Analytics data

Economy-wide, the number of jobs in establishments that remained foreign-owned from one year to the next actually declined in the average year by 1.3 percent, or 74,000 jobs, as losses from establishment closures and contractions outweighed gains from establishment openings and expansions. In most years, foreign acquisitions of domestic companies offset those losses in the accounting to top up the number of jobs in FOEs: In the average year, 162,000 more jobs transferred into foreign ownership through M&As than left it through buy-outs by U.S.-based firms. Since M&As emerge as the key factor driving changes in the share of the economy under foreign ownership from one year to the next, increases in the total do not reflect jobs created by FDI, but rather a net positive transfer of jobs into the sector. Even though many FOEs expand and open every year, the data here suggest that FDI itself is not a source of net direct job creation.⁶⁴

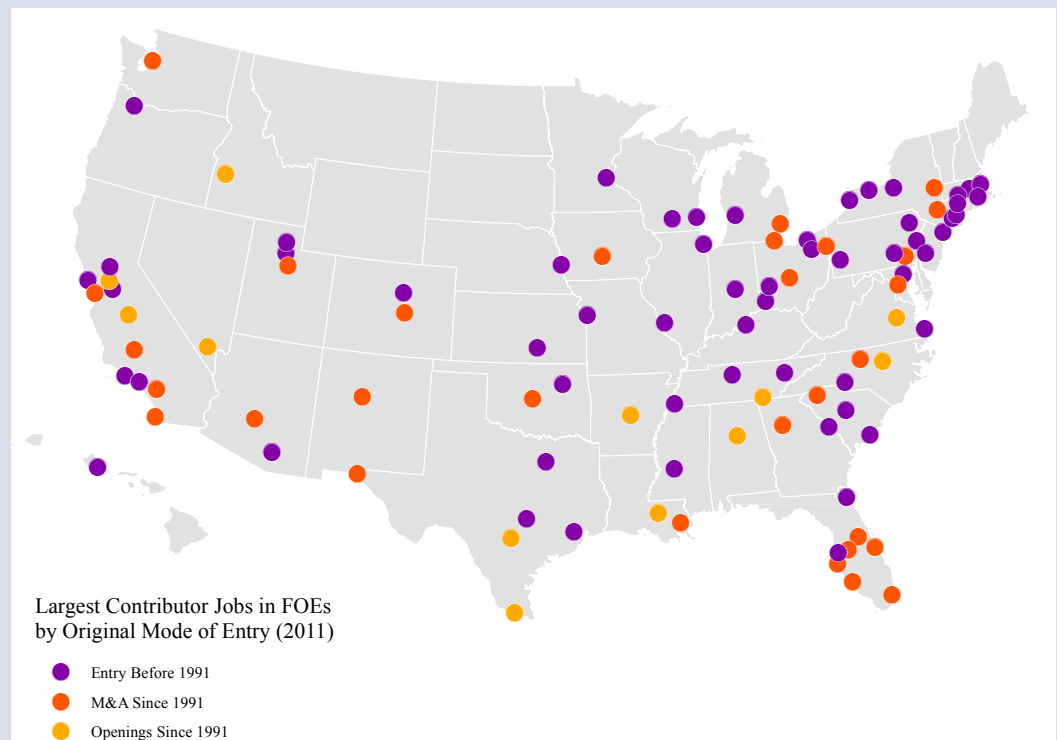
New establishment openings, for their part, accounted for the smallest share of increases in the number of jobs in FOEs in the average year, at 19 percent, behind both M&As and expansions. In the average year in the average large metro area, new establishment openings created 1,200 jobs. Across the country's largest metro areas, the number of jobs generated by establishment openings over the past 20 years was strongly predicted by the size of each metro area's overall employment base in 1991.⁶⁵ Some deviation from this general relationship based on geography took place, however. Over the past 20 years, establishment openings generated more jobs than metro area size would have predicted in several Southeastern metro areas, primarily, and fewer jobs in several California metro areas, parts of the Plains, and parts of the Mountain West.

Surveying the economy in 2011, fully 42 percent of all U.S. jobs in FOEs could be found in establishments that already existed in 1991, for which the original mode of entry is unknown. Thirty-two percent

of all U.S. jobs in FOEs could be found in establishments that became foreign-owned through a merger or acquisition since 1991 and 26 percent of jobs in establishments that opened sometime during the past two decades.⁶⁶

In 58 of the country's 100 largest metro areas in 2011, establishments that existed prior to 1991 still accounted for the largest proportion of area jobs in FOEs. Most of these metro areas could be found in the Northeast and Midwest—as might be expected given their historical role in manufacturing—but also in places with similarly well-established industrial bases such as **Los Angeles, CA; Nashville, TN; and Tulsa, OK**. In 30 metro areas spread all across the country and with vastly different industry bases, establishments that transferred into foreign ownership through M&As since 1991 housed the largest number of jobs in FOEs in 2011. In only 12 metro areas mostly in the South and West could the largest share of 2011 jobs in FOEs be traced back to establishment openings over the past 20 years. This group includes many young Sun Belt economies with very low overall FDI intensities such as **Las Vegas, NV** and **Stockton, CA** but also **Chattanooga, TN** and **Raleigh, NC** with relatively high FDI intensities.

Figure 9. Largest Contributor to Jobs in FOEs by Original Establishment Mode of Entry, 2011



Source: Brookings analysis of D&B / NETS, Bureau of Economic Analysis, and Moody's Analytics data

5. Jobs in FOEs are relatively concentrated in manufacturing and advanced industries; however they have become more services-oriented over time. Even today, U.S. manufacturing receives more FDI than any other sector of the economy.⁶⁷ In 2011, the 2.2 million U.S. manufacturing jobs supported by FDI accounted for 18.5 percent, or nearly one-fifth, of all manufacturing jobs in the country.

The nation's 100 largest metro areas contain 62.8 percent of all U.S. jobs in foreign-owned manufacturers, compared to 58.4 percent of all U.S. manufacturing jobs. This makes employment in foreign-owned manufacturers more localized in large metro areas than U.S. manufacturing overall but less concentrated in metro areas than FDI employment in general.

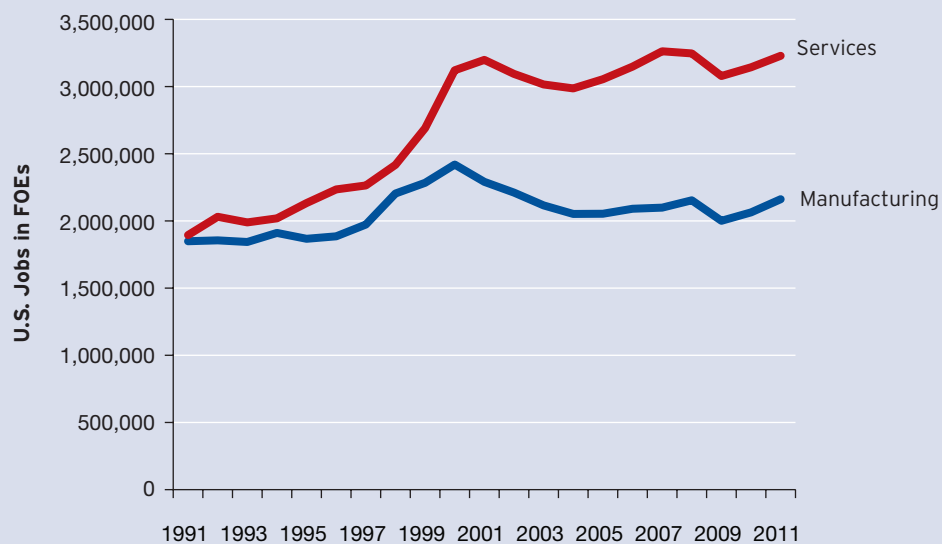
Figure 10. Metro Areas with the Highest Share of Jobs in FOEs in Manufacturing, 2011

Metro Area	Jobs in Manufacturing FOEs	Manufacturing Share of Jobs in FOEs	Share of Metro Manufacturing Employment in FOEs
Youngstown, OH-PA	5,900	77.8%	19.5%
Toledo, OH	12,500	72.6%	31.8%
Augusta, GA-SC	6,700	69.0%	33.6%
Baton Rouge, LA	7,000	61.0%	27.0%
Detroit, MI	75,000	60.3%	36.5%
McAllen, TX	5,000	59.7%	83.1%
Greenville, SC	9,600	59.1%	25.2%
El Paso, TX	10,800	58.2%	62.1%
Allentown, PA-NJ	11,800	56.7%	32.9%
Grand Rapids, MI	5,700	55.0%	9.2%
100 Largest U.S. Metro Areas	1,358,000	32.7%	19.8%
United States	2,161,600	38.4%	18.5%

Source: Brookings analysis of D&B / NETS, Bureau of Economic Analysis, and Moody's Analytics data

Foreign-owned manufacturing establishments housed 32.7 percent of jobs in FOEs in the country's 100 largest metro areas in 2011. In one-fifth of all large metro areas almost exclusively in the Midwest and the South, more than half of all jobs in FOEs could be found in the manufacturing sector in 2011.

Figure 11. U.S. Jobs in FOEs in Manufacturing and Services, 1991-2011



Source: Brookings analysis of D&B / NETS, Bureau of Economic Analysis, and Moody's Analytics data

Even though manufacturing remains the single largest sector for FDI in terms of both dollars and jobs, the share of jobs in FOEs in the services sector has risen over time—a trend undoubtedly influenced by the steady shift in the composition of the U.S. economy towards services. In 1991, nearly half of all jobs in FOEs could be found in the manufacturing sector. By 2011, that share had fallen to 38.4 percent. By comparison, the share of all jobs in FOEs in services increased from 48.9 percent to 57.3 percent during the same period. A surge of FDI into professional, scientific, and technical services and in the administrative support, waste management, and remediation services industries in the late 1990s drove much of this shift.⁶⁸

Figure 12. Metro Areas with the Highest Share of Jobs in FOEs in Services, 2011

Metro area	Share of Jobs in FOEs in Services	Three largest services industries by jobs in FOEs
Honolulu, HI	89.2%	Depository credit intermediation Restaurants and other eating places Traveler accommodation
Washington, DC-VA-MD-WV	84.5%	Computer systems design and related services Grocery stores Management; scientific; and technical consulting services
Las Vegas, NV	81.5%	Grocery stores Investigation and security services Restaurants and other eating places
Cape Coral, FL	80.6%	Grocery stores Investigation and security services Offices of real estate agents and brokers
Fresno, CA	80.3%	Employment services Grocery stores Investigation and security services
Sacramento, CA	79.9%	Computer systems design and related services Prof. and commercial equipment and supplies wholesalers Restaurants and other eating places
Poughkeepsie, NY	78.7%	Clothing stores Depository credit intermediation Grocery stores
Miami, FL	78.7%	Computer systems design and related services Depository credit intermediation Investigation and security services
Baltimore, MD	77.9%	Employment services Grocery stores Insurance carriers
New York, NY-NJ-PA	77.5%	Advertising; public relations; and related services Depository credit intermediation Securities and commodity contracts inter. and brokerage
United States	57.3%	Depository credit intermediation Grocery stores Investigation and security services

Source: Brookings analysis of D&B / NETS, Bureau of Economic Analysis, and Moody's Analytics data

The services sector accounts for over four out of five jobs in FOEs in highly services-oriented metro areas such as **Honolulu, HI**; **Washington, DC**; and **Las Vegas, NV**. Foreign ownership of regional chains in labor-intensive locally-serving industries such as grocery stores or retail banking increases services' share of jobs in FOEs in places such as **Baltimore, MD**, and **Poughkeepsie, NY**. In metro areas like **Cape Coral, FL** and **Fresno, CA** with little FDI, industries that have high rates of foreign-ownership nationally and also tend to scale with population size—such as employment services or investigation and security services—account for a large share of all local jobs in FOEs. Some traded services such as

advertising in **New York**, NY, emerge on the list of largest industries in services-oriented metro areas as well.

Moving beyond the manufacturing versus services distinction, FDI plays an important role in the nation's advanced industries (AI) sector, which encompasses a mix of both manufacturing and services industries important to technology development and diffusion.⁶⁹ The average worker in an FOE is four times more likely to be employed in the AI sector than is the average worker in the broader economy. As of 2011, fully 25.7 percent of jobs in FOEs, or 1.4 million in total, could be found in the AI sector, compared to 5.1 percent in the U.S. economy as a whole. Furthermore, in a few AIs such as motor vehicle and basic chemical manufacturing, the foreign share of all U.S. employment in the industry doubled to over 50 percent from 1991 to 2011.⁷⁰

In 2011, the nation's 100 largest metro areas contained 69.6 percent of foreign affiliates' jobs in AIs. In a variety of places, AIs accounted for more than one-third of all jobs in foreign-owned establishments: Metro areas that specialize in motor vehicle-related manufacturing, such as **Detroit**, MI; **Greensboro**, NC; **Knoxville**, TN; and **Toledo**, OH; technology hubs, such as **San Jose**, CA and **San Diego**, CA; metro areas with a handful of advanced manufacturing specialties but relatively little FDI in local consumption and retail sectors, such as **Indianapolis**, IN; **Wichita**, KS; and **Youngstown**, OH; and border-metro areas with manufacturing and assembly facilities, such as **El Paso**, TX and **McAllen**, TX. In both absolute and relative terms, metro areas in California's Central Valley and parts of Florida see little FDI in general and even less in AIs in particular.

Figure 13. Metro Areas with the Highest Share of Jobs in FOEs in Advanced Industries, 2011

Metro area	Jobs in FOEs	Share of Jobs in FOEs in Advanced Industries	Largest Advanced Industry by Jobs in FOEs
San Jose, CA	57,600	60.9%	Computer systems design and related services
Baton Rouge, LA	11,400	57.1%	Navigational; measuring; electromedical; and control instruments mfg.
Detroit, MI	124,400	52.9%	Motor vehicle parts manufacturing
Toledo, OH	17,300	50.7%	Motor vehicle manufacturing
Austin, TX	29,200	50.3%	Electric lighting equipment manufacturing
McAllen, TX	8,400	48.1%	Navigational; measuring; electromedical; and control instruments mfg.
Syracuse, NY	10,800	44.3%	Electric power generation; transmission and distribution
San Diego, CA	48,700	43.9%	Navigational; measuring; electromedical; and control instruments mfg.
Augusta, GA-SC	9,700	42.7%	Other transportation equipment manufacturing
Knoxville, TN	17,300	42.5%	Motor vehicle parts manufacturing
United States	5,634,300	25.6%	Motor vehicle parts manufacturing

Source: Brookings analysis of D&B / NETS, Bureau of Economic Analysis, and Moody's Analytics data

6. FDI contributes to and in some cases drives industry specialization in metro areas. One of the many roles that metro areas play in the nation's economy is to concentrate the factors of production—labor, capital, technology, and entrepreneurialism—both generally and in specific industries, stoking innovation and enhancing productivity in the process. Over time, metro areas evolve to specialize in certain industries even while many retain diversified bases—examples include finance in New York, entertainment in Los Angeles, and energy in Houston. These concentrations of activity attract both foreign and domestic investments that further reinforce industry strengths.

Some industry concentrations attract an outsized share of FDI. The foreign share of total jobs in several of the country's largest industry concentrations—identified by metropolitan area as the industry with the highest location quotient (a common measure of specialization) and at least 10,000

Figure 14. Metropolitan Industry Concentrations with More Than 10,000 Workers at Least Twice as FDI-Intensive as Their Wider Metro Areas, 2011

Metro Area	Largest Industry in Which Metro Area Specializes	FOE Share of Total Industry Employment	Total Industry Employment	FOE Share of Total Area Employment
Detroit, MI	Motor vehicle manufacturing	27.9%	29,190	7.8%
New York, NY-NJ-PA	Securities and commodity contracts inter. and brokerage	23.1%	143,050	6.8%
San Jose, CA	Computer and peripheral equipment manufacturing	20.6%	37,280	7.3%
Indianapolis, IN	Warehousing and storage	15.5%	11,600	6.5%
Miami, FL	Scheduled air transportation	14.4%	17,540	4.7%
Tucson, AZ	Aerospace product and parts manufacturing	13.2%	11,700	4.9%
Madison, WI	Insurance carriers	12.5%	13,820	2.8%
Los Angeles, CA	Motion picture and video industries	12.3%	119,640	6.1%
Portland, OR-WA	Semiconductor and other electronic component mfg.	11.9%	27,010	4.8%
Wichita, KS	Aerospace product and parts manufacturing	11.6%	30,220	4.7%

Source: Brookings analysis of D&B / NETS, Bureau of Economic Analysis, and Moody's Analytics data

workers—is double the foreign share of all jobs in the metro area as a whole. This holds in places and industries as diverse as motor vehicle manufacturing in **Detroit**, MI, securities and brokerage in **New York**, NY, and semiconductor manufacturing in **Portland**, OR. In other major industry concentrations such as oil and gas extraction in **Houston**, TX, the foreign contribution to total employment (6.5 percent) runs lower but remains significant. In instances where industry specialization is driven by single U.S.-based firms, such as semiconductor manufacturing in **Phoenix**, AZ, or software publishing in **Seattle**, WA, the foreign share of industry jobs falls below 2 percent.

However, in many cases FDI not only contributes to but itself drives metro area specialization in particular industries. In 20 different large metro areas FDI accounts for more than half of all jobs in the largest industry in which that metro area specializes. The data reveal FDI in the automotive industry as a particularly potent force for regional specialization: In **Knoxville**, TN; **Dayton**, OH; **Greensboro**, NC; **San Antonio**, TX; **Chattanooga**, TN; **El Paso**, TX; and **Charleston**, SC motor vehicle or motor vehicle parts manufacturing is the largest specialized industry and the foreign contribution to total industry employment exceeds 75 percent.⁷¹

In another 20 different metro areas, FOEs account for over 20 percent of total jobs in the largest specialized industry. These include well-known concentrations of activity such as rubber products in **Akron**, OH; basic chemicals in **Baton Rouge**, LA; glass manufacturing in **Toledo**, OH; steel in **Pittsburgh**, PA; and traveler accommodation in **Honolulu**, HI.

On average, FDI supports 15.5 percent of all jobs—just over one in seven—in a metro area's largest specialized industry—a narrow proxy for clusters. While FDI does not drive or even contribute to all regional specialization in particular industries in the country—indeed it would be surprising if it did, considering that FDI only accounts for 5 percent of total private employment in the United States—it plays a major role in several of them.

Despite FDI's contribution to regional industry specialization, the profile of jobs in FOEs in most metro areas is quite diversified. FDI is most concentrated in single industries in very specialized regional economies such as **Wichita**, KS in aerospace manufacturing, **Honolulu**, HI in traveler accommodation, or **McAllen**, TX in manufacturing and assembly. Diversified economies such as **Atlanta**, GA; **Chicago**, IL; and **Dallas**, TX, however, attract diversified portfolios of FDI with no industry accounting for more than 6 percent of all jobs in FOEs.

Figure 15. Metro Areas Where Jobs in FOEs Are Least and Most Concentrated in the Single Largest Industry, 2011

Metro area	Industry Accounting for the Largest Number of Jobs in FOEs	Jobs in FOEs	Industry Share of Area Jobs in FOEs
Cleveland, OH	Investigation and security services	1,700	5.0%
Dallas, TX	Pharmaceutical and medicine manufacturing	7,100	5.3%
Miami, FL	Pharmaceutical and medicine manufacturing	4,900	5.4%
Atlanta, GA	Travel arrangement and reservation services	7,300	5.4%
Chicago, IL-IN-WI	Depository credit intermediation	12,400	5.5%
Honolulu, HI	Traveler accommodation	6,000	28.3%
Wichita, KS	Aerospace product and parts manufacturing	3,500	30.3%
New Haven, CT	Grocery stores	4,100	30.7%
Knoxville, TN	Motor vehicle parts manufacturing	5,900	34.2%
McAllen, TX	Navigational; measuring; electromedical; and control instruments manufacturing	3,100	36.9%

Source: Brookings analysis of D&B / NETS, Bureau of Economic Analysis, and Moody's Analytics data

The Global Pull of World-Class Clusters: Bridgeport, Detroit, Houston, and Miami

Clusters—regional concentrations of economic activity in particular fields or related ones—often defy easy classification into industry codes. Across the geography of the United States, technologies, competencies, and shared knowledge bases tie diverse actors together in these dynamic and spatially-bound clusters. Industry clusters serve not only as important determinants of investment locations but also as magnets in their own right for high-value FDI into the United States.

Just outside New York City, the **Bridgeport** metro area, which encompasses all of Fairfield County, Connecticut, is home to one of the densest concentrations of financial and managerial talent in the country. This talent pool draws large investments from global financial firms such as UBS, Royal Bank of Scotland, and Thomson Reuters as well as headquarters operations from foreign firms such as Boehringer Ingelheim and Diageo, to name only two. As a result, head offices account for over half of Bridgeport's approximately 51,000 jobs in FOEs.

In **Miami**, the metro area houses a cluster bound by networks and shared language. Living up to its nickname as the “capital of Latin America,” Miami hosts nearly 300 direct investments from 28 different Latin American countries and 50 different Latin American city-regions together employing over 10,500 workers—plus another 75 investments from Spain and Portugal employing almost 5,000 more. One third of these jobs can be found in foreign-owned establishments in the information, finance, real estate and professional services industries in companies such as Brazilian banks Itau and Banco de Brasil, Mexican telecoms provider Telmex, and Colombian broadcaster Caracol.

FDI in **Houston** attests to its primacy in global energy networks. Foreign companies in energy-related activities and the professional services and the heavy manufacturing industries that co-locate near them employ approximately 90,000 workers in the metro area across 600 different business establishments. At the core of the cluster are major investments from European oil majors such as BP, Shell, Eni, and Total, as well as Brazil's Petrobras and Saudi Arabia's Aramco. A dense network of niche players such as Danish sea-faring giant Maersk's offshore drilling subsidiary augment the cluster and connect Houston to 89 different city-regions from Aberdeen, Scotland and Stavanger, Norway to Riyadh, Saudi Arabia and Kuala Lumpur, Malaysia.

The magnitude of FDI into **Detroit's** automotive industry attests to the region's enduring strength as the global capital of automaking. The region hosts both large production facilities and business unit headquarters for foreign-owned automakers and suppliers such as Chrysler-Fiat, Robert Bosch, Magna, and GKN. Russia's Severstal supplies raw materials while Japanese robotics companies Fanuc, Kawasaki, and Nachi boost productivity on production lines. With automobiles morphing into computers on wheels, the high-tech electronics operations of companies such as Continental and STMicroelectronics increasingly define the cluster. Ultimately, FDI carries knowledge and technology from over 110 different global city-regions in 39 different countries into Detroit, employing 80,000 workers across over 700 different FOEs.

Source: Brookings analysis of D&B / NETS data

The Rise and Changing Composition of FDI from China

FDI from China garners considerable interest even though, in employment terms, Chinese firms (excluding Hong Kong) accounted for only 11,600 U.S. jobs in 2011 by Brookings' accounting, just 0.2 percent of all jobs in FOEs. This relatively modest number, however, masks rapid growth: From 2007 to 2011, the BEA estimates that employment in the U.S. affiliates of Chinese companies increased by over 800 percent.

These figures suggest that a growing number of Chinese firms are interested in investing in the United States. The Rhodium Group estimates that between 2011 and 2013, years not captured in Brookings' dataset, 140 Chinese FDI transactions worth \$21.1 billion took place—totaling nearly 150 percent of the value of all Chinese FDI up to 2011. In 2013 alone, Chinese companies invested a record high \$14 billion driven by large-scale acquisitions in food, energy, and real estate including Smithfield Foods, the U.S. assets of Nexen and Wolfcamp Shale.

The composition and geography of FDI from China has already started to change. Originally concentrated in trade facilitation sectors such as banking and distribution in metro areas like **New York** and **Los Angeles**, Chinese companies now have an increasingly large presence in places with strong technology clusters such as San Jose, Detroit, and Dallas. In **San Jose**, Chinese FDI has concentrated in IT services through companies such as AsiaInfo Linkage and Neusoft. Chinese automakers Yangfeng, SAIC, and Changan have all been drawn to **Detroit**, the knowledge capital of global auto-making, where the latter opened an R&D center in 2011. Telecoms giants Huawei and ZTE, meanwhile, followed the lead of several of their peers to choose **Dallas** for their U.S. headquarters.

In general Chinese FDI is becoming an increasingly common fixture in the nation's advanced industries. R&D spending in the U.S. operations of Chinese companies increased from nearly zero in 2007 to \$366 million in 2011, betraying an intense interest on behalf of many Chinese companies in technological learning and, in some cases, technology sourcing. In the first quarter of 2014, Chinese FDI into U.S. high-tech exploded to \$6 billion—more than the total from 2009-2013 altogether—and was led by the acquisitions of Chicago-based Motorola Mobility and Los Angeles-based Fisker Automotive, an electric carmaker.

Sources: U.S. Bureau of Economic Analysis; Rhodium Group's "China Investment Monitor;" New York Times; Thilo Hanemann and Daniel Rosen's "High Tech: The Next Wave of Chinese Investment in America;" and E&E News.

7. The average large metro area contains FDI from 33 different countries and 77 different city-regions worldwide. The U.S. hosted FDI from companies based in 445 different global city-regions spread across 115 different countries in 2011.⁷² Despite this diversity, companies from a small number of countries account for the vast majority of FDI into the United States: In 2011 companies based in only 10 countries accounted for three-quarters of all U.S. jobs in FOEs. For that matter, 46 percent of all U.S. jobs in FOEs can be found in the establishments whose parent companies are based in only 10 global city-regions.⁷³

Western European countries, Canada, and Japan constitute the 10 most significant sources of FDI into the United States, measured in terms of the number of jobs in the U.S. establishments of companies domiciled within them.⁷⁴ The 10 city-regions whose resident companies account for the largest number of jobs in FOEs in the United States all lie within a top investor country with the exception of greater Dublin (Ireland ranks 11th among countries). Altogether 13 different global city-regions—those shown above plus Montreal-Sherbrooke, Quebec, Canada; Stockholm, Sweden; and Zurich, Switzerland—are home to companies that between them employ more than 100,000 U.S. workers.

The top 10 investor nations display their own industry specialties. Belgian-owned affiliates were prominent in beverage manufacturing, accounting for 38.1 percent of all U.S. jobs in FOEs in the industry and concentrated in metro areas such as **St. Louis**, MO and **Columbus**, OH. Japanese-, German-, and Italian-owned affiliates dominated FDI into the United States in the auto industry—together accounting for over two-thirds of all U.S. jobs in FOEs in the industry—and concentrated in places such

Figure 16. Countries and Global City-Regions Whose Domiciled Companies Account for the Largest Number of U.S. Jobs in FOEs, 2011

Country of Origin	Jobs in FOEs	Share of Total U.S. Jobs in FOEs	City-Region of Origin	Jobs in FOEs	Share of Total U.S. Jobs in FOEs
England	790,300	14.0%	Tokyo–Kanagawa–Saitama–Chiba, Japan	487,400	8.7%
Japan	676,300	12.0%	London, England	460,700	8.2%
Germany	512,300	9.1%	Paris–Île-de-France, France	429,500	7.6%
Canada	470,700	8.4%	Toronto–Ottawa–Ontario, Canada	256,600	4.6%
France	456,600	8.1%	Amsterdam–North Holland, Netherlands	231,700	4.1%
Switzerland	369,900	6.6%	Düsseldorf–Cologne–North Rhine-Westphalia, Germany	165,400	2.9%
Netherlands	347,800	6.2%	Brussels–Leuven–Flemish Brabant, Belgium	154,800	2.7%
Italy	184,600	3.3%	Dublin–Ulster–East, Ireland	141,600	2.5%
Belgium	170,000	3.0%	Stuttgart–Mannheim–Baden–Württemberg, Germany	134,300	2.4%
Sweden	163,100	2.9%	Oxford–Gatwick–South East, England	132,000	2.3%
Top 10	4,141,600	73.5%	Top 10	2,594,000	46.0%

Source: Brookings analysis of D&B / NETS, Bureau of Economic Analysis, and Moody's Analytics data

as **Birmingham, AL**; **Greenville, SC**; **Nashville, TN**; and **Toledo, OH**. British-owned affiliates accounted for the largest share of jobs in FOEs in the aerospace industry and could be found in metro areas such as **Indianapolis, IN** and **Los Angeles, CA**. Swiss-owned affiliates, for their part, were over-represented in pharmaceutical and medicine manufacturing and concentrated in places such as **Boston, MA**; **New York, NY**; and **Philadelphia, PA**.

Mexico, Brazil, South Korea, India, and Taiwan lead investment from the developing world.⁷⁵ Altogether, investments from companies headquartered in these five countries account for 4.7 percent of all U.S. jobs in FOEs. For all the attention garnered by Chinese FDI into the United States, as of 2011 U.S. affiliates of Chinese companies employed only 11,500 U.S. workers, ranking China 33rd for the number of direct U.S. jobs its FDI supports, behind Norway and ahead of the United Arab Emirates. However, in the case of China and several other emerging markets, data from the BEA and other sources indicate that FDI into the United States is growing rapidly from its low base.⁷⁶

FDI from the emerging world comes in both basic and advanced industries: For instance, Mexico's FDI into the United States employs the largest number of workers in bakeries and cement manufacturing, while Indian FDI employs the most workers in computer systems design and business support services and South Korean FDI in clothing stores and motor vehicle manufacturing. At the city-region level, **Seoul**, **São Paulo**, **Mexico City**, and **Monterrey** send the most FDI to the United States from the emerging world, accounting for over 80 percent of all jobs supported by FDI from their four countries combined.

As for host regions in the United States, **New York, NY** hosts FDI from the widest variety of places—267 city-regions across 89 countries—followed by **Los Angeles, CA**; **Miami, FL**; **Chicago, IL**; and **Houston, TX**, revealing a general association between metro area size and diversity of foreign investor origins. A few smaller metro areas such as **Cincinnati, OH** and **Tampa, FL** register outsized global profiles with FDI from around 100 different global city-regions.

Aggregate numbers hide important variation in the industry composition of FDI from particular places and the destinations of such investment in the United States, especially in advanced industries. In these innovation-intensive industries especially, FDI forges clear linkages between the world's leading industry clusters. For example, FDI ties global automotive hubs **Tokyo, Japan**; **Turin, Italy**; **Nagoya,**

Figure 17. Top Destinations for FDI into U.S. Advanced Industries by Global City-Region of Origin, 2011

NAICS Code	U.S. Advanced Industries with the most workers in FOEs	Emp. in FOEs	FOE Share of Total U.S. Emp.	Top 5 Large Metro Destinations	Top 5 Sending Global City-Regions
3363	Motor vehicle parts manufacturing	219,500	47.10%	Detroit, MI	Greater Tokyo, JPN
				Knoxville, TN	Turin–Piedmont, ITA
				Indianapolis, IN	Nagoya–Aichi–Gifu, JPN
				Toledo, OH	Toronto–Ottawa–Ontario, CAN
				Dayton, OH	Stuttgart–Baden–Württemberg, DEU
5415	Computer systems design and related services	121,800	8.20%	Washington, DC	Paris–Île-de-France, FRA
				New York, NY	London, GBR
				San Jose, CA	Greater Tokyo, JAP
				Boston, MA	Oxford–Gatwick–South East, GBR
				Atlanta, GA	Stockholm, SWE
3254	Pharmaceutical and medicine manufacturing	114,300	43.50%	New York, NY	Basel–Northwestern, CHE
				Philadelphia, PA	London, GBR
				Boston, MA	Tel Aviv–Central, ISR
				Dallas, TX	Paris–Île-de-France, FRA
				San Francisco, CA	Greater Tokyo, JAP
3361	Motor vehicle manufacturing	88,700	58.10%	Detroit, MI	Turin–Piedmont, ITA
				St. Louis, MO	Stuttgart–Baden–Württemberg, DEU
				Portland, OR	Nagoya–Aichi–Gifu, JAP
				Toledo, OH	Greater Tokyo, JAP
				Greensboro, NC	Munich–Nuremberg–Bavaria, DEU
3345	Navigational; measuring; electromedical; and control instruments manufacturing	81,600	20.40%	Boston, MA	London, GBR
				New York, NY	Paris–Île-de-France, FRA
				San Diego, CA	George Town–Grand Cayman, CYM
				Houston, TX	Schaffhausen–St. Gallen, CHE
				McAllen, TX	Dublin–Ulster–East, IRL
3251	Basic chemical manufacturing	71,800	51.80%	Houston, TX	Rotterdam–Hague, NLD
				New York, NY	Koblenz–Ludwigshafen, DEU
				Chicago, IL	Düsseldorf–Köln–NRW, DEU
				Cincinnati, OH	Munich–Nuremberg–Bavaria, DEU
				Philadelphia, PA	London, GBR
3344	Semiconductor and other electronic component manufacturing	59,600	15.30%	San Jose, CA	Schaffhausen–St. Gallen, CHE
				Portland, OR	Greater Tokyo, JPN
				Los Angeles, CA	Paris–Île-de-France, FRA
				San Diego, CA	Singapore, SGP
				San Francisco, CA	Kyoto–Shiga, JPN
3391	Medical equipment and supplies manufacturing	57,100	18.80%	Los Angeles, CA	Dublin–Ulster–East, IRL
				Dallas, TX	Basel–Northwestern, CHE
				New York, NY	Paris–Île-de-France, FRA
				Boston, MA	Frankfurt–Kassel–Hesse, DEU
				Providence, RI	London, GBR
3339	Other general purpose machinery manufacturing	56,000	23.50%	New York, NY	Stuttgart–Baden–Württemberg, DEU
				Chicago, IL	Düsseldorf–Köln–NRW, DEU
				Detroit, MI	Zug–Lucerne–Central, CHE
				Cincinnati, OH	Schaffhausen–St. Gallen, CHE
				Houston, TX	Nagoya–Aichi–Gifu, JPN
3364	Aerospace product and parts manufacturing	54,100	11.20%	Indianapolis, IN	London, GBR
				Los Angeles, CA	Paris–Île-de-France, FRA
				Wichita, KS	Birmingham–West Midlands, GBR
				Seattle, WA	Montreal–Sherbrooke–Quebec, CAN
				St. Louis, MO	Bath–Bristol–South West, GBR

Source: Brookings analysis of D&B / NETS, Bureau of Economic Analysis, and Moody's Analytics data

Japan; **Toronto**, Canada; and **Stuttgart**, Germany to their U.S. counterparts of **Detroit**, MI; **Knoxville**, TN; **Indianapolis**, IN; **Toledo**, OH; and **Dayton**, OH; just as it links chemical giants **Rotterdam**, Netherlands; **Ludwigshafen**, Germany; and **Düsseldorf**, Germany with U.S. concentrations in **Houston**, TX; **Cincinnati**, OH; and **Philadelphia**, PA.

* * *

In short, FDI flows into the United States and its metro areas in nearly every industry and from a vast array of global locations. This exploration of the geography of jobs in FIEs captures a sub-set of the economy that exhibits considerable variation from place to place and reports, and displays, for the first time, the locations, industries, origins, and modes of entry of the FDI deployed across the United States today.

V. An Agenda for Maximizing the Potential of Foreign Direct Investment

FDI is big business. MNEs are expected to invest over \$1.6 trillion in productive assets outside their home countries in 2014 alone.⁷⁷ Competition among countries and regions to attract this capital and put it to work is intensifying.

As policymakers consider how to best take advantage of the opportunities presented by increasing flows of cross-border investment, they should cease treating FDI attraction as an end in itself and instead begin to regard FDI as a means to strengthen industry clusters, infuse new knowledge and technology into regional economies, and increase global engagement. Economic development practice should jettison its traditional preoccupation with attracting more and more FDI in favor of a focus on better harnessing FDI to achieve economic development goals.

In order to maximize the quality, quantity, and impact of FDI into the United States, the federal government should work to sustain a dynamic and growing domestic market built on strong regional foundations. It must strive to serve as a reliable partner in renewing the pillars of U.S. competitiveness: innovation, human capital, and infrastructure. At the same time, the federal government should engage in a finite number of low-cost FDI-specific initiatives where it clearly has the comparative advantage over state and localities.

Sub-national leaders, for their part, should begin by integrating FDI into comprehensive regional economic development strategies that aim to cultivate strong industry clusters. Strong industry clusters should form the bedrock of sub-national FDI strategies not only because they are magnets for FDI in their own right, but also because they play a crucial role in determining whether the potential benefits of FDI are made real. In addition to cluster-building efforts, states and their regions should work together to craft a small number of tightly focused policies designed to attract, retain, and maximize the economic impact of FDI.

The federal government should foster a vibrant domestic economy that draws FDI naturally

Alarmed by the steady decline in the share of global FDI coming into the United States, the federal government has already set out to renew the nation's capacity to attract foreign investment.

The creation of SelectUSA in 2011 as the first-ever federal effort to promote and facilitate FDI in the United States signaled a new commitment to FDI attraction at the federal level, reinforced by a late 2013 investment summit.⁷⁸ And the House of Representatives' 2013 passage of the Global Investment in American Jobs Act—directing the executive branch to conduct an interagency review of policies and practices that affect FDI—further demonstrated the strong bipartisan consensus on the need for action to renew U.S. competitiveness.⁷⁹

The federal government's steps in the right direction are laudable, but winning the long game requires more—and will be much harder. The United States' greatest asset in the global competition for capital is the dynamism of its domestic economy. Accordingly, the core tenets of a national FDI strategy should barely seem specific to FDI at all—they should seek to cultivate an environment in which innovation and production can flourish economy-wide. The federal government should therefore:

Cultivate a stable economic and investment environment. Dynamic and growing economies with strong institutions draw FDI naturally. The list of possible supply- and demand-side reforms that could remove structural hindrances to economic growth and unleash investment by foreign and domestic firms alike is long. However, the appetite to tackle some of the economy's most intractable issues, such as corporate tax reform, appears to be non-existent.⁸⁰ At the minimum, though, the federal government should work to craft a long-term plan for fiscal sustainability that revives confidence in the federal government's ability to steward the economy and balances mandatory spending with needed discretionary investments.

The opportunity for more ambitious action exists on the horizon around trade. Multilateral trade negotiations currently underway present an opportunity to boost investment in and exports from the United States. Specific investment clauses would advance the country's FDI goals but so too would basic steps to liberalize trade and harmonize regulations.⁸¹ With a large domestic economy and a competitive cost-structure vis-à-vis other developed countries, the United States could gain inordinately from further liberalization and become a popular base for both locally-serving and export-oriented production.⁸² In a similar vein, pursuing bilateral investment treaties, which ensure reciprocal national treatment of investors and clarify important issues such as taxation, with countries not presently covered by an agreement would open the doors to both increased FDI and increased exports from U.S.-based companies venturing abroad.⁸³

Serve as a reliable partner in building strong industry clusters by securing the basic drivers of economic growth and competitiveness. Beyond attending to the institutional environment, the United States also needs to develop and embark on a concerted growth agenda through which the federal government—working with states, regions, and the private sector—reinforces the traditional pillars of U.S. competitiveness and invests in what matters to strengthen regional industry clusters and safeguard the country's long-term prosperity.⁸⁴

Now more than ever the federal government needs to **commit to the nation's innovation system** by increasing public investment in basic R&D. The strength of the U.S. innovation system is one of the country's strongest attractions, and federal funding into basic research primes the entire system. To date, the rapid pace of innovation has all but compelled firms competing globally in R&D-intensive industries to maintain a presence in the U.S. market. However, the country has never had a monopoly on innovation, and its lead is eroding.⁸⁵ Federal R&D spending has declined by 15.8 percent since the financial crisis and in 2014 will reach a new postwar low as a share of GDP.⁸⁶ In order to maintain the nation's innovation advantage, the federal government must redouble its commitment to science, technology, and innovation.

The federal government should also help **ensure an adequate supply of skilled workers** by partnering with states and regions on workforce training and, more ambitiously, moving forward on high-skilled immigration reform. The federal government should work with states and regions to build an education and workforce training system that not only provides workers with the training and skills that they need but is also flexible and responsive to the rapidly changing needs of the industry.⁸⁷ It should emphasize regional approaches to employer-guided solutions, provide practical experience through programs such as apprenticeships, and focus on STEM and career technical education. Responsibility for the second major component of a national skills strategy—reforming the nation's immigration system so that the best and brightest from across the globe can contribute to the U.S. economy—falls squarely under the federal purview as well.

The federal government should devise a strategy to **modernize the country's infrastructure** that prioritizes trade-facilitating infrastructure supporting freight, port, and air transportation, as well as the energy, water, and telecommunications infrastructure that directly impact competitiveness. Historically low borrowing costs and the continued need for public investments to accelerate a weak recovery make the moment opportune, if the federal government is willing to seize it.⁸⁸ Beyond investing directly in specific projects, the federal government can play a catalytic role in opening the door for novel sources of finance—including foreign capital—to be deployed in upgrading the nation's ailing infrastructure and in forging public-private partnerships that deliver better value for American taxpayers.⁸⁹

Engage in a finite number of low-cost FDI-specific initiatives. Beyond these platform-setting policies, the federal role in a national FDI agenda is relatively circumscribed. Direct federal engagements

should be restricted to areas where the federal government enjoys a clear comparative advantage. Accordingly, the federal government should:

► **Continue aligning federal trade and investment programs.** The federal government should use the opportunity presented by the 2014 sun-setting of the National Export Initiative to fully integrate exports and FDI into a comprehensive national trade and investment strategy.⁹⁰ The Department of Commerce appears to already be moving in this direction. The president's FY 2015 budget request rebrands the International Trade Administration (ITA) as the *International Trade and Investment Administration*, which would be a symbolic first step and should be supported by appropriate adjustments to missions and incentive structures.

Commerce should build on ITA's recent efforts around exports and align its integrated trade and investment strategy around not only countries and sectors, but also clusters and innovation. Economies of scale and scope suggest that integrated missions should advance the United States as a destination to produce, invest, and learn, as well as a source of quality products. Doing so would have U.S. representatives abroad present the full slate of U.S. offerings in a specific, high-quality, and targeted manner.

Alongside, Commerce should explore ways to capitalize on increasing outflows of high-quality FDI from emerging markets, where the U.S. consular network is thinner. The opportunity is huge and growing: China's outbound investment alone increased from \$916 million in 2000 to nearly \$84 billion in 2012.⁹¹

Across the federal government, better understanding of the linkages between exports, imports, FDI, and economic development is needed. For example, this analysis found that 9 percent of FOEs in 2011—representing 1.25 million workers or 22 percent of the total FDI-supported workforce—engage in importing, exporting, or both.⁹² Improved knowledge of how the U.S. operations of MNEs fit into global value chains would put this information into context. Congress could help the interagency process by enacting the Global Investment in American Jobs Act, which requires an interagency review of laws and regulations affecting the U.S. investment environment and a review of policy options to enhance U.S. competitiveness in attracting FDI.

Lastly, Commerce and other agencies should identify opportunities to encourage the alignment of trade and investment activities at state and regional levels. Application guidelines for federal awards can encourage regions to combine industry clusters, exports, and FDI into unified and comprehensive economic development plans. One model is the new Investing in Manufacturing Communities Partnership (IMCP) initiative, which helps regions win grants to invest in infrastructure and public goods to strengthen entire industries and attract new investment in manufacturing.⁹³ The IMCP grant requires the development of a comprehensive regional economic development plan and coordination of long-term investments by multiple parties. In doing so, the successful program also advances best-practice economic development policy-making.

► **Augment SelectUSA's capacity to carry out its mandate and free it to articulate the advantage of the nation's diverse industry clusters.** SelectUSA was launched by executive order in 2011 with a mandate to promote the United States as an investment destination abroad; provide technical assistance to potential investors and coordinate for them across federal agencies; and partner with U.S. state and regional economic development organizations on FDI attraction and retention.⁹⁴ The organization currently operates on a shoestring budget within the Department of Commerce. In order to carry out its many responsibilities effectively, SelectUSA must be adequately staffed and resourced. SelectUSA received its first direct appropriation of \$7 million in the FY2014 budget, and the President has requested \$20 million to expand the initiative further in his proposed FY2015 budget. This increased commitment notwithstanding, if other countries' investment promotion activities are any guide, SelectUSA will remain woefully underfunded.⁹⁵

SelectUSA has proposed a number of policies in its recent budget requests that it is uniquely positioned to carry out. Educating and training Foreign Commercial Service (FCS) officers on FDI promotion offers a low-cost, high-return early step. At any rate, empowering closer partnership between SelectUSA and the FCS on investment attraction takes advantage of a clear federal government strength: its global reach. And an Investment Innovation Fund that competitively awards grants to support new and specific ways to promote U.S. competitiveness has the potential to revitalize a field overly reliant on incentives and business-as-usual economic development.

At present, SelectUSA's required geographic neutrality—by which it cannot be perceived to promote one U.S. location over another—should be reevaluated. This constraint prevents SelectUSA from providing potential investors with crucial specificity about the advantages of investing in the United States. In reality, many of the United States' competitive strengths are regional in nature. The assets that potential investors frequently wish to tap into in a given industry—skilled workers, complementary research institutions, and specialized suppliers—cluster together. To advertise life sciences in the United States but not be permitted to mention Boston or San Diego, for example, is to miss an opportunity to convey what sets the United States apart. If the requirement of strict geographic neutrality must remain in place, SelectUSA should find a way to tout, at the very least, the diversity and dynamism of U.S. industry clusters in a neutral way.

Finally, with demands many and expectations high, SelectUSA must find a way to be responsive to the many state and hundreds (if not thousands) of regional entities that wish to take advantage of its services. One area of potential concern stems from SelectUSA's closer relationship with states, which can leave local officials in the dark if their state fails to pass along information. Requiring state and local alignment before making connections would coordinate actors at the outset, streamline interactions, encourage collaboration among economic development leaders, and enable SelectUSA to disseminate opportunities at scale.

► **Restore and modernize federal data programs tracking inward investment.** Sequestration accelerated troubling reductions in the number and scope of federal surveys tracking FDI into the United States. From 2010 to 2011 BEA was forced to cut its analysis of the operations of U.S. affiliates of foreign companies to bare-bones tables with one year of time series data and a cover sheet.⁹⁶ The useful survey on foreign-owned establishments that links BEA and Census Bureau data to provide detailed industry and state information crucial to practitioners has not been published since 2002, and its future is uncertain.⁹⁷ In 2007, budget cuts hit the annual surveys of new investment that provided data on both incoming greenfield and M&A activities.⁹⁸ As a result, at present none of BEA's product offerings report FDI statistics by mode of entry even at the national level, although future releases may again.

Beyond restoring the full provision of basic data, Congress should grant BEA and other U.S. statistical agencies sufficient funding to continue their coordinated data modernization efforts.⁹⁹ In the face of increasingly globalized production networks and expanding trade in intermediate goods and services, federal statistics must better capture where U.S. operations of multinational companies are located in global value chains.¹⁰⁰ At present, annual surveys of FDI into the United States only include import and export information for goods. BEA has recently started to integrate data from a number of its surveys to capture trade in services by multinational corporations, though, and in doing so found that foreign-owned firms in the United States generated \$122 billion worth of trade in services in 2008.¹⁰¹

Such findings demonstrate the importance of projects to link datasets, but BEA should advocate for funding to consolidate as much information as possible into comprehensive and timely annual releases accompanied by written analyses. Relying on linked individual surveys to yield new information can sacrifice timeliness, as all datasets must be reduced to the most recent common year of observation, and result in one-off productions.

Finally, BEA does not currently offer any accounting of FDI in either dollar or employment terms at the metropolitan area level—the crucial geography for economic development. Privacy and data suppression issues notwithstanding, BEA would provide an immense service to its regional stakeholders and improve economic development policymaking across the country if it provided even basic summary statistics on FDI at the metropolitan area level.

State and regional leaders should develop and execute tailored FDI strategies that are fully integrated into broader regional economic development priorities and grounded in their regional industry clusters

This analysis showed that new establishment openings contribute little to employment changes at national, state, and regional levels—accounting for just 19 percent of increases in the number of jobs in FDI in the average year. These contributions are dwarfed by employment changes due to establishment expansions, contractions, and closures, on one hand, and ownership transfers of existing

companies, on the other hand. State and regional FDI strategies that focus on greenfield investments—as most do—consequently ignore the five largest of the six drivers of employment change in FOEs and all of the potential economic benefits from FDI via M&As. Given these realities about the economic and employment impact of FDI on regional economies, good FDI policy should at its core resemble good cluster policy. That is to say, good FDI policy should emphasize the support and nurturing of firms already located in a region and prioritize the provision of public goods and cluster infrastructure from which all local producers can benefit.

In this sense, state and local leaders striving to maximize the economic potential of FDI into their regions should focus first and foremost on building dynamic, healthy, and innovative regional economies. The cornerstone of a strategic local FDI strategy is a robust regional economic development strategy that places strong industry clusters and global engagement at its core. After taking care of the basics, state and local leaders can engage in a limited set of specific activities around FDI itself. Specifically, sub-national leaders should:

Integrate FDI into a broader regional economic development strategy with a focus on industry clusters. States and regions should stop thinking about FDI in isolation or as an extension of business recruitment strategy, and instead work to integrate it into their comprehensive economic development

The Innovation Economy as FDI Catalyst: Massachusetts-Israeli Partnership

Massachusetts has emerged as a global leader in the innovation economy, with thriving industry clusters in life sciences, biotechnology, IT, and clean energy, to name only a few. Companies and research institutions in these clusters have forged numerous linkages with complementary concentrations of activity abroad. The state is seizing the opportunity to deepen some of the most promising ties. Israel—known as the “Startup Nation” and home to the second-largest concentration of companies listed on the NASDAQ with expertise in clean energy and water technology, medicine, and software—was a natural early target.

Israeli companies, for their part, have demonstrated their eagerness to tap into Massachusetts’ innovation economy. In terms of dollar investment, Israeli FDI into the United States grew by 79 percent from 2006 to 2011. From Teva Pharmaceuticals, Candela Laser Corporation, and Argo Medical Technologies to Zerto, an innovative data services provider, many Israeli-owned companies have found their way to Massachusetts.

Recognizing not just the opportunity but the natural fit of Israeli FDI into the state’s economy, Governor Deval Patrick led a trade mission to Israel in 2011 where he unveiled the Massachusetts-Israel Innovation Partnership (MIIP), which launched several research collaborations between companies from both sides. Through MIIP, both Massachusetts and Israel intend to accelerate knowledge exchange and explore opportunities for mutual growth in the life sciences, clean energy, and technology sectors. The partnership gives Massachusetts companies direct access to Israel’s burgeoning innovation ecosystem while also establishing Massachusetts as a premier gateway to North America for fast-growing Israeli companies.

The Massachusetts-Israel Industrial R&D program—created within the MIIP framework—has for the past two years awarded grants to Massachusetts-based and Israeli companies engaged in cooperative industrial R&D projects. Other states including Florida, New York, and South Carolina have started to emulate Massachusetts’ model. Massachusetts has not stopped either. The Massachusetts Life Sciences Center, based on the successful model of the industrial R&D program, recently launched the International Collaborative Industry Program to promote collaboration and idea exchange between life sciences companies around the world.

Massachusetts’ world-class innovation economy makes it a magnet for FDI from everywhere. But given the complementarity of their industry clusters and a mutual focus on advanced research and innovation, Israel in particular has emerged as a natural partner for investment.

Source: Massachusetts Israel Innovation Partnership website; David Goodtree, “The Massachusetts-Israel Economic Relationship, 2nd Edition,” prepared for the New England-Israel Business Council (2013).

Grounding FDI in a Cluster Strategy: Autos in Upstate South Carolina

With a growing presence of globally competitive companies such as BMW, Freightliner, Bosch, and Michelin, South Carolina's Upstate region—centered on the Greenville-Spartanburg area—has developed a world-class auto industry cluster over the past 35 years. The region's success in developing this cluster can be attributed to a number of factors, but perhaps none as important as the strong commitment of the state and the region to fold FDI into an explicit cluster-based strategy for upgrading the region's industrial base and moving up the value chain.

The Clemson University International Center for Automotive Research (CU-ICAR) serves as the linchpin of the region's auto cluster, conducting advanced automotive R&D and training a skilled workforce for the industry. CU-ICAR evolved from conversations between Clemson and BMW in early 2000 about what the region's automotive cluster needed to remain competitive. Since then CU-ICAR's focus on building a robust automotive ecosystem where industry collaborates with academia has continued to attract best-in-class foreign companies such as German In-tech Automotive Engineering, ZF Group, and Tigges as well as domestic companies including Proterra, Inc. Altogether the public and private sectors have invested \$250 million in CU-ICAR, including a \$36 million dollar partnership to support four endowed chairs in engineering.

A number of other public and private efforts to grow the cluster complement CU-ICAR's anchor. The Upstate South Carolina Alliance—a regional public-private economic development organization formed in 2000—has leveraged the efforts of the entire 10-county region to serve as its singular marketing and branding entity. Since 2010, the Upstate region has grown its auto cluster with 50 companies announcing \$4 billion in capital investment.

In addition the South Carolina Automotive Council—an industry-led organization dedicated to advancing the auto sector in the state—provides hallmark services of a strong cluster organization: training seminars, opportunities for best practices sharing and peer benchmarking, networking events, and specialized programming. And the state's technical college-based workforce training program, ReadySC, serves all companies locating in the state by offering customized workforce training solutions.

Collaboration between the public and private sectors in the Upstate region has proven the power of a well-designed cluster strategy that harnesses FDI to achieve larger economic development goals.

Source: The Upstate SC Alliance website; ReadySC website; David Cole, "Revving the Economic Engine: South Carolina's Auto Cluster" (National Association of Development Organizations, 2013).

plans. The new approach should be organized around regional industry clusters—powerful engines of economic development that stimulate innovation and growth in their own right.¹⁰² Clustering fosters the emergence of the kind of deep and specialized supply chains on which multinationals rely. Clustering also signals to other companies in the same industry that a particular location is an advantageous one.

More importantly, though, strong clusters help maximize the economic development potential of FDI by accelerating spillovers. Strong clusters ensure that the knowledge, technologies, and practices accompanied by FDI actually flow out of the investing firm to other local producers and more widely throughout the region.¹⁰³ Clusters accomplish this by encouraging collaborations, facilitating business transactions, and allowing for a steady turnover of skilled workers.

Accordingly, sub-national leaders looking to maximize the quantity, quality, and impact of FDI into their regions should—just like their federal counterparts—focus first and foremost on attending to the basics of strong clusters.

To begin with, sub-national leaders must commit to **building a dynamic innovation ecosystem** in their regions. When critical innovations begin to flow from a region, companies active in the same field start to view a presence in that region as integral to their own competitiveness. Along these lines, an effective way to attract high-value investment is to cultivate a critical mass of actors—firms,

universities, laboratories, and skilled workers—in technology fields aligned with regional industry strengths. Many states and regions will need to take a more active role in building such ecosystems. R&D investment used to be seen as the sole responsibility of the federal government, but with the pullback in federal funding on all fronts, states are increasingly taking the reins.¹⁰⁴

The bulk of the power to reform and innovate in education and workforce training in this country lies with the states and regions. Accordingly, sub-national leaders must take the lead in **building a skilled workforce** by investing in workforce training. Given that access to a skilled labor pool regularly emerges as a determining factor in the location decisions of foreign firms, states and regions that do the best job training workers and developing a system responsive to the changing needs of employers should have an advantage.¹⁰⁵ What is more, the human capital level of a region's workforce—known in the jargon as regional absorptive capacity—is instrumental in processing the knowledge, technology, and ideas introduced by FDI and converting them into productivity-enhancing spillovers.¹⁰⁶

Finally, public investment in infrastructure will be necessary to bolster the competitive proposition of investing in the United States. Against the backdrop of federal budget constraints, here too state and local governments must assume a greater role in planning, financing, and delivering infrastructure projects—and many already have.¹⁰⁷ They should continue to **pursue novel infrastructure investment mechanisms**, including ballot referendums, public-private partnerships, and value capture tools like tax increment financing to build new infrastructure projects and maintain and upgrade existing ones.

Craft a discrete number of specialized policies to attract, retain, and maximize FDI. Beyond platform-setting steps to cultivate dynamic regional economies and strong clusters, sub-national leaders should develop discrete set of specialized policies to attract, retain, and make the most of foreign investment.¹⁰⁸

► **Fold FDI strategy and export promotion efforts into an integrated portfolio of global engagement activities.** Trade and investment go hand in hand in today's global economy, with one flow predicting the other. FDI plays an additional well-documented role in boosting regional exports through spillovers.¹⁰⁹ States and regions will find efficiencies in combining FDI and export promotion activities into an integrated global engagement portfolio for a number of other reasons as well, though.

First, export and FDI levels are both functions of the global reach of local competitive advantages. Activities to promote each are therefore complementary by nature and start with strong industry clusters. More granularly, export and FDI strategies also require similar skill sets to tailor and execute effectively. Both sets of activities rely on the region's networks of contacts at home and abroad. What is more, investment relationships can and do quickly evolve into trading relationships, and vice versa. In an era of global supply chains, foreign firms may engage in both importing and exporting from their U.S. locations, and many also supply local firms which may themselves export. This complementarity extends to physical infrastructure: Prospective investors need the same roads, rail, and ports to import intermediate goods that exporters need to reach global markets.

A typical misconception among many economic development practitioners—betraying their continued preoccupation with winning big greenfield investments—is that foreign direct investors tend to be large firms while clients of public export promotion services tend to be SMEs. These stereotypes in turn lead practitioners to believe that foreign investors and domestic exporters each have very different needs that render conjoined approaches inefficient. In reality, though, Brookings' analysis found that 92 percent of foreign-owned companies present in the United States in 2011 employed fewer than 500 workers across all of their U.S. establishments, qualifying as small and medium enterprises.¹¹⁰ Only 8 percent of companies (albeit accounting for 83 percent of all jobs in FOEs) employed over 500 workers. Potential clients of smart export promotion and FDI attraction activities are therefore less different than commonly assumed—small and medium-sized foreign investors outnumber large ones in most regions by very large margins. Accordingly, practitioners should be sensitive to the small-firm nature of their economic communities as they work to consolidate their FDI and exports efforts.

► **Prioritize activities to retain, expand, and embed existing businesses in the region.**

Business retention and expansion strategies are not about awarding subsidies or incentives to long-time investors instead of new ones. Rather, retention involves the creation of an economic

development system that attends to—or indeed anticipates—the needs of employers with relevant programming available to any firm with a need. This sort of programming can come in the form of customized workforce training solutions or facilitated networking with suppliers, for example.

Just as important are activities to embed companies—foreign or new ones especially, given their presumed shallower ties—in the regional economy and its industry clusters.¹¹¹ Such activities may include facilitating joint research between a company and local university or partnering with industry associations to provide a forum for technology exchange and best practice sharing among peers. South Carolina, for its part, has achieved considerable success with programs to provide custom workforce training solutions for local employers in partnership with educational institutions.¹¹²

As the data presented in this report show, five of the six factors driving employment levels in FOEs in a region involve the health of existing firms.¹¹³ In the average year in the average region, more jobs in FOEs are lost to closures than gained by openings, and more are lost to contractions than gained by expansions.¹¹⁴ The scope for well-designed policies to accelerate expansions, slow contractions, and work with companies to ward off closures is therefore large.

Ultimately, cultivating an environment in which existing investors can thrive holds as much, if not more, promise for maximizing the economic impact of FDI than does an active attraction strategy.¹¹⁵ Greenfield investments provide ribbon-cutting opportunities and an obvious boost to the FDI base in a region, but active greenfield policy, often accompanied by tax breaks, subsidies, and other types of incentives, comes at great hidden expense to states, localities, and taxpayers. What is more, such transactions frequently lack transparency and accountability. By favoring individual firms, they also distort competition and involve considerable amounts of risk, tying policy success to the fate of one company.¹¹⁶ Indeed recent studies have found that the cost of active incentive-based greenfield attraction strategies often outweigh the potential benefits.¹¹⁷

Retention and embedding activities, on the other hand, fit hand-in-glove with broader efforts to build strong clusters through the provision of public goods and the cultivation of a shared industrial commons. Such activities by nature align with regional efforts to build a strong labor force; a culture of collaboration, learning, and exchange (in addition to competition); and shared research and technology infrastructure. In addition, such a joined-up approach can also generate goodwill and new prospects organically, help attract overseas suppliers, and brand a region's location as the place to do business via word-of-mouth—the most powerful form of communication and validation of all.¹¹⁸

► **Devise a strategy for leveraging foreign M&As in service of local economic development**

goals. Local leaders can feel ambivalent about foreign takeovers of local firms and question whether and how local economic development intermediaries should involve themselves in what are in essence private business transactions. However, M&As entail real opportunities for expanding local businesses and upgrading regional industry clusters. Local economic development officials can play an important role in ensuring that their regions maximize the potential benefits of foreign M&As—and minimize any potential downsides.

Immediately after a foreign acquisition, practitioners can set out to build a relationship with the new owner and establish lines of communication that can be used to encourage the new parent company to retain or consolidate functions locally. Over the longer term, practitioners can learn about the company's needs, align programming, and work with the new parent company to expand capacity and add capabilities. Both actions relate directly to the need for well-designed business retention strategies.

Strong industry clusters are also critical to maximizing the potential economic benefits of foreign M&As. Because strong clusters facilitate tech transfer and knowledge exchange among companies in a region via supplier relationships, research collaborations, workforce turnover, and more, they can determine the extent to which spillovers from the global parent company accrue locally. Strong clusters also mitigate any potential adverse impacts such as downsizing or establishment closure by ensuring that displaced workers can find alternative employment and that bought-out former owners can re-invest their new riches in other local start-ups. More importantly, though, strong clusters lessen the chances of downsizing or closure happening in the first place by making regions “sticky”—that is to say, companies that derive a critical element of their

Embracing Foreign M&As to Accelerate Life Sciences Innovation: San Diego's Biocom

San Diego's life sciences cluster consists of hundreds of companies and research institutions across the health, energy, and agriculture sectors. Like anywhere else, though, its firms require capital to develop and commercialize ideas. With the help of Biocom, the cluster's search for capital goes beyond borders.

Biocom is a member-driven organization that sits at the center of the greater San Diego region's life sciences cluster and represents more than 600 companies, service providers, and research institutions. Among the many services that Biocom provides its members is a line of programming to facilitate inward investment.

Two pillars of Biocom's capital development strategy directly involve the appreciation of mergers & acquisitions (M&As). The first, a Global Life Science Partnering Conference, brings together senior executives from the world's leading pharmaceutical and biotech firms with local companies for an annual event to forge connections and catalyze deal-making. Local companies enjoy direct access to decision-makers in the industry while executives from around the globe learn about the depth, diversity, and sophistication of activity underway in San Diego and Southern California.

The second pillar, Biocom's Partner Days, brings scientists, engineers, and executives from large pharmaceutical companies to San Diego for a series of one-on-one meetings with local firms or institutions engaged in complementary research to explore opportunities for partnership, licensing, and M&A deals. The next Partner Day, now in planning mode, will feature researchers from German life sciences giant Bayer AG. Biocom will facilitate matchmaking by solicited applications from its members and will help the visiting company identify local actors engaged in target activities for one-on-one meetings.

Biocom's recognition—and that of its members—of the strategic importance of FDI via M&As stems from the fast paced and global nature of innovation and commercialization in the sector. Many researchers and entrepreneurs set out with the intention of selling their solutions to larger firms with deep development pockets and vast distribution networks, free then to take the proceeds from the deal and start again. Past experience has taught San Diego that FDI often begets more FDI too. With the acquisition of San Diego-based Althea, Japanese company Ajinomoto established a presence in Southern California to tap into the local ecosystem and build ties between clusters as well as scout for other targets and potential locales for future investment. This cycle works best when supported by a strong underlying industry cluster with deep pools of skilled labor, plentiful research institutions, and a ferment of entrepreneurship and start-up activity—all of which San Diego has in abundance.

Sources: Biocom and the San Diego Union-Tribune.

competitive advantage from a location are less likely to abandon it following a change in ownership; the new parent firm may also be more likely to put down additional roots.

States and regions can also serve as information clearinghouses for local companies in need of capital and foreign firms on the lookout for prospective acquisitions. Startups and SMEs often struggle to raise sufficient capital to bring their ideas and products to market and—with many regional banks in secular decline and bank lending generally squeezed since the financial crisis—increasingly lack access to traditional sources of financing. To address these challenges, economic development entities can create programs that link capital-starved companies with potential investors—regardless of investor country of origin. Serial entrepreneurs actively seeking buy-outs in order to re-invest the proceeds in other start-ups would benefit from such services as well. Taking an inventory of promising local firms with innovative technologies to inform trade and investment missions, for example, would help practitioners more readily identify prospective investors and facilitate match-making.

► **Establish a compelling global identity.** States and localities must cultivate distinctive regional identities that capture their unique position in the global marketplace.¹¹⁹ Identities should grow out of regional specializations and local competitive advantages, not magazine rankings or empty sloganeering. Since effective identity-shaping forces regions to conduct thorough assessments of their economies, industry bases, and assets in order to hone their competitive proposition, this exercise should be incorporated into the economic development planning activities mentioned above.¹²⁰ Ultimately, a broad base of regional stakeholders should contribute to the exercise in order to establish an identity that unifies public, private, and civic leaders in spirit and purpose.

With a carefully crafted message that differentiates a place from its competitors in hand, regions can spread word about their distinctive strengths through a number of specific avenues:

marketing campaigns; conducting targeted trade missions, attending international expositions, maintaining foreign offices in key markets, and creating an information-rich website, to name a few.¹²¹ Some of these activities can be expensive, though, and not appropriate for all regions. In crafting a marketing agenda, policymakers should examine the relative effectiveness of each potential activity and adopt only those that will deliver the most value.¹²²

For their part, metropolitan area leaders in the public and private sectors should work together to align behind a single regional identity that precludes neighboring cities from competing against one another in a zero-sum game for the region.¹²³ Investor confidence can be shaken by local infighting that spills into the open.¹²⁴ Appointing a chamber of commerce or other organization operating at the metropolitan scale as the primary representative of the regional business environment can ensure that the region puts its best face forward. For instance, the Upstate SC Alliance, one of the country's most successful regional economic development organizations, represents and collectively markets 10 counties spanning multiple metro areas in northwest South Carolina. It handles all requests for the region and works with county economic development officials to close the deal, thereby providing a united front and avoiding confusion.¹²⁵

► **Seek alignment among local, state, and federal partners.** Effective FDI strategy relies on partnership, collaboration, and alignment vertically, across multiple layers of government, and horizontally, across the public, private, and civic sectors. Alignment across these tiers ensures the smooth flow of information and the seamless stewardship of investors while at the same time optimizing the federalist division of labor and avoiding wasteful duplication of effort.

At the regional level, leaders should avail themselves of the range of state and federal resources that are available. States tend to have far more resources at their disposal than do localities (and, in many instances, federal actors) and may even maintain foreign offices or conduct trade missions on their own, which can be important sources of leads and exposure for regions. Regions should keep states informed of their own FDI goals and strategies and work with their states not only in finding new investors, but also in building strong industry clusters to bolster existing investments. In addition, given the unmatched scale and reach of the federal government, states and regions together should determine how and when to utilize SelectUSA's ombudsman, advocacy, and counseling services to achieve their goals. For their part, federal and state partners should take proactive steps to better understand the distinctive specializations of the country's diverse regions.

Collaboration should also extend to stakeholders across public, private, and civic sectors. To that end, state and regional leaders should actively consult individual companies, industry trade associations, cluster organizations, universities, and local economic development entities in the process of developing their global engagement strategies. Such engagement not only improves the strategies but also fosters buy-in, lends credibility to the strategies, taps into expertise, and helps build the networks that are critical for outreach.

While national strategies to ensure the competitiveness of the United States as a destination to invest, employ, and produce remain critical, ultimately states and regions are the scale at which high-value FDI gets integrated into the broader economy. Healthy and dynamic regional economies are therefore imperative to ensuring that all of the potential benefits of FDI materialize. In this sense, FDI and clusters are symbiotic—FDI serves to strengthen regional industry clusters, supply chains, and innovation ecosystems, and is attracted to strong clusters in turn. States and metro areas must therefore cease thinking about FDI as an end in itself and instead devise concerted strategies to leverage FDI to engage globally and achieve their economic development goals.

VI. Conclusion

After a decade of national economic drift and years of slow recovery, FDI holds out considerable promise for giving the economy's re-orientation back towards production, innovation, and global engagement a shot in the arm. Immensely differentiated but inordinately concentrated in manufacturing, advanced industries, and R&D activities, FDI into the United States supports a large number of good jobs and confers a host of ancillary benefits that enhance national

and regional economic competitiveness. A full assessment of the opportunities presented by FDI should, therefore, extend beyond employment to carefully evaluate its potential impact on value- and wealth-creation in regions.

As this analysis shows, FDI is disproportionately attracted to U.S. metro areas as the places where the nation's industry clusters—encompassing the skilled workers, dynamic innovation ecosystems, robust supply chains, and quality multi-modal infrastructure reside. Strong clusters attract FDI and help maximize its economic benefits to the U.S. economy, while FDI strengthens clusters further.

The information here counsels metropolitan leaders against viewing FDI solely from the narrow prism of establishment openings or headline-grabbing greenfield investments. Employment levels in FIEs—the proxy for FDI activity used here—at the national, state, and regional levels are driven more by M&As, establishment expansions, contractions, and closures rather than by openings. All this means that the metropolitan reality of FDI and its potential have long been misunderstood, and that a shift in policy focus is in order.

The core tenets of a good FDI policy overlap significantly with good cluster policies that emphasize the building of dynamic and competitive regional economies through the provision of public goods and services that give proximate firms a leg-up. In this regard, a complete change in mindset is required: One that moves beyond seeing FDI policy as mere attraction and recruitment of foreign-owned firms to one that integrates FDI into the broader regional economic development vision with strong clusters and global engagement at its core. ■

Endnotes

1. To learn more about advanced industries, see Mark Muro, Kenan Fikri, and Scott Andes, "Powering Advanced Industries: State by State" (Washington: Brookings Institution, 2014), and Mark Muro, et al., "Advanced Industries: A Metropolitan Analysis" (Washington: Brookings Institution, forthcoming 2014).
2. Global figure: "Global Investment Trends Monitor No. 15" (New York: United Nations Conference on Trade and Development (UNCTAD), 2014). U.S. figure (preliminary): "International Transactions Accounts, Table 1: U.S. International Transactions" (Bureau of Economic Analysis (BEA), 2013).
3. Most figures cited in this report—operating data relating to employment, R&D, trade, and so on—and the data underlying the analysis presented in Chapter IV adopt the majority stake criterion for designating an enterprise as "foreign owned," where a single entity based in a foreign country must hold a controlling interest of more than 50 percent of the voting shares in the business enterprise operating in the United States. In adopting this definition Brookings follows the precedent set by the BEA, which itself adheres to international guidelines. In certain instances—typically when citing financial figures or income positions—the numbers reported here are based on an influencing interest criterion, where a single foreign entity owns at least 10 percent of the voting shares in a business enterprise operating in the United States. Certain types of foreign capital coming into the U.S.—portfolio investments in real estate, debt, equities, and other financial instruments seeking short-term returns and liquidity—are never considered FDI. For more on terms and concepts relating to FDI, see "Direct Investment Concepts" (Washington: BEA). The Organization for Economic Co-operation and Development (OECD) also produces an authoritative lexicon of FDI terminology, the "OECD Benchmark Definition of Foreign Direct Investment" (Paris: 2008).
4. "Glossary of FDI Terms and Definitions" (Paris: OECD, 2008). The economic benefits of FDI are less likely to accrue when the foreign parent's ownership stake falls below 50 percent because, without a controlling interest, the foreign parent will exert less influence over the management and operations of its U.S. affiliate.
5. John Dunning, *Multinational Enterprises and the Global Economy* (Reading, MA: Addison-Wesley, 1993).
6. Lucyna Kornecki, "Inward FDI in the United States and its Policy Context" (Vale Columbia Center, 2013). See also Tazeem Pasha, "The United States: A Globally Competitive Business Location," *Area Development Online*, April 2013.
7. Peter Dicken, "Transnational Corporations: The Primary 'Movers and Shapers' of the Global Economy." In Peter Dicken, ed., *Global Shift: Transforming the World Economy* (Sage Publications, 1998) and John Dunning, "Toward an Eclectic Theory of International Production: Some Empirical Tests," *Journal of International Business Studies* 11 (1980): 9-31.

8. A number of studies support this assertion. Artige and Nicolini found in their research that market size as measured by GDP or GDP per capita is the most robust determinant in econometric studies. See Lionel Artige and Rosella Nicolini, "Evidence on the Determinants of Foreign Direct Investment: The Case of Three European Regions." CREPP Working Paper 2006/07. Chakrabarti found that FDI tends to move to countries with larger and expanding markets with greater purchasing power as firms can reap higher profit from their investments in those markets. See Avik Chakrabarti, "The Determinants of Foreign Direct Investments: Sensitivity Analyses of Cross-Country Regressions," *Kyklos* 54 (1) (2001).
9. As long as the U.S. continues to uphold domestically and advance globally national treatment of foreign firms and open markets on which companies can freely buy and sell intellectual property, foreign acquisition of technology will remain a fact of economic life. The possibility of a foreign company acquiring critical infrastructure or sensitive technologies through FDI could pose a serious threat to U.S. interests and is a legitimate concern of policymakers and the public, however. Thankfully, the U.S. Department of Treasury, through its Commission on Foreign Investment into the United States, carefully reviews every suspect transaction and has a number of safeguards in place in order to ensure that no deals that pose a true threat to national security proceed. Their diligence frees this paper to focus on the economic development potential of FDI that does pass these federal safeguards. For further reading on the intersection of FDI and national security, see: Edward Graham and David Marchick, *U.S. National Security and Foreign Direct Investment* (Washington: Peterson Institute for International Economics, 2006) and James Jackson, "Foreign Investments and National Security: Economic Considerations" (Washington: Congressional Research Service, 2013).
10. Compared to some European countries, though, wages in the United States are not especially high. In the manufacturing sector in 2009, average wages were higher than in the United States in 12 European nations and Australia. See Susan Helper, Timothy Krueger, and Howard Wial, "Why Does Manufacturing Matter? Which Manufacturing Matters?" (Washington: Brookings Institution, 2012). On shale gas's role in reinvigorating U.S. manufacturing, see Maria Sheahan and Georgina Prodhon, "Shale Gas Lures Global Manufacturers to U.S. Industrial Revival," *Reuters*, March 26, 2013.
11. For example, a foreign firm investing in physical assets in the U.S. may do so not only in anticipation of selling to the large domestic market, but also to achieve economies of scale and scope in production and to take advantage of energy costs that may be cheaper than in the firm's home country. Other companies may be pulled into new markets by their own clients or customers, while some could even be driven by currency hedging and the desire to denominate assets and sales in U.S. dollars. To read more on the trade-offs between direct investment, exporting, and licensing, see Dicken, *Global Shift*.
12. M&A can be the preferred mode of entry for firms seeking to acquire strategic assets such as market knowledge or proprietary technology, firms wishing to take advantage of a local firm's existing distribution networks, or investors spotting an opportunity to increase the returns on another company's assets.
13. According to the BEA, non-residential fixed investment's share of U.S. GDP stood at 12.2 percent in 2013, above the 11.5 percent average since the 2009 economic crisis but well below the 13percent average from the 15 years prior. In 2013 testimony before Congress, Martin Bailey notes that foreign companies may set lower target rates of return on capital investments that do U.S.-based companies, meaning that untapped opportunities for lower return but still profitable investment exist in the U.S. economy. Martin Bailey, "Testimony Prepared for the hearing: Discussion of the Global Investment in American Jobs Act." Testimony before U.S. House of Representatives Subcommittee on Commerce, Manufacturing, and Trade, Committee on Energy and Commerce (2013).
14. Brookings analysis of U.S. BEA, "Foreign Direct Investment in the U.S., Preliminary 2011 Tables, Employment and Compensation of Employees" and U.S. BEA, "Personal Income and Employment Summary, Table SA06N: Average Compensation per Job" data. Total compensation includes benefits and pension contributions, in addition to wages and salaries.
15. Daniel Ikenson, "Insourcing Companies: How They Raise Our Game" (Washington: Organization for International Investment, 2013).
16. Several studies have set out to identify the source of the FDI wage premium and come back with mixed evidence that however increasingly points towards only a modest impact of foreignness itself. See for example Robert Lipsey, "Home and Host Country Effects of FDI" (Cambridge: National Bureau of Economic Research, 2002) and, with evidence from Sweden, Frederik Heyman, et al., "Is There Really a Foreign Ownership Wage Premium," *Journal of International Economics* 73 (2) (2007). Several hypotheses have nonetheless been put forth for why foreign firms offer better wages than their domestic counterparts. Foreign firms help

to improve the productivity of their workers—thereby leading to increased wages—by providing training and undertaking steps to upgrade technical and managerial skills in excess of that typical in domestic firms. Foreign firms may also offer above-market wages in a bid to reduce worker turnover and minimize the risk of their productivity advantage spilling over to competing firms. Sometimes foreign firms end up paying higher wages due to their limited understanding of local labor markets while knowledgeable domestic firms are able to attract workers with similar skills without paying them as high of wages. See Brian Aitken, Ann Harrison, and Robert Lipsey, “Wages and Foreign Ownership: A Comparative Study of Mexico, Venezuela, and the United States,” *Journal of International Economics* 40 (3-4) (1996). See also Timothy Ford, Jonathan Rork, and Bruce Elmslie, “Foreign Direct Investment, Economic Growth, and the Human Capital Threshold: Evidence from the United States,” *Review of International Economics* 16 (1) (2008).

17. Research examining the impact of FDI in South Carolina communities found that manufacturing employment by foreign firms had a substantial positive impact on industry wages. Specifically, the authors find that the addition of an average sized foreign manufacturing firm leads to a 2.3 percent increase in wages for all workers in both foreign and domestic firms in the county. The introduction of a similar size new domestic firm only creates a 0.3 percent wage increase. See David Figlio and Bruce Blonigen, “The Effects of Foreign Direct Investment on Local Communities,” *Journal of Urban Economics* 48 (2) (2000). Aitken, Harrison, and Lipsey find that the higher the share of employment in foreign firms across U.S. states, the higher is the average wage after controlling for state and industry wage effects. Importantly, their research finds that the higher wage levels hold in both foreign and domestic establishments. This is in contrast to their findings in Mexico and Venezuela where higher wage effects are concentrated in foreign enterprises. See Aitken, Harrison, and Lipsey, “Wages and Foreign Ownership.” Overall the evidence provides a somewhat mixed message with respect to the impact of foreign ownership on wages. While most studies indicate that foreign ownership has a positive impact on wages, a number of studies indicate small negative effects. These may reflect differences in country characteristics or the nature of FDI, as well as differences in the methodology.
18. The Foreign affiliate share of U.S. capital expenditures calculated for 2011 using BEA’s financial and operating data of U.S. affiliates, “Expenditures for Property, Plant, and Equipment” and the Census Bureau’s Annual Capital Expenditure Survey’s “Table 1b: Capital Expenditures for Structures and Equipment.” For information on FDI’s share of U.S. capital investment, see: “Foreign Direct Investment in the United States” (Washington: Department of Commerce, White House, and the Executive Office of the President, 2013). In a study analyzing the extent to which foreign capital contributed to U.S. productivity growth between 1988 to 1999, Goss, et al. find that foreign capital accounted for almost 16 percent of overall U.S. productivity growth and during the same period it was responsible for more than one-third of the manufacturing sector’s productivity growth. See Ernie Goss, John Wingender Jr., and Megan Torau, “The Contribution of Foreign Capital to U.S. Productivity Growth,” *The Quarterly Review of Economics and Finance* 47 (2007). In another study, Kornecki and Borodulin found that between 1981 and 2007 foreign capital accounted for almost 23 percent of overall U.S. economic growth, compared to the 20 percent accounted for by domestic capital. See Lucyna Kornecki and Vladislav Borodulin, “FDI Contributes to Output Growth in the U.S. Economy,” *Journal of US-China Public Administration* 8 (1) (2011). See also Parviz Ashegjan “Determinants of Economic Growth in the United States: The Role of FDI,” *The International Trade Journal* 13 (1) (2004).
19. For OECD countries research consistently shows that the presence of foreign firms relates positively to productivity of domestically-owned firms. Research on developing countries shows more mixed results. One consistent finding, though, is that the capability of host country firms to absorb foreign technology is an important determinant of the magnitude of the productivity impacts. For a quality synthesis of the available literature, see Magnus Blomstrom, Steven Globerman, and Ari Kokko, “The Determinants of Host Country Spillovers from Foreign Direct Investment: Review and Synthesis of the Literature,” *The European Institute of Japanese Studies* 76 (1999). For evidence from Canada see also Steven Globerman, John Ries, and Ilan Vertinsky, “The Economic Performance of Foreign Affiliates in Canada,” *The Canadian Journal of Economics* 27 (1) (1994).
20. Blomstrom, Globerman, and Kokko, “Determinants of Host Country Spillovers from FDI.” See also Holger Gorg and David Greenaway, “Much Ado About Nothing? Do Domestic Firms Really Benefit from Foreign Direct Investment?” *The World Bank Research Observer* 19 (2) (2004).
21. Theodore Moran and Lindsay Oldenski, “FDI in the United States: Benefits, Suspensions, and Risks with Special Attention to FDI from China” (Washington: Peterson Institute for International Economics, 2013). The authors calculate that FDI alone increased total factor productivity in the U.S. by 3 percent over the period. They find that

the impact of FDI on domestic firms in the same industry is even higher than that found by Keller and Yeaple in a widely-cited paper covering the period 1987 to 1996, suggesting that the productivity dividends from FDI may be increasing over time. See also Wolfgang Keller and Stephen Yeaple, "Multinational Enterprises, International Trade, and Productivity Growth: Firm-Level Evidence from the United States," *The Review of Economics and Statistics* 91 (4) (2009).

22. M&As, however, can reduce competition: If the acquiring foreign parent was already active in the host country market, then the acquisition would serve to reduce the number of companies competing in the market.
23. International evidence is more mixed. For a review, see Gorg and Greenaway, "Do Domestic Firms Really Benefit from FDI?" For more on the correlation between foreign-affiliate share in an industry and the productivity of domestic firms in the same industry, see Jonathan Haskel, Sonia Pereira, and Matthew Slaughter, "Does Inward FDI Boost the Productivity of Domestic Firms?" *The Review of Economics and Statistics* 89 (3) (2007) and Moran and Oldenski, "FDI in the United States." The latter find that the positive effects hold for FDI from developing countries as well, including China.
24. Based on preliminary data from the U.S. BEA's International Transactions Account.
25. Brookings analysis of BEA and NETS data.
26. U.S. Census Bureau Foreign Trade Statistics, "U.S. Trade in Goods and Services—Balance of Payments Basis" (March 2014) and BEA, "U.S. Affiliates of Foreign Companies: Operations in 2011" (August 2013).
27. Brookings Analysis of U.S. BEA, "Foreign Direct Investment in the U.S. Preliminary 2011 Statistics, Majority-Owned Affiliates U.S. Trade in Goods, Table II.G 1" data.
28. Brian Aitken, et al., "Spillovers, Foreign Investment, and Export Behavior," *Journal of International Economics* 43 (1) (1997); David Greenaway, et al., "Do Domestic Firms Learn to Export from Multinationals?" *European Journal of Political Economy* 20 (4) (2004); and Richard Kneller and Mauro Pisu, "Industrial Linkages and Export Spillovers from FDI," *The World Economy* (2007).
29. The foreign affiliate share of U.S. private employment is 5 percent and of value-added is 5.9 percent. R&D figures include business R&D from public funds. Brookings analysis of BEA, "Foreign Direct Investment in the U.S., Majority-Owned Bank and Nonbank U.S. Affiliates (data for 2007 and forward), Research and Development Expenditures" data. Total business R&D data obtained from National Science Foundation. See Raymond Wolfe, "Business R&D Performance in the United States Increased in 2011." Working Paper 13-335 (National Science Foundation, 2013). The bulk (more than 70 percent) of R&D in U.S. affiliates is conducted by Swiss, Japanese, British, German, and French firms. In terms of country ownership patterns and industry focus, Swiss and British-owned U.S. affiliates performed two-thirds of R&D in chemicals and German-owned U.S. affiliates performed 40 percent of R&D in transportation equipment in 2010.
30. Corporate R&D expenditures captures all funds for R&D expended by private entities and differs from total expenditures on business R&D in that the federal government provides large amounts of funding for the latter. Brookings analysis of BEA, "Foreign Direct Investment in the U.S., Majority-Owned Bank and Nonbank U.S. Affiliates (data for 2007 and forward), Research and Development Expenditures" data. See Wolfe, "Business R&D Performance in the United States."
31. Lee Branstetter, "Is Foreign Direct Investment a Channel of Knowledge Spillovers: Evidence from Japan's FDI in the United States" *Journal of International Economics* 68 (2) (2006). See also, for example, Ram Mudambi, "Knowledge Management in Multinational Firms," *Journal of International Management* 8 (2002).
32. Battelle, "2014 Global R&D Funding Forecast," *R&D Magazine* (2013).
33. Grossman and Helpman in their research show that the presence of multinational firms introduces a country to technologies that may not exist within its borders. Technology is transferred through a process of learning by watching. See Gene Grossman and Elhanan Helpman, *Innovation and Growth in the Global Economy* (Cambridge: MIT Press, 1991). See also James Simmie, "Innovation and Urban Regions as National and International Nodes for the Transfer and Sharing of Knowledge," *Regional Studies* 37 (6) (2003) and J.L. Hervás-Oliver and J. Alborns-Garrigos, "Local Knowledge Domains and the Role of MNE Affiliates in Bridging and Complementing a Cluster's Knowledge," *Entrepreneurship and Regional Development* 20 (2008).
34. Ikenson, "Insourcing Companies."
35. Giorgio Barba Navaretti and Anthony Venables, *Multinational Firms in the World Economy* (Princeton: Princeton University Press, 2004). See also Blomstrom,

Globerman, and Kokko, "Determinants of Host Country Spillovers from FDI."

New Investment in 2008" (Washington: U.S. Department of Commerce, 2009).

36. New knowledge, technologies, and best practices are transferred from firm to firm and worker to worker through a variety of channels. Labor mobility is one, whereby employees trained by the foreign firm move to a local firm taking their newly acquired knowledge with them. This includes knowledge of production techniques as well as business and managerial skills. In a second scenario, local firms may imitate the superior production processes and management practices introduced by the foreign company—also called the "demonstration effect"—through reverse engineering or informal contacts. And finally technology and knowledge spillovers may happen through linkages formed between foreign companies and their local suppliers. In this case foreign firms may assist their suppliers to improve their production processes or demand that suppliers raise the quality of their products. The transfer of new knowledge and technologies is accelerated in industry clusters. See Blomstrom and Kokko for a detailed discussion of the channels through which such transfers occur. Magnus Blomstrom and Ari Kokko, "Multinational Corporations and Spillovers," *Journal of Economic Surveys* 12 (3) (1998). Also see Branstetter, "Is FDI a Channel of Knowledge Spillovers." See Castellani and Zanfei who identify three main channels: Demonstration and imitation effects; labor mobility; and backward and forward linkages. Davide Castellani and Antonello Zanfei, *Multinational Firms, Innovation, and Productivity* (Cheltenham: Edward Elgar, 2006).
37. Brad McDermann, Greg Clark, Joseph Parilla, "The 10 Traits of Globally Fluent Metro Areas" (Washington: Brookings Institution, 2013).
38. Calculated in terms of "Gross domestic product based on purchasing-power-parity valuation of country GDP, current international dollars" from the International Monetary Fund's "World Economic Outlook Database, April 2014."
39. For a discussion of some potential adverse effects of FDI see Bailey, "Testimony for the Global Investment in American Jobs Act."
40. For example, FDI into the auto industry—for all its benefits to regions, consumers, and the national economy—can also be linked to declining wages and decreasing unionization rates in the industry's former heartland.
41. In the fifteen years prior to the financial crisis, M&As' share of all U.S. FDI inflows averaged 87 percent. See Thomas Anderson, "Foreign Direct Investment in the U.S.: New Investment in 2008" (Washington: U.S. Department of Commerce, 2009).
42. Gugler and Yurtoglu looked at the question of whether M&As—domestic or foreign—have adverse employment impacts using a large sample of M&As from the United States and Europe and did not find any significant negative impact in the United States, although they did in Europe. The authors attribute this difference to Europe's more rigid labor markets, which leave M&As as one of the few tools at a firm's disposal to undergo restructuring and workforce adjustments. U.S. firms in a more flexible market are able to undergo such adjustments continuously, by contrast. For more details see Klaus Gugler and Burcin Yurtoglu, "The Effects of Mergers on Company Employment in the USA and Europe," *International Journal of Industrial Organization* 22 (2004). What is more, examining plant-level data for the manufacturing sector from 1977 to 1987, McGuckin and Nguyen found that M&As economy-wide are not typically vehicles for job destruction and instead lead to increases in the number of jobs and their quality. Robert McGuckin and Sang Nguyen, "The Impact of Ownership Changes: A View from Labor Markets," *International Journal of Industrial Organization* 19 (5) (2001).
43. Navaretti and Venables, *Multinational Firms in the World Economy* and Razin, Assaf, and Efraim Sadka, "Gains from FDI Inflows with Incomplete Information," *Economics Letters* 7 (2003). Evidence on employment impacts of foreign M&As in the United States is thin and ambiguous, finding that factors such as acquirer's country of origin, target's export level, and industry mix all influence the outcome. The problem of the counterfactual also muddies the picture. For evidence from the United States see, for example, Anusha Chari, et al., "Foreign Ownership and Firm Performance: Emerging Market Acquisitions in the United States." Working Paper 82 (Ann Arbor: International Policy Center, 2009). With evidence from Sweden, see Roger Bandick and Holger Gorg, "Foreign Acquisition, Plant Survival, and Employment Growth," *Canadian Journal of Economics* 43 (2) (2010).
44. According to the research, profitability increases in acquired firms regardless of country of origin of the acquirer, but productivity, employment, and sales are only higher than they would be after a domestic acquisition when the acquiring company comes from a developed industrialized country. Developed countries do, of course, account for the overwhelming majority of foreign acquisitions in the United States. For a very interesting discussion see Wenjie Chen, "The Effect of Investor Origin on Firm Performance: Domestic and Foreign Direct Investment in the United States," *Journal of International Economics* 83 (2) (2011). See also Olivier Bertrand,

- Katariina Hakkala, and Pehr-Johan Norback, "Cross-Border Acquisition or Greenfield Entry: Does it Matter for Affiliate R&D?" Working Paper 693 (Stockholm: Research Institute of Industrial Economics, 2007).
45. Ikenson, "Insourcing Companies."
 46. Brookings analysis of UNCTAD "Inward and outward foreign direct investment flows, annual, 1970-2012" data.
 47. By comparison, the U.S. accounts for a larger 22 percent of global GDP. Brookings analysis of UNCTAD "Inward and outward foreign direct investment flows, annual, 1970-2012" data.
 48. Brookings analysis of UNCTAD "Outward foreign direct investment flows, annual, 1970-2012" data.
 49. UNCTAD, "World Investment Report 2013" (New York and Geneva: United Nations, 2013). The financial crisis had a particularly strong impact on banks and financial institutions in the United States and Europe, with an attendant impact on M&A activity.
 50. Brookings analysis of UNCTAD data.
 51. Brookings analysis of UNCTAD data, "Inward and outward foreign direct investment flows, annual, 1970-2012." FDI flows to the BRICS alone have more than tripled over the past decade and reached \$263 billion in 2012, compared to \$168 billion to the United States. This number represents 20 percent of global FDI in 2012, with China accounting for the lion's share of growth. Recently, though, economic growth in emerging markets has slowed. See for example "When Giants Slow Down," *The Economist*, July 27, 2013.
 52. UNCTAD, "World Investment Report 2013." Four developing countries—China, Hong Kong, Brazil, and British Virgin Islands—now rank among the top five recipients in the world.
 53. Richard Dobbs, et al., "Urban World: Cities and the Rise of the Consuming Class" (New York: McKinsey Global Institute, 2013); Andres Rodriguez-Pose and Riccardo Crescenzi, "Mountains in a Flat World: Why Proximity Still Matters for the Location of Economic Activity," *Cambridge Journal of Regions, Economy, and Society* 1 (3) (2008); and Michael Storper, *The Regional World* (New York: Guildford Press, 1997).
 54. In classifying countries Brookings follows UNCTAD's scheme, which lists South Korea as a developing country even though it has emerged as a formidable player in the world economy and is a member of both the OECD and the G-20.
 55. Michael Porter and Jan Rivkin, "Prosperity at Risk" (Cambridge: Harvard Business School, 2012).
 56. Helmuth Ludwig and Eric Spiegel, "Americans Real Manufacturing Advantage," *Strategy and Business* 74 (2014). The United States is a leader in software industry with nine out of the top 10 grossing SaaS (Software-as-a-service) firms in the world being American companies. See also Scott Andes and Mark Muro, "Software: America's Hidden Manufacturing Advantage," *The Avenue*, February 25, 2014.
 57. Brookings' dataset contains information down to the county level and therefore for every metropolitan and micropolitan area in the country, even though only data for the 100 largest metropolitan areas is reported here. For information on smaller geographies please contact the authors.
 58. For national detailed industry data, Brookings used BEA Table II.A.2 Selected Financial and Operating Data of Majority-Owned Affiliates and for state level broad industries Table II.F.7 Employment of Majority-Owned Affiliates, State by Industry. The NETS database is maintained by Walls & Associates.
 59. For more information on dual allocation procedures, see: "Gross Domestic Product by State Estimation Methodology" (Washington: BEA, 2006).
 60. Since D&B build its dataset from telephonic surveys and other sources, errors are typically attributable to mistakes made by respondents or typographical errors on the part of D&B's own recorders. Economist David Neumark and colleagues have published an academic article checking the quality and accuracy of the NETS database, which is developed by Walls and Associates under license from D&B. They examined the accuracy of employment estimates and changes, relocations, and coverage of new firms. All of these were found to be highly correlated with public data sources except for short-term (single year) changes in employment. For further reading see David Neumark, Junfu Zhang, and Brandon Wall, "Employment Dynamics and Business Relocation: New Evidence from the National Establishment Time Series." Working Paper 11647 (Cambridge: National Bureau of Economic Research, 2005).
 61. See the methodology appendix at the back of the report on steps undertaken to identify and eliminate errors.

62. A handful of small mostly manufacturing-oriented metro areas register even higher FDI intensities, in most cases attributable to single large foreign-owned plants that dominate local employment. Columbus and Kokomo, Indiana; Anderson and Spartanburg, South Carolina; and Steubenville, Ohio, count among these smaller but highly FDI-intensive metro areas.
63. For a background on business dynamics—meaning the natural process by which businesses expand, contract, open, and close—and its importance to a dynamic market economy, see John Haltiwanger, Ron Jarmin, and Javier Miranda, “Business Formation and Dynamics by Business Age: Results from the New Business Dynamics Statistics” (Washington: Small Business Administration, 2008).
64. While the data presented here suggest that FDI is itself not a net source of direct job creation, it also exposes the critical role FDI plays supporting jobs in the economy—including preserving jobs that might otherwise have been lost absent an infusion of capital and new ideas. The finding that, at the national scale and over time, employment in FDEs tends to decline should be interpreted with caution and above all warrants further research: The data do not provide any insight into the counterfactual, that is to say what would have happened absent the transaction or had the company been acquired by someone else—nor do they assess whether acquired firms share certain characteristics that lead to a selection bias, such as establishment age or an orientation toward manufacturing or other sectors undergoing rapid technological change—factors which could drive the result. In addition, the result stems from establishment-level, not company-level, information; foreign parents that acquire and downsize an establishment in one place may over time open new establishments in the same or different regions. Finally, the data do not speak to any of the other benefits associated with foreign acquisitions such as possible improvements in productivity or job quality. The issue therefore neatly encapsulates the risks of assessing the economic impact of FDI in employment terms alone, and the reality that every transaction is unique and should be assessed for its economic development potential on its own merits.
65. The correlation between the number of jobs in each of the 100 largest metro areas in 1991 and the number of jobs generated by establishment openings over the 20 year period (i.e. the sum of annual gains from establishment openings, which does not include jobs from expansions these establishments may have undergone in subsequent years) is 0.96. The correlation between relative standing on each, meaning each metro area’s rank on both metrics, is 0.81.
66. Since the dataset used here only contains information for establishments extending back to 1991, it is not possible to determine the original mode of entry of establishments that existed prior to that date.
67. In 2011, the manufacturing sector received 41.7 percent of all FDI dollars into the United States. In 2012, that figure increased to 49.5 percent. BEA, “Foreign Direct Investment into the U.S.: Balance of Payments and Direct Investment Position Data.”
68. In 1991, 4.2 percent of the nation’s FDI jobs could be found in the professional, technical, and services sector. By 2011, that share had increased to 7.1 percent. Similarly, the share of the nation’s FDI jobs in administrative support, waste management, and remediation services increased from 3.7 percent to 6.7 percent over the same period.
69. Brookings singles out advanced industries because of their importance in driving, deploying, and diffusing technological advancement in the economy. Advanced industries are identifiable at the four-digit industry level by their R&D intensities—meaning expenditures on R&D in an industry divided by total employment in that industry—and by the technological capacity of their workforces—meaning the percentage of workers in an industry in occupations that require a high degree of STEM (science, technology, engineering, and math) knowledge. Thirty-six different four-digit industries meet Brookings’ criteria—R&D intensities over \$300 per worker and high-STEM shares of industry jobs exceeding 10 percent—for being considered “advanced” and are listed in the methodology appendix. To learn more about advanced industries and why they matter see Muro, Fikri, and Andes, “Powering Advanced Industries.”
70. The share of motor vehicle manufacturing workers employed in FDEs increased from 31 percent to 58 percent between 1991 and 2011; motor vehicle parts manufacturing from 15 percent to 47 percent; basic chemical manufacturing from 29 percent to 52 percent; and other transportation equipment manufacturing from 24 percent to 51 percent.
71. Each metro area’s top industry specialization was identified by taking the most specialized industry among its top 20 largest industries. All industries with less than 1 percent domestic share of total metro employment and fewer than 2,000 employees, and less than 2 percent of foreign share of metro foreign employment and fewer than 500 employees, were not considered.
72. Brookings’ global city-regions are based on sub-national administrative districts and titled according to a primary

city-district naming convention. In cases where multiple administrative districts comprise one single metropolitan area, such as the prefectures around Tokyo, Japan, multiple administrative districts were wrapped into one. In cases where one district is an enclave within another, such as Berlin within Brandenburg or Vienna within Lower Austria, districts were also combined to form single city-regions. For a crosswalk linking cities, administrative districts, and city-regions, please contact the authors.

73. For a small sub-set of the dataset—7,600 establishments accounting for over 300,000 jobs—Brookings was unable to determine the ultimate global parent due to complicated ownership structures and as a result may have missed additional city-regions or countries, on the one hand, or underestimated the full reach of certain global city-regions' or countries' companies, on the other.
74. Due to methodological differences, the country estimates presented here may differ from those reported by the BEA.
75. In classifying countries into developed and developing economies, Brookings has followed the UNCTAD schema.
76. Just in two years between 2009 and 2011, employment in U.S. affiliates of Chinese companies tripled from 4,400 to 13,200 workers while for U.S. affiliates of Indian companies the increase was 37 percent during the same period. For more information, see the BEA's "Financial and Operating Data for the U.S. Affiliates of Foreign Companies." See also the Rhodium Group's "China Investment Monitor."
77. United Nations Conference on Trade and Development, "World Investment Prospects Survey: 2013-2015" (New York: United Nations, 2013).
78. For more information on SelectUSA see www.selectusa.commerce.gov/. SelectUSA, housed within the Department of Commerce's International Trade Administration, was created by President Obama in 2011 through an Executive Order to promote business investment in the United States.
79. The bill was referred to the Senate in May 2013 but no action has been taken since. Prognosis for enactment stood at only 27 percent one year later. For more information see www.govtrack.us/congress/bills/113/hr2052.
80. The United States currently has the second highest statutory corporate tax rate and average effective tax rate among OECD countries. See Moran and Oldenski, "FDI in the United States." The World Bank ranks the United States 64th worldwide on the tax and administrative burden it places on companies. "Paying Taxes" is the metric on which the U.S. performs worst in the World Bank's index. Improving its ranking here would increase its overall performance considerably. See World Bank, "Ease of Doing Business Index" (Washington: The World Bank Group, 2013).
81. Matthew Slaughter, "Attracting Foreign Direct Investment through an Ambitious Trade Agenda" (Washington: Organization for International Investment, 2013).
82. For example, in the automotive industry Mexico has attracted considerable investment in part because it sits at the center of a Venn diagram of smaller trade agreements spanning different countries in the western hemisphere.
83. The U.S. Department of State's website provides a list of bilateral investment treaties signed by the United States. Other countries may be covered by the same effective provisions through other agreements such as free trade agreements.
84. For a discussion of the macroeconomic, microeconomic, and institutional variables that drive U.S. competitiveness, see Niall Ferguson, "Is the U.S. Losing Competitiveness?" Testimony before the U.S. House of Representatives, Subcommittee on Commerce, Justice, and Science Appropriations (2012) and Michael Porter and Jan Rivkin, "The Looming Challenge to U.S. Competitiveness," *Harvard Business Review* (March 2012).
85. Robert Atkinson and Scott Andes, "The Atlantic Century 2011: Benchmarking U.S. and EU Innovation and Competitiveness" (Washington: Information Technology and Innovation Foundation, 2011).
86. Absolute spending levels adjusted for inflation. Matt Hourihan, "R&D in the FY 2014 Omnibus: The Big Picture" (Washington: American Association for the Advancement of Science, 2014).
87. See Moran and Oldenski, "FDI in the United States: Benefits." See also Thomas Hilliard, "Building the American Workforce" (Washington: Council on Foreign Relations, 2013).
88. "Policies for Increasing Economic Growth and Employment in the Short Term" (Congressional Budget Office, 2010). For a comprehensive literature review and discussion of the economic impacts of infrastructure investment, see also "An Economic Analysis of

- Infrastructure Investment" (Department of the Treasury with the President's Council of Economic Advisors, 2010). For a useful discussion of federal government policy levers for promoting infrastructure investment see Scott Thomasson, "Encouraging U.S. Infrastructure Investment" (Washington: Council on Foreign Relations, 2012). For a discussion of the opportunity that infrastructure upgrading provides for boosting U.S. competitiveness, see Susan Lund, et al., "Game Changers: Five Opportunities for U.S. Growth and Renewal" (McKinsey Global Institute, 2013).
89. Gordon Goldstein, et al., "Rebuilding America: The Role of Foreign Capital and Global Public Investors" (Washington: Brookings Institution, 2011).
 90. See, for starters, President's Council on Jobs and Competitiveness, "A National Investment Initiative" (Washington: The White House, 2011). Recommendations include leveraging innovation districts around universities, establishing supply chain partnerships, upgrading the capabilities of Select USA and its coordination with states, reforming immigration, and exploring options for tax reform.
 91. "World Investment Report: Annex Tables" (Geneva: United Nations Conference on Trade and Development, 2013).
 92. Brookings analysis of D&B/NETS data.
 93. "Fact Sheet: The Investing in Manufacturing Communities Partnership" (Washington: U.S. Department of Commerce, 2013).
 94. "Executive Order 13577: SelectUSA Initiative" (The White House Office of the Press Secretary, 2011). See also SSTI blog, "Highlights from the President's FY15 Department of Commerce Budget Request," March 4, 2014. For a full list of SelectUSA's services to its two client groups, prospective investors and U.S. economic development organizations, visit the services page of their website: <http://selectusa.commerce.gov/services>.
 95. SelectUSA's analysis of Investment Promotion Agencies (IPAs) in Australia, Brazil, Canada, China, France, Germany, Ireland, Netherlands, Spain, and the United Kingdom reveals that on average these countries spend \$58 million each year on investment promotion and have 167 dedicated staff. SelectUSA, by contrast, operates with full-time staff of 10 in its Washington, DC headquarters in the Department of Commerce with support from temporary assignments in the agency and U.S. Foreign Commercial Service staff at U.S. embassies and consulates across 72 markets. Undersecretary Francisco Sanchez, "Testimony on Foreign Direct Investment and SelectUSA." Testimony before the House Energy and Commerce Subcommittee on Commerce, Manufacturing, and Trade (April 18, 2013).
 96. "U.S. Affiliates of Foreign Companies: Operations in 2011" (Washington: BEA, 2013).
 97. See last release: "Foreign Direct Investment in the United States: Establishment Data for 2002" (Washington: BEA and Bureau of the Census, 2007). Releases are infrequent and not especially timely in part because the project only begins after the results from the latest Economic Census have been published. The next release, due in 2014 or 2015, will contain the data from the 2007 Economic Census. The project may be discontinued after the next release.
 98. See last release: Thomas Anderson, "Foreign Direct Investment in the United States: New Investment in 2008" (Washington: BEA, 2009).
 99. In June 2014, the BEA will begin releasing new table presentations resulting from a comprehensive restructuring of the U.S. international economic accounts, part of an on-going data modernization effort that represents the biggest change to the international accounts since 1976. The restructuring will bring BEA's statistics into closer alignment with international guidelines, improve information on trade in services, and add a presentation of FDI data on an asset/liability basis. This balance sheet approach comports more closely with typical financial market accounting and improves comparability with other macroeconomic statistics. For more, see Maria Borga and Kristy Howell, "The Comprehensive Restructuring of the International Economic Accounts" (Washington: BEA, March 2014).
 100. Matthew Slaughter, "The Global Investment in American Jobs Act of 2013." Testimony before the United States House of Representatives Committee on Energy and Commerce, Subcommittee on Commerce, Manufacturing, and Trade, April 18, 2013. A particular challenge appears to be arising around inversions and other tax gimmickry whereby companies change their paper nationality with no material impact on the management and operations of the firm itself, obscuring the true picture of FDI flows in the classic sense.
 101. Kevin Barefoot and Jennifer Koncz-Bruner, "A Profile of U.S. Exporters and Importers of Services" (Washington: BEA, June 2012).
 102. For a discussion of how clusters stimulate regional economies see Mark Muro and Bruce Katz, "The New 'Cluster

- Moment': How Regional Innovation Clusters can Foster the Next Economy" (Washington: Brookings Institution, 2010). See also Mark Muro and Kenan Fikri, "Job Creation on a Budget: How Regional Industry Clusters can Add Jobs, Bolster Entrepreneurship, and Spark Innovation" (Washington: Brookings, 2011).
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104. Scott Andes and Mark Muro, "State Governments Step Up R&D Investment," *The Avenue*, November 20, 2013. Analyzing data from the National Science Foundation, the authors note that state government R&D expenditures have increased by 11.3 percent between 2010 and 2011 even while federal investment declined 9 percent during the same period.
105. Mark Crawford, "Workforce Development Programs Can Make or Break a Site Selection Deal," *Area Development*, Q3/Summer 2013.
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107. See Colin Galloway and Rachel MacCleery, "Infrastructure 2014: Shaping the Competitive City" (Urban Land Institute and Ernst & Young, 2013).
108. For a rich discussion of what makes for an effective promotion strategy for cities and regions, see Christiana McFarland and J. Katie McConnell, "Strategies for Globally Competitive Cities: Local Roles in Foreign Direct Investment and International Trade" (Washington: National League of Cities, 2011); Michael Moskow and William Osborn, "Foreign Direct Investment: Globalizing Chicago's Economic Development Plans" (Chicago Council on Global Affairs, 2012); and Vale Columbia Center, "Handbook for Promoting Foreign Direct Investment in Medium-Size, Low Budget Cities in Emerging Markets" (New York: Columbia University, 2009).
109. See, for example, Aitken, et al., "Spillovers, Foreign Investment, and Export Behavior;" Greenaway, et al., "Do Domestic Firms Learn to Export from Multinationals;" and Kneller and Pisu, "Industrial Linkages and Export Spillovers from FDI."
110. Company size calculated by the total number of workers in the United States in all establishments associated with a single ultimate parent DUNS number. The D&B/NETS dataset utilized by Brookings contained 19,000 unique ultimate parent identifications in 2011. Differences in the size distribution of the U.S. affiliates of foreign companies may arise between the data reported here and that reported by the BEA because they do not include affiliates with assets, sales, or net income (or loss) greater than \$15 million, and because of possible differences in consolidating affiliates according to ultimate parents.
111. Jonathan Potter, "Embedding Foreign Direct Investment" (Paris: OECD, 2002)
112. ReadySC in South Carolina is a joint effort between the Division of Economic Development and the SC Technical College System to provide workforce training solutions for South Carolina-based companies. It may be the best-known program of its kind with the longest history of success: Nearly 276,000 trainees since 1961 and nearly 4,700 in FY 2012-13 working with 83 different companies. For more visit <http://www.readysc.org/>.
113. M&As by definition involve existing firms and assets that merely undergo a change in ownership.
114. Brookings analysis of D&B/NETS data.
115. UNCTAD, "Aftercare: A Core Function in Investment Promotion," *Investment Advisory Series A* (1) (2007).

116. For an introduction to the issues and a review of best and worst practices in accountable economic development, see Good Jobs First's "Beginner's Guide, available on their website.
117. Ford, Rork, and Elmslie, "Foreign Direct Investment, Economic Growth, and Human Capital;" Contessi and Weinberger, "FDI, Productivity, and Country Growth;" and David Figlio and Bruce Blonigen, "The Effects of Direct Foreign Investment on Local Communities," *Journal of Urban Economics* 48 (2) (2000): 338-3363.
118. See McFarland and McConnell, "Strategies for Globally Competitive Cities" and Vale Columbia Center, "Handbook for Promoting FDI" for key objectives and benefits of aftercare policies.
119. McDearman, Clark, and Parilla, "10 Traits of Globally Fluent Metro Areas." Strong examples can be found in Portland, OR ("We build green cities") and Minneapolis-St. Paul, MN ("We provide healthy solutions for the world").
120. See also McFarland and McConnell, "Strategies for Globally Competitive Cities;" Moskow and Osborn, "Foreign Direct Investment: Globalizing Chicago's Economic Development Plans;" and Vale Columbia Center, "Handbook for Promoting FDI."
121. See Adis Maria Vila, "The Role of States in Attracting Foreign Direct Investment," *Law and Business Review of the Americas*, 16 (2) (2010). See also Paul Kozlowski, Andrew Solocha, and Lori Dixon, "Attracting Foreign Direct Investment to States: Outcomes, Budgets, and Foreign Offices," *Regional Science Perspectives* 24 (2) (1994).
122. For instance, foreign offices excel at generating leads and forging relationships but are also one of the most expensive propositions available. As the first-line of information, these offices provide invaluable service in terms of marketing research, generating contracts, and distributing information about state resources and services to potential investors but are also expensive to maintain. The number of such offices, their locations, and opportunities for pooling resources with other localities should be evaluated periodically. See Kozlowski, Solocha, and Dixon, "Attracting Foreign Direct Investment to States." See also Timothy Wilkinson and Lance Brouthers, "Trade Shows, Trade Missions and State Governments: Increasing FDI and High-Tech Exports," *Journal of International Business Studies* 31 (4) (2000).
123. McFarland and McConnell, "Strategies for Globally Competitive Cities." See also Prosperity Partnership, "Attracting Foreign Direct Investment to Your Community" (Seattle: Puget Sound Regional Council Prosperity Partnership, 2009).
124. McFarland and McConnell, "Strategies for Globally Competitive Cities." See also OCO Insight, "How Can U.S. Regions More Effectively Attract FDI?" (New York: OCO Consulting, 2012).
125. For more information, see Upstate SC Alliance's website at www.upstatescalliance.com/pages/index/homepage

Appendix Table 1. Metro Areas

Rank	Metro	Jobs in Foreign-Owned Establishments (FOEs)	Share of Total Private Employment in FOEs		Share of Jobs in FOEs Originating			Share of Jobs in FOEs by Sector, 2011	
		2011	1991	2011	as Openings	as M&A	before 1991	Goods	Services
1	New York-North New Jersey-Long Island, NY-NJ-PA	490,287	6.0%	6.8%	21.2%	26.7%	52.2%	22.5%	77.5%
2	Los Angeles-Long Beach-Santa Ana, CA	271,181	5.2%	6.1%	28.4%	26.7%	44.9%	24.8%	75.2%
3	Chicago-Joliet-Naperville, IL-IN-WI	223,514	4.6%	5.9%	24.8%	27.2%	47.9%	32.9%	67.1%
4	Houston-Sugar Land-Baytown, TX	178,005	5.9%	8.0%	25.1%	28.9%	46.0%	52.0%	48.0%
5	Boston-Cambridge-Quincy, MA-NH	142,815	4.2%	6.7%	25.9%	31.2%	42.9%	28.9%	71.1%
6	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	137,037	5.6%	5.8%	30.1%	31.3%	38.6%	30.8%	69.2%
7	Atlanta-Sandy Springs-Marietta, GA	134,611	5.6%	6.8%	24.4%	39.0%	36.5%	31.7%	68.3%
8	Dallas-Fort Worth-Arlington, TX	134,111	4.8%	5.2%	26.3%	36.5%	37.1%	41.2%	58.8%
9	Washington-Arlington-Alexandria, DC-VA-MD-WV	126,211	3.1%	5.4%	25.1%	37.9%	37.0%	15.5%	84.5%
10	Detroit-Warren-Livonia, MI	124,420	7.5%	7.8%	20.8%	50.8%	28.3%	61.0%	39.0%
11	Miami-Fort Lauderdale-Pompano Beach, FL	91,694	4.6%	4.7%	22.6%	41.6%	35.8%	21.3%	78.7%
12	San Francisco-Oakland-Fremont, CA	89,383	5.1%	5.5%	23.9%	30.8%	45.3%	30.0%	70.0%
13	Minneapolis-St. Paul-Bloomington, MN-WI	75,593	4.2%	5.0%	17.7%	26.8%	55.5%	29.0%	71.0%
14	Seattle-Tacoma-Bellevue, WA	65,045	3.6%	4.6%	28.7%	37.4%	33.9%	32.5%	67.5%
15	San Jose-Sunnyvale-Santa Clara, CA	57,640	6.2%	7.3%	26.3%	40.3%	33.4%	45.4%	54.6%
16	Phoenix-Mesa-Glendale, AZ	55,742	3.8%	3.7%	29.4%	37.7%	33.0%	26.6%	73.4%
17	St. Louis, MO-IL	53,700	3.6%	4.7%	18.7%	34.4%	47.0%	54.9%	45.1%
18	Pittsburgh, PA	51,844	2.9%	5.0%	25.9%	29.5%	44.6%	49.4%	50.6%
19	Bridgeport-Stamford-Norwalk, CT	50,694	7.0%	13.6%	11.5%	28.1%	60.3%	33.5%	66.5%
20	Cincinnati-Middletown, OH-KY-IN	50,564	3.7%	5.8%	26.9%	30.1%	43.0%	49.7%	50.3%
21	Denver-Aurora-Broomfield, CO	50,099	4.5%	4.8%	29.8%	32.1%	38.2%	36.5%	63.5%
22	Indianapolis-Carmel, IN	49,910	3.7%	6.5%	27.0%	28.4%	44.5%	53.2%	46.8%
23	Charlotte-Gastonia-Rock Hill, NC-SC	48,810	8.2%	6.8%	33.3%	27.8%	39.0%	43.6%	56.4%
24	San Diego-Carlsbad-San Marcos, CA	48,730	3.2%	4.8%	27.5%	36.4%	36.1%	51.6%	48.4%
25	Baltimore-Towson, MD	48,051	4.2%	4.5%	32.9%	29.3%	37.8%	22.1%	77.9%
26	Kansas City, MO-KS	47,371	3.2%	5.6%	28.0%	30.2%	41.8%	43.3%	56.7%
27	Providence-New Bedford-Fall River, RI-MA	44,273	3.2%	7.5%	22.4%	34.5%	43.1%	50.0%	50.0%
28	Tampa-St. Petersburg-Clearwater, FL	41,670	3.6%	4.2%	32.0%	33.9%	34.0%	30.3%	69.7%
29	Portland-Vancouver-Hillsboro, OR-WA	41,314	4.6%	4.8%	30.4%	26.9%	42.7%	45.2%	54.8%
30	Columbus, OH	37,506	4.9%	4.8%	28.6%	39.8%	31.6%	43.5%	56.5%
31	Riverside-San Bernardino-Ontario, CA	36,169	2.8%	3.9%	31.2%	39.9%	28.8%	37.2%	62.8%
32	Cleveland-Elyria-Mentor, OH	34,010	5.6%	3.9%	30.3%	28.8%	40.9%	49.2%	50.8%
33	Hartford-West Hartford-East Hartford, CT	33,452	5.2%	6.4%	29.7%	28.7%	41.7%	41.1%	58.9%

Appendix Table 1. Metro Areas (continued)

Rank	Metro	Jobs in Foreign-Owned Establishments (FOEs)	Share of Total Private Employment in FOEs		Share of Jobs in FOEs Originating			Share of Jobs in FOEs by Sector, 2011	
		2011	1991	2011	as Openings	as M&A	before 1991	Goods	Services
34	Nashville-Davidson-Murfreesboro-Franklin, TN	32,205	6.0%	4.8%	31.4%	21.3%	47.3%	31.9%	68.1%
35	Virginia Beach-Norfolk-Newport News, VA-NC	30,018	4.1%	5.2%	24.1%	33.8%	42.1%	33.7%	66.3%
36	Austin-Round Rock-San Marcos, TX	29,180	2.7%	4.6%	25.4%	25.8%	48.8%	46.0%	54.0%
37	Buffalo-Niagara Falls, NY	28,416	5.9%	6.3%	22.0%	29.4%	48.5%	45.5%	54.5%
38	Orlando-Kissimmee-Sanford, FL	27,720	4.2%	3.1%	30.1%	40.0%	29.8%	23.4%	76.6%
39	Milwaukee-Waukesha-West Allis, WI	27,323	3.4%	3.7%	18.9%	32.2%	48.9%	43.0%	57.0%
40	Greensboro-High Point, NC	27,036	5.2%	9.0%	30.9%	39.7%	29.4%	54.0%	46.0%
41	Richmond, VA	26,339	4.1%	5.2%	41.6%	22.7%	35.7%	30.6%	69.4%
42	Memphis, TN-MS-AR	25,193	3.3%	4.9%	31.7%	27.3%	41.0%	42.6%	57.4%
43	Raleigh-Cary, NC	24,864	6.1%	5.9%	36.6%	35.8%	27.6%	33.0%	67.0%
44	Worcester, MA	24,624	5.0%	9.0%	19.1%	22.4%	58.4%	43.7%	56.3%
45	Louisville-Jefferson County, KY-IN	23,974	3.7%	4.6%	26.4%	35.3%	38.4%	53.6%	46.4%
46	Salt Lake City, UT	23,866	4.2%	4.6%	28.0%	32.0%	40.1%	46.1%	53.9%
47	Las Vegas-Paradise, NV	21,741	1.5%	3.0%	43.8%	39.8%	16.4%	18.5%	81.5%
48	Rochester, NY	21,701	3.1%	5.0%	28.7%	29.1%	42.1%	38.5%	61.5%
49	San Antonio-New Braunfels, TX	21,576	2.4%	3.0%	36.9%	28.2%	35.0%	50.4%	49.6%
50	Jacksonville, FL	21,426	2.6%	4.2%	29.8%	34.2%	36.0%	34.5%	65.5%
51	Honolulu, HI	21,136	8.9%	6.1%	15.6%	14.6%	69.9%	10.8%	89.2%
52	Allentown-Bethlehem-Easton, PA-NJ	20,776	5.2%	6.9%	36.7%	20.5%	42.8%	58.9%	41.1%
53	Dayton, OH	20,074	3.2%	6.4%	36.5%	19.6%	44.0%	55.0%	45.0%
54	El Paso, TX	18,540	7.9%	8.8%	36.3%	36.5%	27.2%	59.2%	40.8%
55	Toledo, OH	17,267	6.2%	6.8%	15.9%	59.1%	25.1%	74.5%	25.5%
56	Knoxville, TN	17,259	4.7%	6.1%	20.1%	37.2%	42.6%	56.2%	43.8%
57	Charleston-North Charleston-Summerville, SC	17,198	5.9%	7.2%	36.4%	24.2%	39.4%	35.6%	64.4%
58	Greenville-Mauldin-Easley, SC	16,179	9.0%	6.1%	27.0%	55.2%	17.9%	61.8%	38.2%
59	Harrisburg-Carlisle, PA	16,013	2.8%	6.1%	35.0%	29.1%	35.9%	36.0%	64.0%
60	Sacramento-Arden-Arcade-Roseville, CA	15,244	1.3%	2.6%	30.6%	34.0%	35.5%	20.1%	79.9%
61	Tulsa, OK	14,903	4.4%	4.0%	25.2%	23.9%	50.9%	58.1%	41.9%
62	Albany-Schenectady-Troy, NY	14,835	2.2%	4.4%	20.9%	42.4%	36.7%	25.4%	74.6%
63	Columbia, SC	14,319	5.0%	5.3%	30.8%	33.1%	36.1%	54.5%	45.5%
64	Akron, OH	14,273	5.0%	5.2%	22.5%	19.1%	58.4%	36.6%	63.4%
65	Scranton-Wilkes-Barre, PA	14,049	4.6%	6.2%	23.1%	25.6%	51.3%	53.2%	46.8%
66	Birmingham-Hoover, AL	13,949	2.7%	3.4%	36.3%	34.7%	29.0%	42.7%	57.3%
67	Tucson, AZ	13,687	3.7%	4.9%	25.5%	26.7%	47.8%	49.7%	50.3%

Appendix Table 1. Metro Areas (continued)

Rank	Metro	Jobs in Foreign-Owned Establishments (FOEs)	Share of Total Private Employment in FOEs		Share of Jobs in FOEs Originating			Share of Jobs in FOEs by Sector, 2011	
		2011	1991	2011	as Openings	as M&A	before 1991	Goods	Services
68	New Haven-Milford, CT	13,418	3.1%	4.3%	23.1%	32.0%	44.9%	38.5%	61.5%
69	Oklahoma City, OK	13,288	3.7%	2.8%	31.7%	34.5%	33.9%	46.7%	53.3%
70	Omaha-Council Bluffs, NE-IA	13,077	1.5%	3.3%	32.6%	28.2%	39.2%	35.4%	64.6%
71	Chattanooga, TN-GA	12,674	4.6%	6.4%	42.5%	37.9%	19.7%	52.6%	47.4%
72	Oxnard-Thousand Oaks-Ventura, CA	11,746	3.7%	4.6%	23.8%	21.8%	54.4%	45.2%	54.8%
73	New Orleans-Metairie-Kenner, LA	11,651	3.8%	2.6%	27.6%	40.4%	32.0%	29.9%	70.1%
74	Wichita, KS	11,610	2.4%	4.7%	30.5%	33.7%	35.8%	42.4%	57.6%
75	Baton Rouge, LA	11,434	5.9%	3.9%	40.9%	22.5%	36.6%	62.4%	37.6%
76	Bakersfield-Delano, CA	10,812	3.1%	4.9%	17.3%	50.5%	32.2%	48.1%	51.9%
77	Syracuse, NY	10,782	3.9%	4.2%	26.1%	19.4%	54.4%	58.0%	42.0%
78	Grand Rapids-Wyoming, MI	10,383	3.7%	3.0%	21.0%	18.2%	60.8%	55.8%	44.2%
79	Springfield, MA	10,321	2.9%	4.4%	26.8%	23.2%	50.1%	34.8%	65.2%
80	Augusta-Richmond County, GA-SC	9,724	4.2%	5.7%	18.4%	20.2%	61.4%	70.4%	29.6%
81	Des Moines-West Des Moines, IA	9,638	2.8%	3.4%	17.5%	42.5%	40.0%	33.3%	66.7%
82	North Port-Bradenton-Sarasota, FL	9,562	4.8%	4.4%	30.4%	53.5%	16.1%	33.5%	66.5%
83	Lancaster, PA	8,835	3.6%	4.2%	34.6%	34.9%	30.6%	50.8%	49.2%
84	McAllen-Edinburg-Mission, TX	8,373	2.2%	4.7%	48.4%	43.1%	8.5%	64.7%	35.3%
85	Youngstown-Warren-Boardman, OH-PA	7,638	2.0%	3.9%	24.8%	43.8%	31.4%	79.8%	20.2%
86	Madison, WI	7,556	2.2%	2.8%	22.9%	25.1%	52.0%	23.9%	76.1%
87	Colorado Springs, CO	7,497	1.7%	3.7%	33.5%	50.4%	16.0%	25.1%	74.9%
88	Albuquerque, NM	7,271	3.0%	2.5%	31.1%	35.7%	33.2%	25.4%	74.6%
89	Boise City-Nampa, ID	6,466	2.4%	2.9%	34.4%	33.4%	32.3%	35.7%	64.3%
90	Fresno, CA	6,445	1.6%	2.4%	35.3%	33.4%	31.2%	19.7%	80.3%
91	Jackson, MS	5,937	2.0%	2.9%	28.0%	27.4%	44.6%	49.4%	50.6%
92	Stockton, CA	5,755	2.3%	3.4%	46.9%	22.0%	31.1%	31.3%	68.7%
93	Little Rock-North Little Rock-Conway, AR	5,611	3.7%	2.1%	40.7%	23.5%	35.8%	41.2%	58.8%
94	Poughkeepsie-Newburgh-Middletown, NY	5,550	2.4%	2.7%	32.6%	37.0%	30.4%	21.3%	78.7%
95	Palm Bay-Melbourne-Titusville, FL	4,553	2.0%	2.7%	22.9%	39.2%	38.0%	44.4%	55.6%
96	Ogden-Clearfield, UT	4,118	1.5%	2.7%	30.3%	30.7%	39.0%	44.3%	55.7%
97	Cape Coral-Fort Myers, FL	3,987	1.3%	2.4%	38.6%	42.7%	18.7%	19.4%	80.6%
98	Lakeland-Winter Haven, FL	3,885	3.7%	2.3%	24.7%	37.7%	37.6%	56.3%	43.7%
99	Provo-Orem, UT	2,430	2.9%	1.5%	18.0%	50.8%	31.2%	50.4%	49.6%
100	Modesto, CA	2,215	1.0%	1.6%	32.9%	24.9%	42.1%	42.6%	57.4%
	Largest 100 Metros	4,156,604	4.6%	5.4%	26.2%	31.9%	41.9%	36.2%	63.8%
	United States	5,634,276	4.2%	5.0%	26.1%	32.0%	41.9%	42.7%	57.3%

Appendix Table 2. States

Rank	State	Jobs in Foreign-Owned Establishments (FOEs)	Share of Total Private Employment in FOEs		Share of Jobs in FOEs Originating			Share of Jobs in FOEs by Sector, 2011	
		2011	1991	2011	as Openings	as M&A	before 1991	Goods	Services
1	California	593,133	4.2%	5.0%	27.0%	31.6%	41.4%	32.6%	67.4%
2	Texas	462,465	4.0%	5.1%	27.4%	32.9%	39.7%	50.9%	49.1%
3	New York	412,610	5.0%	5.7%	20.4%	27.4%	52.2%	22.0%	78.0%
4	Illinois	269,779	4.5%	5.5%	24.2%	30.0%	45.7%	37.8%	62.2%
5	Pennsylvania	269,176	3.9%	5.4%	30.3%	27.8%	41.8%	45.1%	54.9%
6	Florida	239,826	3.5%	3.8%	27.3%	40.8%	31.9%	27.4%	72.6%
7	New Jersey	229,875	5.5%	7.1%	24.8%	28.6%	46.6%	37.6%	62.4%
8	Ohio	221,332	4.4%	5.0%	24.7%	31.4%	43.8%	56.8%	43.2%
9	North Carolina	201,028	5.6%	6.1%	36.9%	28.7%	34.5%	50.9%	49.1%
10	Georgia	194,997	5.0%	6.0%	24.7%	37.7%	37.6%	43.0%	57.0%
11	Massachusetts	189,770	3.8%	6.8%	24.3%	31.9%	43.8%	33.0%	67.0%
12	Michigan	178,412	5.1%	5.2%	22.3%	43.4%	34.3%	61.3%	38.7%
13	Virginia	156,802	4.1%	5.2%	30.1%	35.4%	34.4%	29.2%	70.8%
14	Indiana	145,645	5.1%	5.9%	24.6%	28.3%	47.1%	67.5%	32.5%
15	Tennessee	124,537	4.7%	5.4%	30.8%	27.8%	41.4%	54.4%	45.6%
16	South Carolina	114,787	7.3%	7.5%	26.8%	37.1%	36.1%	58.5%	41.5%
17	Maryland	106,042	3.9%	5.2%	26.2%	27.9%	45.8%	27.2%	72.8%
18	Connecticut	103,127	5.0%	7.4%	19.5%	28.5%	51.9%	36.0%	64.0%
19	Washington	97,096	3.3%	4.1%	28.6%	36.5%	34.9%	41.7%	58.3%
20	Minnesota	94,483	3.5%	4.0%	20.3%	27.6%	52.2%	35.0%	65.0%
21	Kentucky	92,674	4.1%	6.0%	23.9%	29.8%	46.3%	62.8%	37.2%
22	Missouri	88,754	3.0%	3.8%	23.1%	33.8%	43.1%	56.9%	43.1%
23	Alabama	87,045	3.8%	5.6%	30.6%	37.5%	31.9%	64.3%	35.7%
24	Wisconsin	86,442	3.0%	3.5%	25.2%	26.2%	48.6%	55.3%	44.7%
25	Colorado	83,829	3.5%	4.4%	27.9%	37.1%	35.0%	41.6%	58.4%
26	Arizona	80,612	3.6%	3.9%	27.5%	34.6%	37.9%	34.0%	66.0%
27	Kansas	58,700	2.2%	5.1%	24.8%	32.8%	42.4%	48.8%	51.2%
28	Louisiana	57,896	3.5%	3.7%	27.1%	40.9%	32.0%	46.9%	53.1%
29	Iowa	49,472	2.3%	3.7%	21.0%	21.7%	57.3%	55.3%	44.7%
30	Oregon	46,236	3.0%	3.3%	31.4%	26.3%	42.3%	41.7%	58.3%
31	Oklahoma	40,809	3.3%	3.1%	26.6%	32.2%	41.1%	58.3%	41.7%
32	New Hampshire	39,602	5.5%	7.3%	26.6%	22.9%	50.5%	49.1%	50.9%
33	Nevada	38,899	3.2%	4.0%	34.0%	39.3%	26.7%	39.5%	60.5%
34	Arkansas	37,341	2.7%	3.7%	29.3%	31.3%	39.4%	73.6%	26.4%
35	Utah	32,768	3.1%	3.3%	26.9%	35.2%	37.9%	48.1%	51.9%
36	Maine	30,657	4.2%	6.1%	19.8%	25.2%	55.0%	32.3%	67.7%

Appendix Table 2. States (continued)

Rank	State	Jobs in Foreign-Owned Establishments (FOEs)	Share of Total Private Employment in FOEs		Share of Jobs in FOEs Originating			Share of Jobs in FOEs by Sector, 2011	
		2011	1991	2011	as Openings	as M&A	before 1991	Goods	Services
37	Delaware	30,182	12.2%	8.5%	26.0%	49.4%	24.6%	42.7%	57.3%
38	Mississippi	27,692	2.4%	3.1%	21.6%	31.8%	46.6%	56.3%	43.7%
39	Hawaii	26,837	8.8%	5.6%	18.4%	15.8%	65.8%	9.7%	90.3%
40	Rhode Island	26,536	3.3%	6.6%	27.3%	21.1%	51.7%	38.1%	61.9%
41	West Virginia	26,033	5.4%	4.2%	23.9%	33.3%	42.7%	60.7%	39.3%
42	Nebraska	25,782	1.8%	3.1%	24.4%	23.8%	51.8%	53.3%	46.7%
43	District of Columbia	21,610	1.8%	4.5%	26.9%	35.0%	38.1%	9.4%	90.6%
44	New Mexico	16,585	2.3%	2.6%	36.1%	36.8%	27.1%	44.4%	55.6%
45	Alaska	14,373	4.2%	5.8%	35.7%	23.8%	40.4%	58.3%	41.7%
46	North Dakota	13,587	1.2%	3.9%	15.7%	58.3%	26.1%	39.4%	60.6%
47	Idaho	13,469	2.8%	2.5%	29.5%	33.6%	36.8%	42.6%	57.4%
48	Vermont	11,911	2.2%	4.7%	28.1%	34.9%	37.0%	30.2%	69.8%
49	Wyoming	8,544	2.8%	3.7%	36.0%	28.4%	35.6%	71.1%	28.9%
50	South Dakota	8,346	1.7%	2.3%	20.0%	31.8%	48.3%	67.0%	33.0%
51	Montana	6,131	1.4%	1.7%	14.0%	51.5%	34.5%	65.2%	34.8%
	United States	5,634,276	4.2%	5.0%	26.1%	32.0%	41.9%	42.7%	57.3%

Appendix Table 3. U.S. Industry

Rank	NAICS 4 Industry	Jobs in Foreign-Owned Establishments (FOEs), 2011	Share of U.S. FOE Employment, 2011	Share of U.S. Private Employment in FOEs, 1991	Share of U.S. Private Employment in FOEs, 2011
1	Grocery Stores	287,648	5.1%	7.8%	11.6%
2	Motor Vehicle Parts	219,471	3.9%	14.7%	47.1%
3	Commercial Banks	150,103	2.7%	5.1%	8.6%
4	Investigation & Security	130,360	2.3%	3.3%	16.3%
5	Computer Systems Design	121,783	2.2%	3.9%	8.2%
6	Restaurants	118,248	2.1%	1.3%	1.4%
7	Pharmaceuticals	114,305	2.0%	40.5%	43.5%
8	Traveler Accommodation	106,395	1.9%	6.6%	6.2%
9	Insurance Carriers	91,488	1.6%	6.4%	7.4%
10	Commercial Equip. Wholesalers	90,721	1.6%	11.4%	14.8%
11	Architecture & Engineering	89,951	1.6%	5.2%	6.9%
12	Motor Vehicles	88,652	1.6%	31.2%	58.1%
13	Plastics	83,247	1.5%	7.7%	15.8%
14	Precision Instruments	81,579	1.4%	11.0%	20.4%
15	Employment Services	79,082	1.4%	1.7%	2.8%
16	Machinery Wholesalers	74,048	1.3%	9.1%	11.8%
17	Electronics Wholesalers	73,851	1.3%	17.0%	23.8%
18	Basic Chemicals	71,827	1.3%	28.8%	51.8%
19	Securities Brokerage	69,075	1.2%	8.3%	14.7%
20	Newspaper & Book Publishers	68,703	1.2%	7.1%	14.4%
21	Motor Vehicle Wholesalers	65,362	1.2%	19.4%	20.4%
22	Support Activities For Mining	63,802	1.1%	9.3%	19.6%
23	Management Consulting	60,688	1.1%	5.5%	5.9%
24	Semiconductors	59,579	1.1%	10.7%	15.3%
25	Medical Equipment & Supplies	57,139	1.0%	15.1%	18.8%
26	General Purpose Machinery	56,041	1.0%	15.9%	23.5%
27	Cement & Concrete Products	55,831	1.0%	21.8%	34.8%
28	Aircraft Products & Parts	54,121	1.0%	2.3%	11.2%
29	Meat & Poultry Products	51,903	0.9%	2.3%	11.7%
30	Advertising Services	49,137	0.9%	7.3%	11.7%
31	Special Food Services	46,896	0.8%	1.8%	8.5%
32	Petroleum & Coal Products	45,487	0.8%	31.1%	41.4%
33	Insurance Agencies	44,428	0.8%	6.9%	4.9%
34	R&D Services	43,931	0.8%	6.6%	7.0%
35	Electrical Equipment	43,673	0.8%	21.4%	31.5%
36	Rubber Products	42,921	0.8%	25.3%	35.6%
37	Employee Bus Transportation	42,239	0.7%	10.6%	23.6%

Appendix Table 3. U.S. Industry (contiued)

Rank	NAICS 4 Industry	Jobs in Foreign-Owned Establishments (FOEs), 2011	Share of U.S. FOE Employment, 2011	Share of U.S. Private Employment in FOEs, 1991	Share of U.S. Private Employment in FOEs, 2011
38	Administrative Services	41,179	0.7%	26.3%	10.1%
39	Freight Forwarding	40,870	0.7%	16.2%	22.1%
40	Warehousing & Storage	40,863	0.7%	7.3%	6.4%
41	Health & Personal Care Stores	38,551	0.7%	0.8%	4.0%
42	Data Processing & Hosting	36,067	0.6%	7.6%	14.3%
43	HVAC Equipment	36,043	0.6%	13.5%	29.4%
44	Communications Equipment	35,676	0.6%	21.1%	29.7%
45	Valves, Bearings, & Pipes	35,103	0.6%	9.7%	14.0%
46	Engine & Power Equipment	33,626	0.6%	23.5%	35.1%
47	Agri., Constr., Mining Machinery	32,297	0.6%	15.8%	15.5%
48	Iron & Steel Products	31,730	0.6%	11.3%	35.4%
49	Glass Products	31,396	0.6%	18.2%	38.1%
50	Business Support Services	31,292	0.6%	1.7%	3.9%
51	Home Improvement Wholesalers	31,200	0.6%	5.6%	13.9%
52	Bakery Products	30,966	0.5%	7.5%	11.0%
53	Grocery Wholesalers	30,070	0.5%	5.5%	4.2%
54	Jewelry, Sporting Goods	29,709	0.5%	7.1%	10.9%
55	Beverage Products	29,668	0.5%	11.7%	17.1%
56	Snack, Coffee, & Condiments	28,855	0.5%	14.5%	17.2%
57	Outpatient care centers	28,271	0.5%	1.6%	4.5%
58	Non-Bank Credit Intermediation	28,268	0.5%	6.3%	5.0%
59	Arch. & Structural Metals	28,136	0.5%	5.4%	8.6%
60	Clothing Stores	27,723	0.5%	1.5%	2.7%
61	Travel Arrangement Services	27,589	0.5%	7.2%	14.2%
62	Misc. Electrical Equipment	26,360	0.5%	12.7%	21.2%
63	Consumer Goods Wholesalers	26,016	0.5%	8.2%	8.9%
64	Auto Parts & Tire Stores	25,335	0.4%	3.7%	5.1%
65	Misc. Chemicals	24,920	0.4%	18.8%	29.7%
66	Misc. Nondurable Wholesalers	24,127	0.4%	5.2%	7.6%
67	Dairy Products	24,066	0.4%	9.9%	19.3%
68	Wireless Telecom Carriers	23,990	0.4%	0.6%	14.3%
69	Computer Equipment	23,874	0.4%	10.2%	14.5%
70	Industrial Machinery	23,780	0.4%	14.9%	22.9%
71	Cleaning Products	23,015	0.4%	18.5%	23.2%
72	Resins & Synthetic Rubbers	22,108	0.4%	30.0%	24.5%
73	Portfolio & Financial Management	21,672	0.4%	3.4%	6.1%
74	Power Generation & Supply	21,421	0.4%	0.1%	5.3%

Appendix Table 3. U.S. Industry (continued)

Rank	NAICS 4 Industry	Jobs in Foreign-Owned Establishments (FOEs), 2011	Share of U.S. FOE Employment, 2011	Share of U.S. Private Employment in FOEs, 1991	Share of U.S. Private Employment in FOEs, 2011
75	Comm. Building Construction	21,346	0.4%	2.5%	3.3%
76	Film, TV, & Advertising	21,182	0.4%	7.9%	6.3%
77	Nursing Care Facilities	20,861	0.4%	1.4%	1.2%
78	Chemical Wholesalers	20,448	0.4%	13.6%	16.8%
79	Software Products	20,408	0.4%	4.7%	7.5%
80	Other Support Services	20,338	0.4%	3.5%	7.5%
81	Paper Products	20,012	0.4%	5.9%	18.7%
82	Airport Support Activities	19,841	0.4%	8.5%	12.3%
83	Steel Products	19,828	0.4%	9.9%	37.2%
84	Printing & Related Activities	19,748	0.4%	3.8%	4.2%
85	Lumber Wholesalers	19,120	0.3%	8.4%	10.1%
86	Electronics Stores	19,065	0.3%	2.9%	3.6%
87	Other Technical Services	18,939	0.3%	2.0%	3.2%
88	Metalworking Machinery	18,915	0.3%	5.8%	11.4%
89	Pharmacies	18,859	0.3%	11.2%	10.5%
90	Automotive Repair & Maintenance	18,702	0.3%	0.5%	1.7%
91	Electrical Lighting Equipment	18,692	0.3%	25.5%	41.4%
92	Road & Bridge Construction	18,624	0.3%	2.7%	6.5%
93	Building Equipment Contractors	18,428	0.3%	0.9%	1.1%
94	Jewelry & Leather Stores	18,359	0.3%	4.2%	13.8%
95	Stone, Sand, & Clay Mining	18,065	0.3%	12.8%	18.2%
96	Paint & Adhesive Products	18,054	0.3%	19.9%	30.7%
97	Nonferrous Metal Products	17,962	0.3%	17.1%	29.1%
98	Frozen & Canned Foods	17,646	0.3%	10.5%	10.9%
99	Building Services	17,639	0.3%	2.7%	1.0%
100	Converted Paper Products	17,059	0.3%	4.9%	6.2%

Appendix Table 4. Foreign Metro Areas

Rank	Foreign City-Region	Jobs in Foreign-Owned Establishments (FOEs), 2011	Share of U.S. FOE Employment, 2011	Share of Jobs in FOEs Originating		
				as Openings	as M&A	before 1991
1	Tokyo-Kanagawa-Saitama-Chiba, Japan	487,442	8.7%	25.6%	25.2%	49.2%
2	London, England	460,687	8.2%	27.5%	30.8%	41.7%
3	Paris-Île-de-France, France	429,522	7.6%	26.5%	34.4%	39.1%
4	Toronto-Ottawa-Ontario, Canada	256,537	4.6%	25.3%	28.2%	46.6%
5	Amsterdam-North Holland, Netherlands	231,655	4.1%	26.6%	35.8%	37.6%
6	Düsseldorf-Cologne-Westphalia, Germany	165,364	2.9%	40.2%	23.8%	36.0%
7	Brussels-Leuven-Flemish Brabant, Belgium	154,828	2.7%	37.3%	27.5%	35.2%
8	Dublin-Ulster-East, Ireland	141,589	2.5%	21.8%	34.4%	43.8%
9	Stuttgart-Mannheim-Baden-Württemberg, Germany	134,325	2.4%	36.6%	17.0%	46.4%
10	Oxford-Gatwick-South East, England	131,984	2.3%	23.7%	35.9%	40.5%
11	Montreal-Sherbrooke-Quebec, Canada	125,288	2.2%	25.3%	30.0%	44.7%
12	Stockholm, Sweden	123,951	2.2%	52.1%	21.0%	26.9%
13	Zürich, Switzerland	112,609	2.0%	20.5%	25.2%	54.3%
14	Turin-Casale Monferrato-Piedmont, Italy	85,832	1.5%	8.9%	80.6%	10.6%
15	Nagoya-Aichi-Gifu, Japan	81,111	1.4%	27.1%	18.9%	54.0%
16	Schaffhausen-St. Gallen-Eastern, Switzerland	77,262	1.4%	32.8%	29.6%	37.7%
17	Milan-Bergamo-Lombardy, Italy	76,697	1.4%	33.5%	40.5%	26.0%
18	Geneva-Lausanne-Vaud Valais, Switzerland	75,498	1.3%	34.3%	24.4%	41.3%
19	Aberdeen, Scotland	74,769	1.3%	40.8%	32.4%	26.9%
20	Munich-Nuremberg-Bavaria, Germany	73,288	1.3%	18.7%	35.3%	46.0%
21	Luxembourg, Luxembourg	73,186	1.3%	22.4%	29.6%	48.0%
22	Jersey-Guernsey-Channel Islands, England	66,703	1.2%	24.4%	27.8%	47.8%
23	Hamilton, Bermuda	65,797	1.2%	20.5%	34.2%	45.3%
24	Frankfurt-Kassel-Hesse, Germany	63,090	1.1%	34.7%	33.9%	31.4%
25	Osaka-Kobe-Hyogo-Nara, Japan	62,327	1.1%	15.4%	16.7%	67.9%
26	Rotterdam-Hague-South Holland, Netherlands	61,943	1.1%	17.8%	20.9%	61.3%
27	Basel-Northwestern, Switzerland	59,536	1.1%	31.4%	12.5%	56.1%
28	Seoul-Incheon-Gyeonggi, Republic of Korea	50,125	0.9%	17.3%	61.2%	21.5%
29	Sao Paulo-Sao Jose Dos Campos, Brazil	50,122	0.9%	10.4%	51.5%	38.1%
30	Calgary-Edmonton-Alberta, Canada	47,664	0.8%	27.8%	37.5%	34.7%
31	Melbourne-Victoria, Australia	40,352	0.7%	29.5%	30.6%	39.9%
32	Birmingham-Redditch-West Midlands, England	40,078	0.7%	16.6%	28.8%	54.7%
33	Cambridge-Luton-Essex-East, England	40,071	0.7%	41.4%	46.4%	12.3%
34	Zug-Lucerne-Central, Switzerland	39,002	0.7%	23.3%	26.6%	50.0%
35	Auckland, New Zealand	38,578	0.7%	11.3%	57.7%	31.0%
36	Sydney-New South Wales, Australia	37,347	0.7%	18.1%	48.0%	33.9%

Appendix Table 4. Foreign Metro Areas (continued)

Rank	Foreign City-Region	Jobs in Foreign-Owned Establishments (FOEs), 2011	Share of U.S. FOE Employment, 2011	Share of Jobs in FOEs Originating		
				as Openings	as M&A	before 1991
37	Willemstad–Curacao, Netherlands Antilles	36,493	0.6%	19.1%	24.5%	56.3%
38	Tel Aviv–Central, Israel	34,562	0.6%	16.2%	42.0%	41.8%
39	Mexico City, Mexico	32,713	0.6%	24.0%	26.6%	49.4%
40	Helsinki–Espoo, Finland	31,882	0.6%	34.6%	22.1%	43.3%
41	Monterrey–Nuevo León, Mexico	31,437	0.6%	39.8%	20.7%	39.4%
42	Hannover–Wolfsburg–Lower Saxony, Germany	27,283	0.5%	33.4%	28.5%	38.1%
43	Mumbai–Pune–Maharashtra, India	26,269	0.5%	21.4%	62.1%	16.5%
44	Copenhagen–Zealand, Denmark	23,927	0.4%	18.9%	31.7%	49.4%
45	Vancouver–Victoria–British Columbia, Canada	23,897	0.4%	31.6%	35.2%	33.2%
46	Singapore, Singapore	23,742	0.4%	26.0%	33.6%	40.4%
47	Eindhoven–North Brabant, Netherlands	23,378	0.4%	36.0%	23.2%	40.8%
48	George Town–Grand Cayman, Cayman Islands	22,823	0.4%	25.5%	41.8%	32.6%
49	Koblenz–Ludwigshafen–Palatinate, Germany	22,586	0.4%	28.9%	12.6%	58.5%
50	Hong Kong, Hong Kong	20,190	0.4%	26.7%	35.0%	38.2%
51	Bilbao–Basque, Spain	19,971	0.4%	32.8%	32.6%	34.6%
52	Madrid, Spain	19,911	0.4%	14.3%	32.0%	53.7%
53	Göteborg, Sweden	18,936	0.3%	26.2%	15.1%	58.8%
54	Bath–Bristol–South West, England	18,631	0.3%	22.3%	21.0%	56.7%
55	Road Town–Tortola, British Virgin Islands	17,398	0.3%	42.5%	31.4%	26.1%
56	Taipei–Hsinchu–Taoyuan, Taiwan	17,157	0.3%	28.9%	42.4%	28.7%
57	Utrecht–Houten, Netherlands	17,107	0.3%	38.7%	39.6%	21.7%
58	Kyoto–Shiga, Japan	15,611	0.3%	12.3%	16.4%	71.3%
59	Leeds–Sheffield–Yorkshire, England	15,025	0.3%	30.7%	41.1%	28.2%
60	Hamburg, Germany	13,944	0.2%	34.2%	29.1%	36.7%
61	Porto Alegre–Rio Grande do Sul, Brazil	12,709	0.2%	37.3%	20.7%	42.0%
62	Brisbane–Queensland, Australia	12,481	0.2%	2.7%	30.3%	67.0%
63	Rome–Priverno, Italy	11,929	0.2%	12.0%	32.3%	55.6%
64	Oslo–Kongsberg–Eastern Norway, Norway	10,662	0.2%	27.1%	27.8%	45.1%
65	Nottingham–Northampton, England	10,580	0.2%	29.7%	52.3%	18.0%
66	Santander–Cantabria, Spain	10,338	0.2%	18.0%	36.6%	45.3%
67	Barcelona–Catalonia, Spain	9,434	0.2%	46.9%	30.1%	23.0%
68	Vienna–Lower Austria, Austria	9,285	0.2%	19.3%	27.3%	53.4%
69	Lyon–Rhône-Alpes, France	8,407	0.1%	5.8%	49.1%	45.1%
70	Shizuoka, Japan	8,366	0.1%	21.7%	14.5%	63.8%
71	Beijing, China	7,119	0.1%	16.9%	52.5%	30.6%
72	Moncton–Saint John–New Brunswick, Canada	7,113	0.1%	41.3%	12.0%	46.8%

Appendix Table 4. Foreign Metro Areas (continued)

Rank	Foreign City-Region	Jobs in Foreign-Owned Establishments (FOEs), 2011	Share of U.S. FOE Employment, 2011	Share of Jobs in FOEs Originating		
				as Openings	as M&A	before 1991
73	Palma de Mallorca, Spain	6,891	0.1%	44.9%	49.3%	5.8%
74	Wrocław–Lower Silesia, Poland	6,686	0.1%	6.6%	93.4%	0.0%
75	Venlo–Maastricht–Limburg, Netherlands	6,655	0.1%	42.0%	20.4%	37.6%
76	Berlin–Brandenburg, Germany	6,486	0.1%	30.2%	19.8%	49.9%
77	Dubai, United Arab Emirates	6,430	0.1%	20.0%	34.3%	45.7%
78	Bangalore–Karnataka, India	5,822	0.1%	11.4%	67.9%	20.7%
79	Manchester–Liverpool–North West, England	5,778	0.1%	17.5%	36.8%	45.7%
80	Freeport–Nassau, Bahamas	5,745	0.1%	3.4%	93.9%	2.7%
81	Edinburgh–Dundee–Eastern Scotland, Scotland	5,731	0.1%	18.9%	25.1%	56.0%
82	Malmö–Lund–Skåne, Sweden	5,689	0.1%	14.8%	25.2%	60.0%
83	Bern–Fribourg–Espace Mittelland, Switzerland	5,579	0.1%	5.9%	25.1%	69.0%
84	Haifa–Nazareth, Israel	5,550	0.1%	9.4%	65.5%	25.0%
85	Bologna–Parma–Emilia–Romagna, Italy	5,179	0.1%	17.4%	24.8%	57.8%
86	Winnipeg–Manitoba, Canada	5,099	0.1%	31.8%	33.7%	34.5%
87	Rennes–Brittany, France	4,951	0.1%	2.2%	71.8%	26.0%
88	Sandviken, Sweden	4,856	0.1%	18.3%	22.2%	59.5%
89	Walloon Brabant, Belgium	4,786	0.1%	14.6%	35.7%	49.7%
90	Riyadh, Saudi Arabia	4,700	0.1%	17.5%	15.5%	67.0%
91	Höganäs–Trelleborg, Sweden	4,641	0.1%	13.7%	27.2%	59.2%
92	Belfast–Armagh, Northern Ireland	4,620	0.1%	4.5%	66.4%	29.1%
93	Antwerp, Belgium	4,402	0.1%	9.9%	30.9%	59.2%
94	Gunma, Japan	4,160	0.1%	9.6%	11.0%	79.3%
95	Aarhus–Central Jutland, Denmark	4,081	0.1%	10.7%	44.3%	45.0%
96	Vaduz, Liechtenstein	3,887	0.1%	29.2%	7.9%	63.0%
97	Lübeck–Schleswig–Holstein, Germany	3,884	0.1%	14.8%	27.6%	57.6%
98	Bruges–West Flanders, Belgium	3,810	0.1%	16.1%	15.8%	68.1%
99	Cork–Munster–South, Ireland	3,781	0.1%	50.7%	10.0%	39.3%
100	Durango, Mexico	3,569	0.1%	2.4%	45.2%	52.4%

Add About Global Cities Initiative

The Global Cities Initiative aims to equip metropolitan leaders with the information, policy ideas, and global connections they need to bolster their position within the global economy. Combining Brookings' deep expertise in fact-based, metropolitan-focused research and JPMorgan Chase's long-standing commitment to investing in cities, this initiative aims to:

- Help city and metropolitan leaders in the United States and abroad better leverage their global assets by unveiling their economic starting points on such key indicators as advanced manufacturing, exports, foreign direct investment, freight flow, and immigration.
- Provide metropolitan area leaders with proven, actionable ideas for how to expand the global reach of their economies, building on best practices and policy innovations from across the nation and around the world.
- Create a network of leaders from global cities intent upon deepening global trade relationships.

The Global Cities Initiative is chaired by Richard M. Daley, former mayor of Chicago and senior advisor to JPMorgan Chase, and directed by Bruce Katz, Brookings' vice president and co-director of the Metropolitan Policy Program which aims to provide decision makers in the public, corporate, and civic sectors with policy ideas for improving the health and prosperity of cities and metropolitan areas.

Launched in 2012, over the next five years the Global Cities initiative anticipates the following activities:

Independent Research: Through research, the Global Cities Initiative will make the case that metropolitan areas drive global trade and investment. Brookings will undertake rigorous economic and demographic trend analyses of the distinctive economic strengths of the 100 largest U.S. metropolitan areas and relevant global metropolitan areas.

U.S. Forums: Each year, the Global Cities Initiative will convene U.S. state and metropolitan leaders to domestically to help them understand the position of their metropolitan areas in the changing global marketplace. In 2012, the Global Cities Initiative held forums in Los Angeles, California, Columbus, OH, and Miami. In 2013, the Global Cities Initiative held forums in Atlanta, Houston, Dallas, and Denver. Each event brought together a select group of political, corporate, labor, philanthropic, and university leaders to explore how they might work together and with international partners to expand trade and investments.

Global Forums: The Global Cities Initiative will also host one international convening each year to help metropolitan leaders explore best practices and policy innovations for strengthening global engagement and facilitate trade relationships. The first global forum was held in São Paulo, Brazil, in November 2012. The second global forum will be held in Mexico City in November 2013.

Global Networks: Emerging from this effort will be a global network of innovative thinkers and practitioners located throughout the world who will catalyze a new field of trade and investment. This network of proven reformers will be dedicated to the economic advancement of metropolitan areas in the global economy.

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