IBM-Plant Location International

IBM-Plant Location International (IBM-PLI) is a division of IBM Global Business Services that specializes in corporate location and economic development strategies. With support from industry and functional subject matter experts (SMEs) in key markets around the world, IBM-PLI provides location strategy and site selection services to corporate clients, analyzing international business locations for expanding or consolidating companies to help them select the optimal location. IBM-PLI also advises economic development organizations on improving competitiveness, employing strategic marketing and tools and developing value propositions.
**The Rubik’s Cube**

The world is neither flat nor round. From an economic perspective, the world is more like a Rubik’s Cube, with varying combinations of interdependent conditions and developments leading to different outcomes. Technological advances, new and emerging consumer markets, changing cost structures, and political and social upheavals are some of the dynamics that, individually or in combination, are triggering companies to improve and transform their global operating models and footprint of activities. This Global Location Trends report outlines the latest trends in corporate location selection — where companies are locating and expanding their businesses and creating jobs around the world. A separate Global Location Trends, Facts & Figures report presents individual country and state data and rankings.¹

**Executive summary**

Global foreign investment activity returned to growth in 2014. The United States remains the world’s top destination for investment, with China second and India third. Ireland continues to attract investment projects with the highest average value, while a number of smaller countries in Eastern Europe, the Middle East and Latin America receive high levels of foreign investment relative to their size.

With global supply chains becoming increasingly complex, particularly for manufacturing activities, a country’s unique competitive advantages — particularly combined sectoral and functional capabilities — become more important. In services, companies are continuing to adapt their approach to shared-service centers, and overall investment levels in this activity are continuing to decline, with levels now at a third of the peak reached in 2006.

Moving forward, the emergence of the Internet of Things (IoT) and the changes associated with the Fourth Industrial Revolution, the smarter manufacturing movement also known as Industry 4.0, will radically transform the global manufacturing landscape. These developments will usher in new opportunities for companies to operate complex networks of production, distribution and sales across multiple geographic locations, leveraging the power of data to drive value creation.

This transformation of industries will have significant ramifications for labor markets and corporate skills requirements, and public-sector leaders must improve alignment between supply and demand of skills and prioritize efforts to foster educational programs that better serve the skills requirements of industries.
Global foreign investment increased in 2014

After several years of subdued investment activity and gradual declines in investment since 2010, a moderate recovery was made in 2014 in both the number of projects and jobs created from foreign direct investment (FDI) around the world. Signs that the economic recovery was growing more entrenched in major markets prompted companies to expand activities and create more jobs internationally. Accordingly, both overall FDI measured by projects and associated jobs increased by 6 percent (see Figure 1).

Growth trend data differences
The overall growth trend presented in Figure 1 is in marked contrast to the findings from other sources, such as the annual World Investment Report by the United Nations Conference on Trade and Development (UNCTAD). The reasons for these differences are to be found in UNCTAD’s focus on cross-border capital flows rather than greenfield and expansion investment, which is the focus of our data. Many of these capital flow data relate to investments for which a location decision is hardly relevant, such as mergers and acquisitions or portfolio investments. Moreover, UNCTAD also includes portfolio divestments in its analysis.

Overall, UNCTAD reported a global decline in foreign investment by 8 percent. In particular, North America was reported to decline by more than 50 percent, which was due largely to one huge divestment, a share buyback. These conclusions highlight the perils of using capital flows as an indication of actual investment and job creating activity. We believe that the data presented in this report provide a more realistic view of whether and where companies are investing and creating jobs abroad.

The United States maintains its position as the world’s primary destination for FDI, as investors continue to respond positively to the country’s growing economy and central role in global value chains. Overall investment into the United States reached new record levels, and new
job creation was 2 percent higher than in 2013. China remains in second place, while India is third, with both countries returning to growth after a decrease during the previous year. The United Kingdom confirmed its position as Europe’s prime destination for foreign investment. Vietnam and Indonesia experienced substantial growth, highlighting that investors are increasingly seeing these countries as attractive business locations. Not surprisingly, Russia has dropped out of the global top 20 after experiencing substantial declines in inward investment because of the regional conflict in Ukraine and the trade and investment barriers that followed.

**Figure 2**
*Top-ranking destination countries by estimated jobs, 2014 (2013)*

Job creation around the world through foreign investment **increased 6 percent.**

The **United States ranks first**, and repeats its record job creation performance from 2013.

**Ireland continues to lead** the world in attracting high-value projects.
Measuring job creation relative to population size provides a more accurate reflection of FDI performance and allows a fair comparison among countries large and small. This year, Macedonia, with several labor-intensive manufacturing projects, ranks first (see Figure 3). The per-capita ranking demonstrates the relatively strong performance of smaller Eastern European, Middle Eastern and Central American countries which, relative to the size of their populations and economies, attract a considerable amount of foreign investment. It is also evident that Ireland and Singapore remain the strongest per-capita performers among the more mature (and, therefore, higher-cost) economies.

Figure 3
Top-ranking destination countries by estimated jobs per million inhabitants, 2014 (2013)
However, many countries are primarily interested in attracting higher-value investment projects, which create high-paying and knowledge-intensive jobs. To this end, IBM-Plant Location International (IBM-PLI) has developed an FDI Value Indicator that assesses the added value and knowledge intensity of the jobs created by an investment project.

For the fourth year in a row, Ireland is the top ranking country in the world on this measure. It continues to attract investment projects in industries characterized by high knowledge intensity and economic value added, such as life sciences and information and communication technology (ICT). The global top 10 ranking consists primarily of mature economies with a mix of investments similar to Ireland’s (see Figure 4).

Figure 4
Top-ranking destination countries by average job value of investment projects, 2014 (2013)

<table>
<thead>
<tr>
<th>Country</th>
<th>Average Job Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland</td>
<td>6.00</td>
<td>1 (1)</td>
</tr>
<tr>
<td>Switzerland</td>
<td>5.65</td>
<td>2 (13)</td>
</tr>
<tr>
<td>Sweden</td>
<td>5.57</td>
<td>3 (9)</td>
</tr>
<tr>
<td>Denmark</td>
<td>5.50</td>
<td>4 (2)</td>
</tr>
<tr>
<td>Lithuania</td>
<td>5.46</td>
<td>5 (34)</td>
</tr>
<tr>
<td>Netherlands</td>
<td>5.32</td>
<td>6 (8)</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>5.31</td>
<td>7 (11)</td>
</tr>
<tr>
<td>Finland</td>
<td>5.04</td>
<td>8 (19)</td>
</tr>
<tr>
<td>India</td>
<td>5.04</td>
<td>9 (36)</td>
</tr>
<tr>
<td>Germany</td>
<td>5.01</td>
<td>10 (12)</td>
</tr>
</tbody>
</table>

Note: This analysis excludes countries with fewer than 30 projects because of sample size.
Some of the mature economies that have experienced a decline in overall job numbers from foreign investment have realized increases in the average value of projects in the past decade, particularly in Europe. Indeed, as countries move up the value chain, the projects they attract create fewer jobs and are less sensitive to labor costs, but focus more on the quality of the operating environment. Mature economies are thus more likely to see higher average value projects than emerging countries, which compete more on their cost proposition.
Regional differentiation

While overall global levels of FDI remained relatively stable, marked differences were apparent in performance across geographic regions.

In Europe, all of northwestern European countries demonstrated growth. The United Kingdom remains the prime FDI destination in Europe. The Netherlands achieved a record level of new jobs, and Belgium showed a particularly strong increase after a series of relatively weak years. Southern Europe continues to struggle, with Spain, for example, showing a drop of more than 30 percent. Eastern European countries generally attracted lower levels of foreign investment, with the exception of the Czech Republic, which, after several disappointing years, recorded higher numbers of projects and jobs.

As a result of the ongoing geopolitical uncertainty associated with the troubles in Ukraine, the entire Commonwealth of Independent States (CIS) region experienced dramatic declines in FDI measured by both projects and jobs. As the focal point of the conflict, Ukraine experienced a decline of more than 90 percent in jobs from foreign investment. Similarly, Russia saw FDI levels drop to less than half of those of the previous year. In addition, several other CIS countries that had enjoyed growing interest from foreign investors, such as Kazakhstan, Tajikistan, Uzbekistan and Georgia, experienced declines in 2014. Clearly, the turbulence associated with the conflict in Ukraine has caused many companies to postpone or cancel investment projects.

In Africa, several countries experienced increases in FDI. Notably, the North African countries, which had been emerging magnets for foreign investment prior to the instability and uncertainty associated with the Arab Spring in 2010, saw a return to growth in FDI after three years of decline. The fundamental, underlying strengths of various countries remain attractive to investors, and many companies feel confident about the longer-term prospects. Accordingly, Egypt and Morocco both witnessed growth of more than 50 percent in jobs from...
FDI. However, the recent terrorist attacks in Tunisia illustrate the continued uncertainty surrounding the region as a destination for investment, and it is unclear whether the gains made in 2014 can be maintained in the immediate future.

Positive developments emerged in selected Sub-Saharan countries, with Nigeria and Ethiopia registering substantial gains. However, South Africa, the continent’s prime destination for many years, recorded dismal FDI numbers in 2014, with the number of jobs created falling by more than 30 percent. This drop is largely the result of significant declines in key sectors and growing perceptions that the country is failing to address weaknesses in its infrastructure, social climate and skills development.

In Asia, China remains the top destination for FDI, followed by India. In China, the sharp increase in market-driven investment in previous years pivoted in 2014, with investment in sectors such as tourism, food and automotive decreasing. In contrast, the electronics industry grew considerably, due almost entirely to the vast expansion of Foxconn Electronics in Shanxi. As China transitions to a new growth model, companies are growing more confident in the country’s prospects, while others remain wary of severe imbalances and bubbles in the Chinese economy. These factors, coupled with more challenging operating conditions and increasing cost levels, notably labor costs, have caused many investors to reassess their investment strategies for the country.

In India, overall investment levels increased. The sectoral composition of foreign investment is becoming more balanced, with significant growth in electronics, financial and business services, metals and life sciences, with relatively less emphasis on ICT and transport equipment.
The most remarkable results in Asia in 2014 were in Vietnam and Indonesia, with both countries enjoying substantial increases in the number of jobs from foreign investors. This is further evidence that these countries are positioning themselves as strong alternative locations in Asia, attracting substantial export-focused investment projects that would previously have gone to the more traditional hotspots in China. Thailand experienced a decline in inward investment in 2014, after posting record numbers in 2013, but confirmed its increasing importance as source of export-oriented manufacturing. Together, Thailand, Vietnam and Indonesia attracted a slightly higher number of new jobs from foreign investment than China.

In **North America**, the United States experienced another record level of foreign investment measured by number of jobs, with a 2-percent increase after two years of strong growth in 2012 and 2013. The country continues to be the top destination for foreign investment in the world, with many US locations offering a strong value proposition based on a combination of three fundamental drivers of foreign investment: market, talent and cost efficiency. Individual states with particular strong results were Texas, North Carolina, Tennessee, Ohio, Virginia and South Carolina.²

Investment into Canada rose moderately, approximately 3 percent, roughly maintaining investment levels of the previous three years.
In Latin America, Mexico continues to be the prime destination country, despite a 20 percent decline in foreign investment compared to 2013. Brazil experienced a moderate decline of 6 percent in 2014, continuing the downward trend since 2012. However, when incorporating domestic investment by Brazilian companies, the country experienced substantial gains in overall investment levels, suggesting that FDI is taking on a different role in the overall mix of economic activity within the country and is, in part, being replaced by the rise of domestic companies and investment. Colombia posted strong gains of more than 40 percent in number of jobs created from FDI, highlighting the country’s continued emergence as a key contender for foreign investment. Similarly, Costa Rica regained its position as a key destination for FDI, with an increase of almost 70 percent compared to the exceptionally low levels recorded in 2013. Argentina also showed some recovery from a very weak 2013, doubling its inward investment numbers.
Industry sector trends

In line with the 6 percent overall growth of FDI job creation globally, most key sectors showed increases in 2014 (see Figure 5). Particularly strong growth was recorded for textiles and clothing (over 100 percent), pharma (over 40 percent) and electronics (26 percent). The increase in textiles and clothing is primarily the result of several very large investment projects in the low-cost African countries of Nigeria and Ethiopia. However, a few sectors saw declines, with the strongest decrease in food, beverages and tobacco, which fell by approximately 15 percent. Transport equipment continues to be the top sector for job creation in FDI, with growth of 9 percent in 2014, while the tourism sector maintains its second position.

Figure 5
Top-ranking sectors by estimated jobs, 2014 (2012/2013)
Across sectors, production activities are responsible for creating the most jobs, particularly in the transport equipment, electronics and chemicals sectors. The growth in production investment was particularly prominent in some emerging economies, with countries such as Vietnam, Indonesia, China, the Philippines, Poland and the Czech Republic all posting strong gains. In contrast, other recent emerging market hotspots, such as Mexico and Thailand, saw declines in production investment.

Similarly, mature economies had varying production investment results. Countries such as the United States and Germany experienced declines, while countries such as France, Singapore, Ireland, the Netherlands and Belgium all saw increases.

These mixed results across emerging and mature economies are linked to wider transformations of global supply chains that are becoming increasingly complex, particularly for manufacturing activities. In this environment, the unique competitive advantages of countries become more important, with companies seeking to identify the locations that offer the optimal balance between market access, talent, resources and cost efficiencies. As a result, the combination of functional and sectoral capabilities will become more important, and countries will have to position themselves with more nuanced value propositions to investors.

Furthermore, companies are continuing to adapt their approach to shared services centers, and overall investment levels in this activity are continuing the decline seen in previous years. Globally, jobs created from foreign investment in shared services centers is now at a third of the levels recorded at the peak in 2006, and the great rush to set up large centers is winding down. While shared services center investment is likely to continue, the overall levels are expected to be more moderate and focused on optimizing activities for particular functions or geographies. We may also see a shift toward smaller centers of competence for higher-value, more knowledge-intensive functions.
Urban competitiveness

To a large extent, urban agglomerations — not countries — shape the value propositions of locations. With more people, and thus skills, concentrating in cities, urban areas are increasingly becoming the driving forces of national economies and the preferred destinations for companies to locate their facilities.

When looking at the cities that attract most investment globally, London continues to top the global ranking in number of projects (see Figure 6). However, the gap with other cities has narrowed, with Paris a strong second, after a substantial increase in inward investment. In Europe, Amsterdam and Barcelona remain hot spots for a variety of business functions. In Asia, Singapore and Shanghai continue to lead, and in North America Chicago again ranks first.

Dubai is the magnet for investment in the Middle East, largely driven by a boom in hotel development in recent years. The Colombian capital, Bogota, is also in the top 20, ahead of other major Latin American cities.
Figure 6
Top-ranking cities by projects, 2014 (2013)

Note: Projects of less than 10 jobs were not included.
Key considerations for future action

Global value chains are continuing the transformation of recent years, leading to more complex investment patterns. Companies are increasingly looking to balance different objectives relating to market, talent, resources and costs. This means that they are looking for locations with particular value propositions and competitive advantages in a combination of sectors and functions rather than merely having a proposition in a specific industry sector. Moving forward, niche advantages will differentiate locations as industries transform further.

**Increasing ICT investment across industries**

ICT investment is evolving from a horizontal support function to vertical industry applications and expertise that drive business results. This evolution results in a greater role for technology in non-ICT sectors, while the traditional ICT sector is going through a transition. Locations with competitive advantage in non-ICT sectors coupled with strong IT capabilities are attractive candidates for investment in more industry specific ICT activities. In contrast, locations with purely horizontal ICT support capability are less strongly positioned for future ICT investment.

**Internet of Things: data as the new source of value creation and economic growth**

More generally, we are witnessing a considerable transformation of IoT-engaged industries. Known as the Fourth Industrial Revolution, the transformation is expected to usher in a new era of economic growth fueled by the power of data, with widespread implications for how companies create value.

Through interconnected devices able to communicate directly with each other and wider systems, the lines between technology and process will become increasingly blurred, with technology evolving from enabler to driver of the production process. This will, in turn, enable networked optimization of manufacturing throughout the value chain. Corporate leaders are becoming more aware of the potential of these new technologies for improving efficiencies.
For example, a recent study by IBM found that 80 percent of operations executives surveyed are expecting further automation in the immediate future. Coupled with 3D printing and intelligent robotics, the global manufacturing landscape will change radically as a result of the Fourth Industrial Revolution.

Skills and agility for competitive advantage

The emergence of the Fourth Industrial Revolution will fundamentally transform labor markets and the skills requirements of companies across a range of industries. Skills and competences will emerge as the foundation of competitive advantage between locations and as a requirement for companies seeking to create value. To accommodate these changes, public-sector leaders and companies must work together to take a more forward-looking perspective on, and improve alignment between, skills supply and demand and prioritize efforts to align educational programs with new and emerging skill requirements of industries. As a recent IBM publication notes, public-sector organizations will need to work with wider ecosystems of stakeholders to address the challenges of a digital, data-driven economy.

Implications for corporate executives

Corporate decision makers must weigh considerable implications when contemplating location strategies, especially given new technologies that enable companies to operate complex networks of production, distribution and sales across multiple geographic locations. Companies should therefore seek to understand how they may need to transform and optimize their operating models to respond to the opportunities of the IoT and the Fourth Industrial Revolution.
The nature of functions and operations may change, with new skills requirements and a shift toward greater automation. This will, in turn, have implications for the location footprints of some companies. Activities that were moved offshore a decade ago may now be better performed closer to end customers, while other activities will continue to benefit from low-cost locations around the world.

**Implications for policymakers**

Policymakers and public-sector leaders seeking to facilitate economic growth and job creation must prepare for a challenging economic environment with the shift toward more complex global value chains. Foreign investment will flow to locations that add value to companies going through persistent disruption and radical transformation. We may see more volatile investment levels within and among countries, as the underlying factors of competitive advantage change and value creation shifts within sectors. Agile economies of the future will be characterized by their ability to adapt to these constant changes and respond to shifts in global value chains.
IBM’s Global Location Trends database

For many years, the only available data for analyzing foreign investment trends around the world were capital investment data as published by the United Nations. These data measure capital flows through various forms of FDI, including merger and acquisition (M&A) and portfolio (dis)investment. They are often used to measure the success of countries, states or cities in attracting foreign investment. However, this can lead to misleading conclusions on the capacity of locations to attract foreign companies. M&As and portfolio investments are driven mostly by an interest in a target company and not in a particular location.

To measure the success of individual countries in attracting foreign investment it is better to focus on investment projects for which a clear location decision is made. This is the case for most greenfield investment projects and new expansions. In 2002, IBM-PLI initiated the Global Location Trends database, which tracks announced decisions of companies to locate new operations in regions outside of their headquarter region and country.

IBM-PLI’s analysis of volumes of foreign investment focuses on job creation, which we believe is the best indicator of the local economic impact of the investment. Job positions created through the investment are typically filled by employees in the local labor market and consequently generate income and welfare within the region. The investment capital, however, often ends up in other regions or countries, as a result of the acquisition of plant or machinery, contracting of construction and engineering work outside the investment location.

Data from the Global Location Trends database are used to inform companies and policy makers on investment dynamics in regions of interest, and to produce Global Location Trends reports: an executive summary report, individual country or state reports (on request), and a detailed Facts & Figures report, which includes a wider variety of international rankings based on investment activity, as well as many country and state/province profiles. More information on these reports can be found at www.ibm.com/gbs/pli
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Additional support for the 2015 Global Location Trends report was provided by Andres Arbona, Axel Aupaix, Ilulia Banciu, Linh San Benelli, Xenia Cernisenco, Lai Yu Fan, Amaren Hansraj, Alfonso Hermoso, Carina Keuchel, Klinta Mantina, Diana Cubillos Martinez, Andrea Morocutti, Charles Nokerman, Iva Petrova, Sebastjan Plemenitas, Ming Shi, Joke Van Steenbergen, Ruixi Yang and Qi Zhang.
Notes and Sources
2. See separate “Global Location Trends, Facts & Figures” report for detailed rankings and state profiles.
For more information
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