

# Global Location Trends

2016 Annual Report

### **Executive Report**

Operations and Supply Chain

### **IBM-Plant Location International**

IBM-Plant Location International (PLI) is a division of IBM Global Business Services that specializes in corporate location and economic development strategies worldwide. With a global center of excellence in Brussels, Belgium, 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 their areas' competitiveness, creating marketing strategies and tools, and developing value propositions. IBM-PLI maintains a proprietary Global Location Trends database, which tracks cross-border greenfield and expansion investments around the world. The data are also used to produce an annual Global Location Trends report, as well as a detailed Global Location Trends, Facts & Figures report.

# "Growth and comfort do not co-exist"

The world economy continues its transformation as companies' global operating footprints evolve based on new opportunities, challenges and technology. With growing political uncertainty, as well as new risks and disruption ushered in by evolving technologies, companies have to navigate an increasingly complex international operating environment. This tenth edition of IBM's Global Location Trends report outlines the latest trends in corporate location selection and how today's global dynamics influence where companies locate, expand their businesses and create jobs around the world.

### **Executive summary**

Companies continue to internationalize and seek opportunities around the world, despite growing uncertainty about several key economies and the future political commitment to globalization. As part of this, companies have altered investment patterns, and many countries are playing different roles in global value chains.

In terms of overall growth in foreign investment activity, the major emerging economies were on markedly different journeys in 2015. India experienced a considerable increase in inward investment linked to a shift toward more manufacturing and less emphasis on information and communications technology (ICT) and services. Similarly, Mexico continued on its recent growth path, benefiting from a combination of attractive characteristics, notably access to the largest single global consumer market, attractive and stable operating costs, and a growing domestic market.

In contrast, China experienced a significant decline in inward investment. Concerns about the country's future economic prospects coupled with deteriorating operating conditions made companies more reluctant to invest. Brazil and Russia again experienced the volatile investment patterns of previous years. Because of these countries' strong dependence on market-driven investment, investors react strongly to prospective changes in their domestic economies.



Job creation through foreign investment increased 3%, and the United States maintained its #1 ranking.



India showed strong increase and diversification, unseating China as the #2 FDI destination.



Ireland continued to **lead the world** in attracting "high-value" projects.



Mexico achieved almost 30% growth, challenging the traditional top 3.



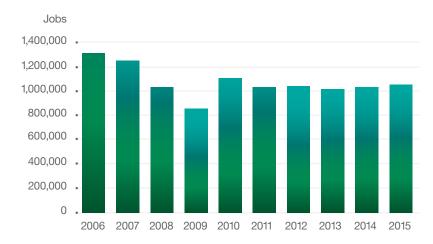
Various (small) emerging countries have become consistent strong performers in creating **high numbers** of jobs, as well as **high quality** of jobs. Meanwhile, several smaller emerging markets are positioning themselves as prime investment locations, particularly for investors in search of alternatives to previous hot spots. Within Europe, the Western Balkan countries had impressive levels of inward investment in 2015, showing how emerging economies can transition to higher-value investment. In Asia-Pacific, Myanmar is positioning itself as the "new kid on the block," while Nicaragua and El Salvador are new destinations for investment in Central America.

Looking forward, value chains disrupted by evolving technologies, such as digitalization, automation and 3D printing, will significantly impact how companies invest and how they define a competitively advantaged location.

## 2015: Another year of FDI growth

Globally, 2015 marked another year of growth in foreign direct investment (FDI). The number of jobs created from foreign investment grew 3 percent year-to-year (see Figure 1). Building on 2013 and 2014 momentum, this growth points to a continued interest in strategic investments that enhance access to markets, resources, talent and improved operating costs.

Figure 1
New foreign investment activity in 2006-2015: Job creation



### How job creation reflects investment impact

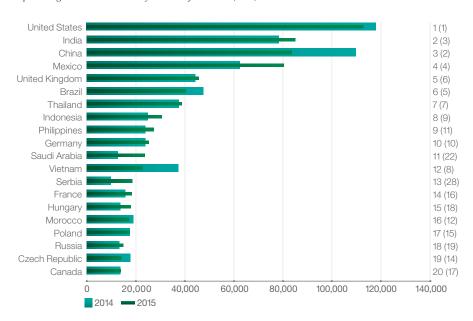
Many organizations monitor the impact of corporate investment in their locations by means of capital investment data. So why have we decided to focus our analysis on job creation?

Often, capital investment data for projects are not announced, meaning any analysis is based on incomplete data. Even more important, capital investment data are fundamentally misleading because not all of the announced capital investment is destined for the location in which the company invests. Often, up to 70 or 80 percent of the investment will be spent on equipment and supplies sourced elsewhere. In contrast, job creation measures the immediate economic impact since these jobs are filled by people living in the location. It also provides a reliable indication of the investment project's scale. Therefore, we believe the direct jobs created from a project better indicate FDI success and economic impact.

Despite an uncertain global macroeconomic environment and signs of deterioration in several emerging economies, overall investment conditions have remained favorable. With the cost of finance remaining very low by historic standards and the emergence of new technologies that enable operational transformation, there are many opportunities for companies to expand or adapt their operational footprint. Furthermore, improvements in operating conditions in many emerging countries give rise to additional reasons for new investments.

Key beneficiaries of the increased global investment include both mature and emerging economies. The *United States* continues to be the number-one destination country for foreign investment, notwithstanding a decrease of 5 percent in jobs created.

Figure 2
Top-ranking destination countries by estimated jobs – 2015 (2014)



#### Asia

While the level of FDI remained relatively stable in *Asia*, there were significant differences between countries. India has overtaken China as the top Asian destination country. The significant decline in investment to China is linked to the country's changing role in the global economy. In addition to concerns about its future economic prospects, there has been a shift in focus away from China's role as a global export platform and toward its domestic market potential.

Several other Asian countries experienced FDI growth in 2015. Thailand saw significant growth in tourism investment, while Indonesia benefitted from large projects in textiles. The Philippines, traditionally a key location for services investment, received substantial manufacturing investment in the electronics sector, suggesting a diversification of FDI.

Myanmar is a relatively new business location in the region. Since opening for foreign investment a few years ago, it has shown substantial annual growth, with international companies creating a considerable number of jobs.

In second ahead of China, *India* was one of the best FDI performers, after seeing substantial growth in inward investment measured by both the number of projects and jobs created. Inward investment in the transport equipment sector doubled, making it the country's most important sector for foreign investment. In addition, FDI in the electronics and chemicals sectors grew substantially. These findings suggest the country is successfully redefining its role in global value chains, evolving beyond its perceived position as the ICT hub. Much of this diversification into manufacturing is driven by growing market opportunities in India. To build on this progress, India must address operational weaknesses, such as infrastructure and skills. As noted in IBM's forthcoming report on India, the country's future economic success is critically dependent on improving both the quantity and quality of its labor force skills.<sup>2</sup>

Mexico was another FDI top performer in 2015, ranking fourth after almost 30 percent growth. The country benefits from its access to the large U.S. consumer market, competitive and stable operating costs, and a growing domestic market – all particularly appealing to companies looking to expand or consolidate operations. Becoming a consistent high performer, Mexico is now a global top-three contender, with its gap to China closing rapidly. Mexico continued to attract significant investment in the transport equipment sector, while also seeing investment inflow in chemicals and tourism. Production activities, which still dominate inward investment, accounted for almost 90 percent of the jobs created by foreign investment in 2015. In recent years, Mexico has positioned itself for services activities, albeit with only limited success. It is worth noting that investment in Mexico was more geographically dispersed this year, including a variety of cities and regions outside of Mexico City.

Investment into *China*, which has shifted in recent years toward serving a growing domestic market, declined 21 percent based on number of jobs created. This reluctance to invest could be based on signs of weakness in China's domestic economy, as well as operating challenges, notably access to affordable skills.

*Brazil* maintains sixth place despite a 14 percent fall in job creation from inward investment. The disappointing year is linked to the country's wider economic difficulties in past years. The investment activity of primarily market-seeking foreign companies was largely deterred after the country entered a recession in 2015.

### Trend to watch: Reconfiguring European operating footprints

Within *Europe*, overall FDI increased in 2015, with significant gains by mature economies such as Ireland, Spain, Belgium, Denmark and Germany, as well as countries in Central and Eastern Europe, such as Hungary and Serbia.

The United Kingdom remains the continent's top destination country, and Germany is second. Foreign investment in Central and Eastern Europe has changed considerably. Ten years ago, foreign investors were primarily looking at Poland, Czech Republic and Hungary. Recently, several smaller Eastern European countries have emerged as key locations. With some Western Balkan countries becoming new principal locations for manufacturing and the Baltic states receiving substantial services and ICT investment, investment patterns to Central and Eastern Europe are expanding beyond Central European countries.

Looking forward, questions about public safety, the outcome of the Brexit referendum and the European Union's future will likely impact investments. The uncertainties associated with these developments will be more of a deterrent for investment than the outcome of any particular election or referendum.

#### Latin America

Brazil experienced a continued decline in inward investment that started after a peak in 2012. An economic recession in 2015, increasing political instability and uncertainty about the country's future economic prospects have made companies reluctant to increase investment. In Colombia, 2015 FDI inflows were almost half of 2014's record results. This is largely due to significant investment in food and beverages in 2014 that was not repeated in 2015. In contrast, Argentina and Nicaragua saw substantial growth in inward investment in 2015, with both benefitting from considerable investment in the transport equipment sector.

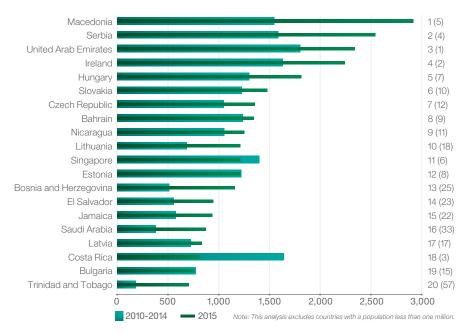
The Caribbean performed well overall. After experiencing substantial growth, both Jamaica and Trinidad and Tobago are featured in the global top 20 for FDI measured by jobs created relative to population size. Nicaragua and El Salvador are also among this top 20, highlighting their emergence as attractive locations for inward investment.

### Small can be beautiful

Measured relative to population size, Macedonia again tops the list, followed by Serbia. Both these *Balkan countries* have seen substantial inward investment in manufacturing activities. Positioning themselves strongly in sectors such as transport and electrical equipment, they offer compelling cost advantages compared to Central and Eastern European competitors. With urban areas such as Belgrade offering cost-attractive opportunities for services activities, the region may see more investment.

The Western Balkans' strong performance is further highlighted by the top-20 ranking of Bosnia and Herzegovina, whose inward investment number doubled in 2015. The country experienced substantial new manufacturing investment in industrial machinery and equipment, as well as the food and beverages sector. In recent years, other small countries in Europe, Asia-Pacific and Latin America have positioned themselves as new cost-efficient locations to serve wider regional markets — further evidence of the search for new hot spots.

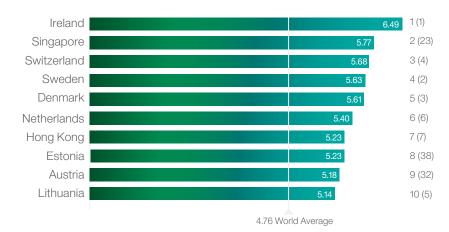
Figure 3
Top-ranking destination countries by estimated jobs per million inhabitants – 2015 (2010-2014)



### **Quality matters**

In many countries, it is not only the number of jobs from FDI that is important, but also the type of jobs. More specifically, many countries are primarily interested in attracting higher-value investment projects that create high-paying and/or knowledge-intensive jobs. To this end, IBM-PLI has developed an FDI Value Indicator that assigns a value to each investment project, depending on sector and type of business activity. This value indicator does not measure the absolute number of jobs, but assesses the added value and knowledge intensity of the jobs created. As such, this Value Indicator allows us to evaluate the "job value" of the investment projects attracted.<sup>3</sup>

Figure 4
Top-ranking destination countries by average job value of investment projects—2015 (2014)



Note: Countries with less than thirty projects were not assessed because of sample size.

For the fifth year in a row, *Ireland* tops the list, highlighting its continued ability to attract high-value investment projects in key sectors, such as ICT, life sciences, and financial and business services. Moreover, the country is particularly successful in attracting knowledge-intensive and high-value activities, such as production, headquarters and R&D. In fact, these three activities account for more than half of 2015 inward investment projects in Ireland.

Singapore jumps to second in the global ranking, with a lower volume of investment compensated by a higher average value of investment projects. Scandinavian countries Sweden and Denmark also attracted high-value investment. While mature economies continue to dominate the global top-ten, both Estonia and Lithuania are on the list — further evidence of the Baltic countries' very strong 2015 FDI performance. Accordingly, the Baltic countries have experienced both an increase in the overall volume of inward investment and a shift toward higher-value investment projects. In particular, ICT investment has grown significantly. For example, Estonia is positioning itself as the next European ICT hub, while Lithuania is a key destination for investment in financial services. While a substantial amount of investments are from Nordic countries, investments from other European countries are increasing.

### **North America**

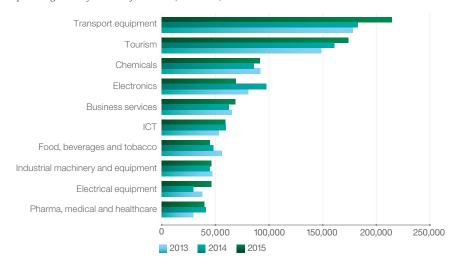
The United States managed to maintain its high level of inward investment of the last couple of years, despite a small decrease in new job creation. The continued high level of FDI signals faith in the U.S. economy's performance and market opportunities. Many U.S. southern states, such as Tennessee, Texas, South Carolina, Georgia and Alabama, experienced growth in FDI, dominated by manufacturing activities. These southern states offer competitive operating costs and good logistics infrastructure, and they have benefitted substantially from companies seeking operations closer to the North American market.

Mexico, which continues to see growing levels of inward investment, is closing the gap on other historical leaders such as China. Though companies primarily have invested in Mexico due to its proximity to the U.S. market, the country is increasingly viewed as an attractive export platform for a wider global market. While the transport equipment sector accounts for more than half of the inward investment, investment in chemicals, electrical equipment, and food and beverages also grew.

## Going places

The relatively stable global FDI is largely reflected in the main sectors, with most showing moderate growth. Transport equipment continues to be the number-one sector for foreign investment globally, followed by tourism. These sectors' continued — and even increased — dominance points to the importance of physical mobility in an integrated global economy. While globalization processes can be enabled by digital technologies, growing international integration translates into greater need for movement and travel. This, in turn, gives rise to increasing investment in transport equipment, hotels and travel.

Figure 5
Top-ranking sectors by estimated jobs – 2015 (2013-2014)



The electronics and textiles sectors declined in 2015, reversing the significant increases of 2014. These sectors tend to see greater volatility in overall job creation numbers, as they are characterized by higher labor intensity than most other sectors. Consequently, their performance can be highly influenced by one or two mega-projects that create larger numbers of jobs. For example, the 2014 increase in the electronics sector was almost entirely due to a few very large investments (by Foxconn), which were not repeated in 2015.

Functionally, investment in production activities grew moderately in 2015 compared to 2014, with almost 600,000 manufacturing jobs created from foreign investment. Investment growth in tourism brought a significant increase in hotels, which continue to be the second largest job-creating function from foreign investment. However, investment in shared services centers continued its global decline measured by number of jobs, evidence that companies are transforming services operations with consequent reductions in overall job creation. Investment in stand-alone R&D activities also decreased in 2015, as did investment in transport and distribution.

### Middle East and Africa

In 2015, several countries in the *Middle East* experienced growth in inward investment. The United Arab Emirates (UAE) saw strong growth, notably in hotel development. Similarly, both Bahrain and Saudi Arabia experienced significant FDI growth compared to 2014, again concentrated in the tourism sector with investment in hotels.

Although *Africa* also saw increasing levels of FDI, this performance was by no means uniform across the continent. Morocco continued its strong performance from 2014 and remains the top destination country in Africa. Tanzania is second this year due to a very large chemicals investment project, while Ethiopia is third with several significant investments in the minerals, agriculture, textiles, and food and beverage sectors. South Africa, traditionally Africa's strongest performer, continued to see low levels of FDI in 2015, albeit moderately higher than in 2014. With growing concerns about public safety, Tunisia experienced its worst FDI performance on record, with new inward investment reduced to negligible amounts.

### A tale of many cities

To a large extent, a location's value proposition is shaped by a wider urban metropolitan area rather than a country. As more people, and thus skills, concentrate in cities, urban areas are becoming preferred destinations for company facilities. Indeed, metropolitan areas can constitute their own unique value proposition, sometimes disconnected from the wider national location offer. At the same time, however, international competition between cities is also intensifying. Increasingly, companies are looking beyond traditional primary business centers to explore other urban options.

Hence, while *London* continues to top the ranking for foreign investment in urban areas, it experienced a significant decline measured by number of projects, notably in ICT and financial services. The city faces growing international competition from other European metropolitan areas, as well as other parts of the United Kingdom. The result is a more geographically balanced distribution of inward investment across U.K. regions. In addition, uncertainty about the United Kingdom's future position in Europe potentially deterred some types of investment that London typically attracts (e.g., European headquarters and sales operations).

Paris has consolidated its position as the world's second top destination after benefitting from a stronger concentration of market-driven investment. The Dutch metropolitan area of Amsterdam-Rotterdam moved into third, after positioning itself for business services and ICT investment. In fact, many foreign companies now view it as a preferred entry-point for the European market.

Figure 6
Top-ranking metropolitan areas by projects – 2015 (2014)



It may be surprising that several top-ranking countries for inward investment — such as the United States, China and India — are poorly represented in the ranking of metropolitan areas. For example, Chicago, which is the top-ranking U.S. metropolitan area and ranked eighth globally, is the only North American agglomeration in the global top 20. Similarly, there are no Indian metropolitan areas in the global top 20, while China is only represented by Shanghai and its neighbor metropolitan area Wuxi-Suzhou. However, these three countries have multiple urban areas with attractive investment potential, resulting in significant internal competition and a geographically dispersed distribution of investment. In contrast, investment in many European countries is heavily concentrated in one urban area, often the capital city. Consequently, these European business centers receive a greater number of investment projects than most U.S., Chinese and Indian cities.

### **Future perspectives**

Upcoming investment activity is likely to be affected by the future health of various economies, such as China, Brazil and the European Union. Furthermore, growing doubts expressed by some politicians and leaders about current internationalization, the merits of future trade liberalization and economic globalization could negatively affect overall investment activity. Uncertainty itself could hinder future investment or suspend or delay existing projects. Consequently, the immediate future of global FDI flows largely depends on whether the next 12 months clarify or further muddy the globalization outlook, as well as the direction of key economies in both mature and emerging markets.

### Review your footprint

To prepare for uncertainty, as well as the opportunities associated with new technologies and growing markets, organization leaders should critically assess current operations against potential future needs. Specifically, focus on meeting changing customer needs, mitigating business continuity risks, and enabling access to the skills and infrastructure required in the digital age.

### Prepare for the digital economy and automation

Companies should determine how best to leverage emerging digital technologies and automation to optimize operations and evaluate potential effects on their operating footprints. For example, global manufacturing footprints in some sectors could be affected by the Internet of Things (IOT), automation and 3D printing. By enabling companies to locate manufacturing facilities closer to end markets, these technologies could decrease the need for large-scale global facilities driven by economies of scale and low labor costs.

# Trend to watch: Technology driving future investment

New and emerging technologies — such as advanced robotics, cognitive computing and Internet of Things (IoT) — are disrupting industry value chains. As this happens, companies are adapting operations and business models to both leverage opportunities and respond to challenges ushered in by these technological developments. As a result, technology is driving a lot more investment decisions — not just in the ICT sector itself, but also in sectors where technology solutions are altering opportunities to improve products and services for customers. For example, companies in the automotive industry are investing heavily in the development of connected and automated vehicles, while the financial services sector is being transformed by the rise of financial technology (fintech) companies. These trends all testify to digital technology's growing impact across industries. This continued impact will drive investment activity and make technology-related criteria more prominent in investment decisions.

#### Develop alternatives to low labor costs

Increased automation is significant for countries that have relied on low labor costs as a key competitive advantage. The decreased emphasis on labor costs means these countries — many of them emerging — must redefine their competitive position. In contrast, mature economies that have struggled with high labor costs could become attractive locations for transformed manufacturing activities due to advanced digital infrastructures, appropriate skills and easy access to key markets. While the impact might not be visible immediately in FDI flows, we expect significant manufacturing operations changes in the medium to longer term.

### Assure inclusive growth

This year's report highlights the importance of continually evaluating a location's value proposition for current and future investment projects. In particular, ascertain how emerging technological trends could impact both existing industries and opportunities in new industries. Evaluate opportunities that advancing technology presents, as well as potential threats, such as changing location requirements (new skills requirements or requirements for improved digital infrastructures, for example) and reduced employment prospects due to automation.

To assuage concerns about new technologies replacing workers, government and public sector leaders must find ways to assure that the fourth industrial revolution translates into job opportunities and higher incomes for all. As part of this, public sector leaders should investigate ways to better align the skills taught by education and training providers with future needs. But they can't do this alone. Government and public sector leaders need to develop relationships with ecosystem partners in both industry and academia to improve alignment in the development and execution of regional economic development strategies.

### About the authors

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### IBM's Global Location Trends database

For many years, the only available data for analyzing *foreign investment* trends around the world were the capital investment data as published by the United Nations. These data measure the capital flows through various forms of FDI, including M&A and portfolio (dis)investment. Often these FDI flows are used to measure the success of geographical entities (countries, states and even cities) in attracting foreign investment. However, this can result in misleading conclusions on the capacity of the locations to attract foreign companies. M&As and portfolio investments are driven mostly by an interest from the investor in a target company with the objective to gain market share, acquire technology and so on. The business location of the target company is typically not the main driver for the investment, and a location decision is rarely part of M&A investment decisions.

A better approach to measure the success of individual countries in attracting foreign investment is, therefore, to focus on those *investment projects* for which a clear decision on the investment location has been made. This is the case for the vast majority of so-called *greenfield investment projects*, as well as for new expansions of existing operations owned by foreign enterprises (as such expansions often can be realized in different locations owned by the company). For this reason, IBM-PLI started to develop the *Global Location Trends* database in 2002. Global Location Trends tracks announced decisions of companies to locate new operations in regions outside their headquarters region and country on an ongoing basis.

IBM-PLI's analysis of volumes of foreign investment focuses on *job creation*. From an economic development perspective, job creation 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 (or staff who relocate to that market) and consequently generate income and welfare in the region around the investment location.

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. Therefore, the investment capital regularly is an overestimate of the economic impact of foreign investment in a specific location, particularly in the case of smaller regions or individual cities.

Data from the Global Location Trends database are used to produce annual 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. For more information on these reports, visit: ibm.com/gbs/pli

#### Notes and sources

- 1 Nusca, Andrew. "IBM's Rometty: 'Growth and comfort don't coexist." *Fortune*. October 7, 2014. http://fortune.com/2014/10/07/ibms-rometty-growth-and-comfort-dont-coexist/
- 2 2015 IBM Institute for Business Value Future of Higher Education in India Study.
- 3 See the Global Location Trends, Facts & Figures report 2016 for a description of the methodology used for IBM-PLI's FDI Value Indicator and for more country and city rankings based on this indicator. For more information on this report, visit: ibm.com/gbs/pli
- 4 For this year's analysis on FDI projects in urban areas, IBM-PLI has created a new, more comparative definition for metropolitan areas around the world, based on labor markets. Therefore, this year's ranking of metropolitan areas should not be compared with rankings in previous years' executive reports. See the Global Location Trends, Facts & Figures report 2016 for more details on the new definition and further rankings.

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