

BLUEGRASS ECONOMIC
ADVANCEMENT MOVEMENT
GLOBAL TRADE AND INVESTMENT PLAN

CONTENTS

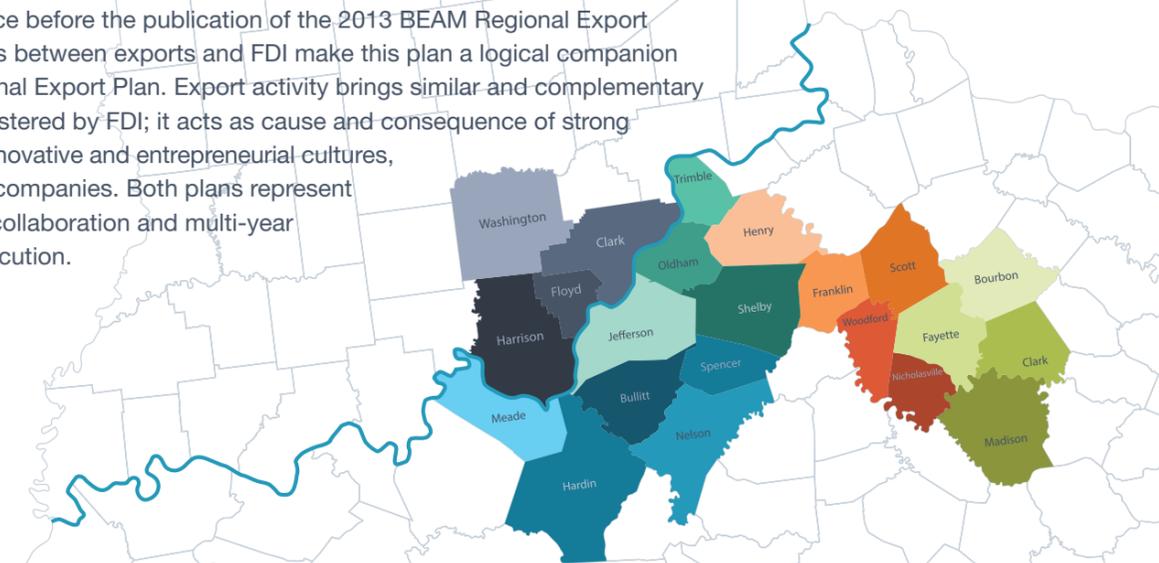
Page 3	Introduction
Page 4	Now is the Time to Focus on FDI
Page 8	The Changing World of FDI: Rise of the Middle Market
Page 11	The Intersection Between Exports and FDI
Page 14	BEAM Regional Export Initiative
Page 16	Situating the Region
Page 18	Progress on Workforce Needs
Page 20	Key Findings
Page 36	Strategies and Tactics
Page 44	Measuring and Tracking
Page 45	Policy Recommendations
Page 46	Conclusion
Page 46	About Global Cities
Page 47	Acknowledgements

INTRODUCTION

The aspirations of 21st century cities depend on metropolitan-level commitments to bold international engagement, such as those led by Mayor Greg Fischer of Louisville and Mayor Jim Gray of Lexington. As these mayors and other leaders eye ambitious goals for prosperity in the Bluegrass Economic Advancement Movement (BEAM) region, both research and experience show that foreign investment is a key element of success. Foreign-owned firms make outsized contributions to innovation, research, exports production, and the creation of high-wage jobs—all fundamental components of vibrant economic centers.

The BEAM Global Trade and Investment Plan examines the role and direction of foreign direct investment (FDI) in the 22-county region, anchored by Louisville and Lexington, that includes much of Central Kentucky and four Southern Indiana counties. The plan proposes strategies to marshal the power of FDI in service to the region's broader goals for advanced industry activity, diverse employment opportunity, and continuous adaptation in a competitive world. At its core are commitments to renew assistance to middle market companies, foster new potency among existing industry strengths, cultivate more activity among both historically strong sources of investment and emerging ones, and prepare the region's workforce to lead economic growth in the 21st century.

This plan also recommits to the extensive work on export cultivation, which has been underway since before the publication of the 2013 BEAM Regional Export Plan. The deep links between exports and FDI make this plan a logical companion to the BEAM Regional Export Plan. Export activity brings similar and complementary benefits to those fostered by FDI; it acts as cause and consequence of strong industry clusters, innovative and entrepreneurial cultures, and globally fluent companies. Both plans represent multi-organization collaboration and multi-year commitment to execution.



Now is the Time to Focus on FDI

Advanced economies have been put on notice about the power of emerging economies. The global landscape for foreign investment is increasingly competitive, as emerging economies gain ground in investment-attracting attributes like infrastructure, workforce capacity, transparency in governance, and consumer base. The U.S.'s perennial strengths of stable markets, deep pockets, and unequaled consumer power are no longer enough to assure that the largest share of investment dollars will always find its way to the U.S. market.

The explosive growth of investment in emerging global markets in recent years has left the U.S. with an ever-smaller slice of an ever-growing investment pie. In 1999, the U.S. received 26 percent of all FDI; by 2012, that figure had shrunk to just 12 percent.¹ From 2012 to 2014, a larger share of FDI inflows went to developing countries than to developed countries.

Since then, slowdowns in China, Brazil, and other emerging economies have been a boon for the U.S., cooling investor activity in these markets and re-orienting some investment to traditional strongholds. In fact, foreign investment in advanced economies, led by the U.S. and the European Union, reached \$936 billion in 2015, accounting for 55 percent of all FDI inflows and ranking as the second highest investment amount ever in these markets.² Investment in the U.S. alone reached \$384 billion in 2015, boosting it back to the world's number one destination for global FDI,³ after a fall to third place in 2014. However, investment in developing countries also reached an all-time high in 2015, hitting \$741 billion and representing a five percent jump over 2014.⁴

1 Saha Devashree, Kenan Fikri, and Nick Marchio. "FDI in U.S. Metro Areas: The Geography of Jobs in Foreign-Owned Establishments." The Brookings Institution, June 2014. Web. 20 July 2016. www.brookings.edu/research/fdi-in-u-s-metro-areas-the-geography-of-jobs-in-foreign-owned-establishments

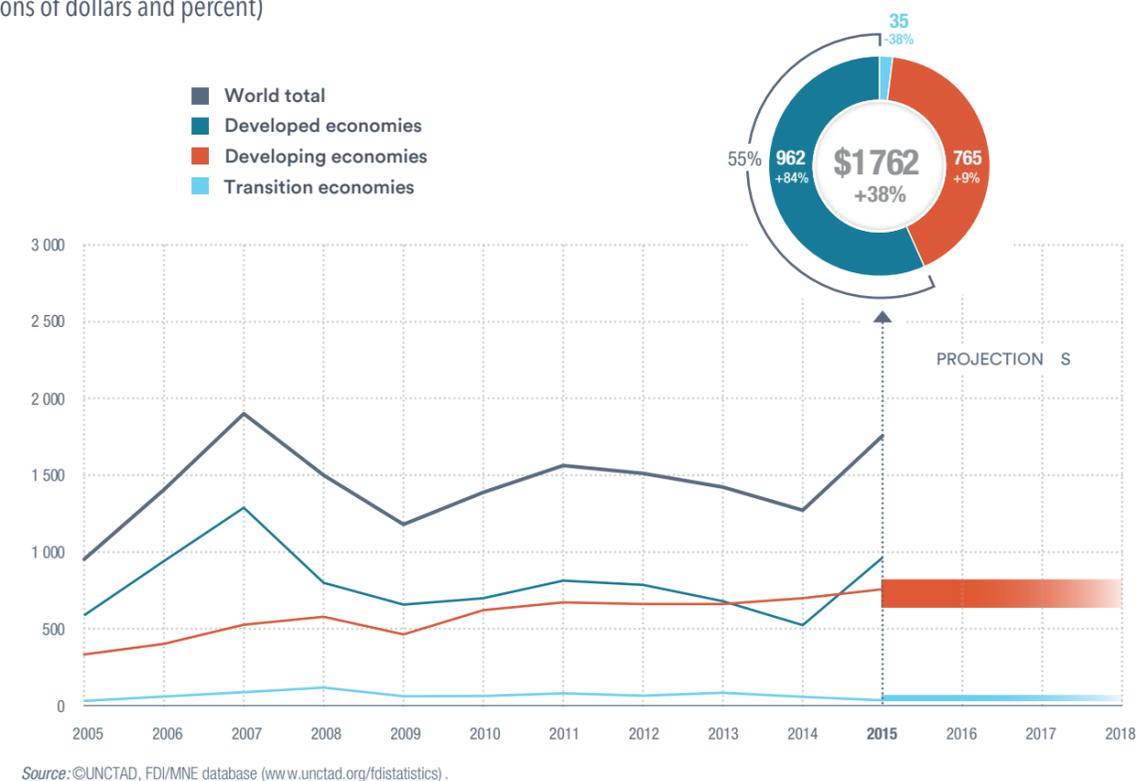
2 Pullam, Felicia. "New Report: Global FDI Flows Show Continued Confidence in U.S. Economy." Tradeology the ITA Blog. International Trade Administration, 03 Mar. 2016. Web. 2016.

3 United Nations Conference on Trade and Development, Global Investment Trends Monitor. Issue no. 22. January 20 2016 http://unctad.org/en/PublicationsLibrary/webdiaeia2016d1_en.pdf

4 United Nations Conference on Trade and Development, Global Investment Trends Monitor. Issue no. 22. January 20 2016 http://unctad.org/en/PublicationsLibrary/webdiaeia2016d1_en.pdf

Global FDI inflows by group of economies, 2005-2015, and projections, 2016-2018

(Billions of dollars and percent)

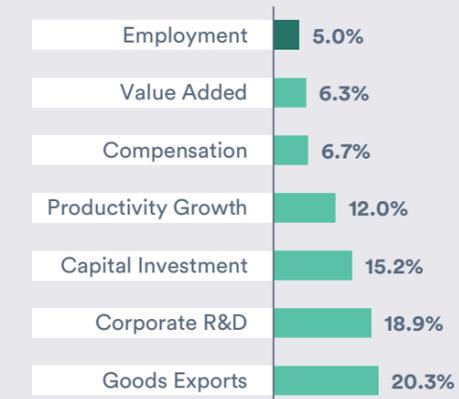


Source: ©UNCTAD, FDI/MNE database (www.unctad.org/fdistatistics).

This shifting global investment environment has profound implications for the U.S. because the benefits of FDI extend beyond investment totals or job creation. Foreign firms employ about five percent of the private sector in large metropolitan areas. Yet, they account for 7 percent of compensation, 12 percent of productivity growth, nearly 19 percent of corporate research and development, and over 20 percent of exports.⁵ In short, foreign investment helps account for some of the defining elements of thriving metropolitan economies.

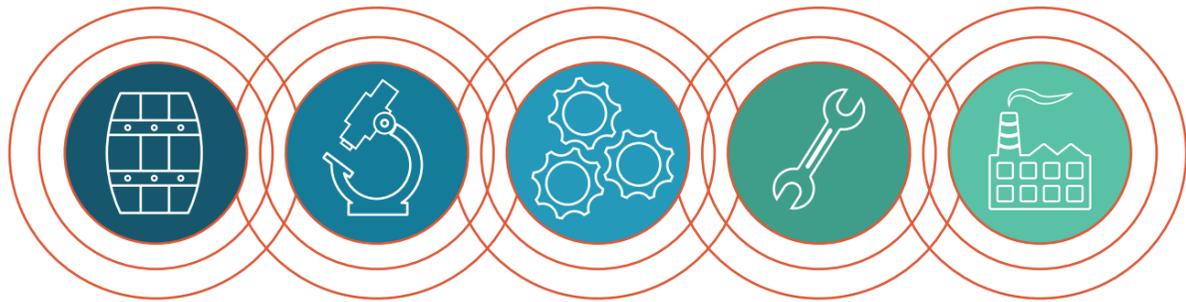
5 Saha Devashree, Kenan Fikri, and Nick Marchio. "FDI in U.S. Metro Areas: The Geography of Jobs in Foreign-Owned Establishments." The Brookings Institution, June 2014. Web. 20 July 2016.

Contributions of FDI



Seventy-four percent of all FDI in the U.S. is concentrated in the top 100 metropolitan areas by population.⁶ These cities are poised to reap great benefits from future FDI opportunities. Conversely, they are vulnerable to the consequences of failing to capitalize on them. Louisville is ranked 43rd among U.S. metros by size.⁷ At 107th, Lexington (MSA) falls just below the top 100. The BEAM region would rank 37th among top 100 U.S. metros by population if it were a united metropolitan area. In these and other top metros, efforts to examine and improve FDI performance will help determine the country's future competitiveness in FDI.

For manufacturing centers like the BEAM region, which are actively pursuing the future of advanced industries,⁸ FDI plays a critical role directly and indirectly in cultivating the production strengths, skills networks, growth trajectories, and spin-off activities that foster sophisticated industry clusters in competitive cities. The Brookings Institution found that production inputs concentrate in metropolitan areas, leading to industry specializations which, in turn, attract FDI. In the BEAM region, foreign investments have contributed to performance in automotive, chemical, steel, and plastics manufacturing, as well as to the signature bourbon and thoroughbred horse industries. The manufacturing sector accounted for nearly 62 percent of all BEAM region jobs in foreign-owned enterprises (FOEs) in 2011.⁹



⁶ Saha Devashree, Kenan Fikri, and Nick Marchio. "FDI in U.S. Metro Areas: The Geography of Jobs in Foreign-Owned Establishments." The Brookings Institution, June 2014. Web. 20 July 2016.

⁷ U.S. Census <http://factfinder2.census.gov/bkmk/table/1.0/en/PEP/2014/GCTPEPANR.US23PR>

⁸ Industries that invest heavily in technology research and development and employ skilled STEM (science, technology, engineering, and math) workers to develop, diffuse, and apply new productivity-enhancing technologies. The sector encompasses industries ranging from manufacturing industries such as automaking and aerospace, to energy industries such as oil and gas extraction, to high-tech services such as computer software and computer system design, including for health applications. It is typified by globalization and innovation.

⁹ Brookings Institution, customized research. 2011 data, the most recent year for which this data is available.

BEAM Region Foreign-Owned Enterprise (FOE) Employment by Sector

INDUSTRY	EMPLOYEES	Share of FOE Employment
Manufacturing	31,876	61.9%
Wholesale Trade	6,023	12.7%
Admin. Support, Waste Mgmt.	2,405	5.4%
Professional & Technical Services	2,127	4.6%
Information	870	4.4%
Retail Trade	1,826	3.6%
Health Care & Social Assistance	1,277	3.4%
Accommodation & Food Services	1,369	3.2%
Transportation & Warehousing	1,292	3.2%
Finance & Insurance	1,165	2.9%
Other Services (except Pub. Admin.)	482	1.1%
Construction	299	1.1%
Mining, Oil, & Gas Extraction	50	1.1%
Agriculture, Forestry, Etc.	90	1.0%
Arts, Entertainment, Recreation	240	0.8%
Real Estate	76	0.3%
Mgmt. of Companies & Enterprises	2	0.2%
Educational Services	7	0.0%

Source: Brookings Institution, 2011

For forward-thinking metros, the goal is not simply to cultivate more FDI. Rather, the aim is to strategically utilize FDI and other tools to build innovative industry clusters, comprised of companies that evolve with and adapt to the needs of a global economy. Evolving and adaptive companies solve important problems, demand and contribute complex workforce skills sets, and foster prosperity through the wages they pay for those skills. They create opportunities that seed and attract the exceptional human capital that expands economic possibilities for firms and individuals.

The Changing World of FDI: Rise of the Middle Market

Toyota Motor Corporation's 1986 greenfield investment in Georgetown, Kentucky, established the company's largest automotive plant outside Japan. It brought thousands of jobs, the concept of kaizen, and a mentality shift among Kentuckians about the positive power of foreign investment. Headlines in the late 1980s heralding fears of a foreign takeover have been replaced by celebrations of Toyota's expansions and a broad-based understanding of the company's role in building Kentucky's impressive auto cluster. The most recent \$360 million expansion in 2015 added the Lexus line and created 750 new jobs, bringing the plant's total employment to 8,000.

The landscape has changed since Toyota came to Kentucky three decades ago. Massive greenfield investments that transform communities and states have become less common. In the U.S. as a whole, only 26 percent of FOE employment in 2011¹⁰ was in establishments that entered through greenfield investments post-1991. The average size of these establishments was relatively small—33 employees at the time of investment.¹¹ Nationwide, only eight percent of FOEs employ more than 500 workers, making these projects the most competitive, most expensive, and least accessible of all FDI for individual U.S. metropolitan areas.

Across the region, investments by Webasto Roof Systems, Sumitomo, Clariant, Birtley/Borun, Flex Films, Computershare, Kito USA, and others track the growing presence of FDI in key industry sectors. Yet, the region's early successes have had a defining impact. In fact, 53 percent of BEAM region FOE employment in 2011 was in firms that settled in the region before 1991, a percentage that was considerably higher than the average of 42 percent among the U.S. top 100 metropolitan areas. Mirroring national trends in FDI, only one of the BEAM region's ten largest FOEs represents a post-1991 (new) greenfield investment.¹² Taken together, this data suggests the region has a strong reliance on older FDI. It also suggests that a major greenfield investment such as Toyota's should be viewed as a catalyst for economic growth—a valuable, but relatively rare event—and not as a template.

¹⁰ Brookings Institution. Ryan Donahue, Project Analyst. 2016. 2011 data.

¹¹ Saha Devashree, Kenan Fikri, and Nick Marchio. "FDI in U.S. Metro Areas: The Geography of Jobs in Foreign-Owned Establishments." The Brookings Institution, June 2014. Web. 20 July 2016.

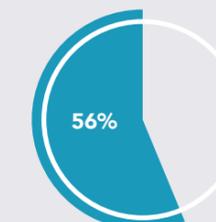
¹² Brookings Institution. Ryan Donahue, Project Analyst. 2016. 2011 data.

Today, most foreign investment enters the U.S. through mergers and acquisitions (M&A), rather than through greenfield projects. Eighty-seven percent of capital investment entered the U.S. market this way between 1992 and 2008.¹³ M&A accounted for 68 percent of new FDI jobs (not counting expansion activity among existing FOEs), in the average year between 1991 and 2011, while only 32 percent was due to greenfields. In the BEAM region, M&A is just as prominent as it is nationally. Brookings data shows that as of 2011, 56 percent of FOEs that entered the region since 1991 did so through M&A investment.¹⁴ The recent Chinese acquisitions of GE Appliances by Haier and Lexmark by Apex Technology illustrate how significant amounts of foreign capital can enter local markets this way. These acquisitions also reflect the national trend of increasing investment from emerging markets.

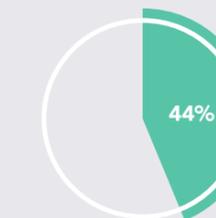
¹³ U.S. Bureau of Economic Analysis

¹⁴ Brookings Institution, customized research. 2011 data.

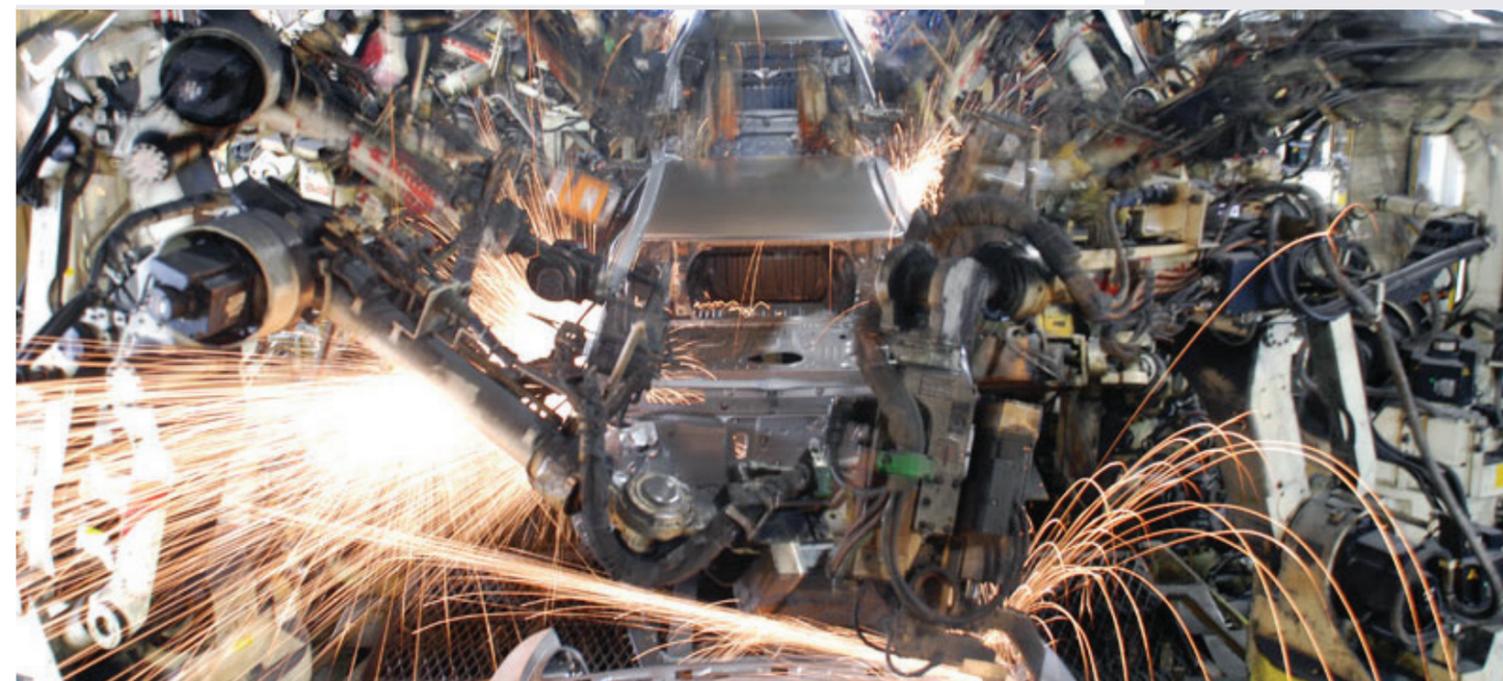
BEAM Region FDI



M&A



Greenfield



Despite their high profile, large M&A acquisitions are not the most representative of these types of transactions. Instead, middle market firms (defined by Brookings as having at least 20 employees and \$10 million - \$1 billion in yearly revenue¹⁵) are the most common targets for M&A. In both large and small M&A transactions, the domestic firm's customer and supplier networks, local relationships, and position within its industry may all be important assets for a foreign firm.

The entry of FDI into the U.S. through M&A transactions poses an opportunity for both Louisville and Lexington. Having long been the focus of much business growth in the region, the cities now have limited appropriately zoned real estate in which to locate a large new project. This is not true in the surrounding counties, where land is generally more plentiful. When greenfield and expansion projects locate in nearby counties, Lexington and Louisville benefit directly and indirectly, by providing workforce, selling homes, and collecting tax revenues as part of the overall economic impact. Mergers and acquisitions offer an opportunity for these cities to welcome a diverse group of companies and people without the concerns about land constraints that accompany large greenfield and expansion projects. For the entire BEAM region, M&A offers the possibility of continued growth and diversification without the outlay of resources expended in pursuit of limited and highly competitive large greenfield projects.



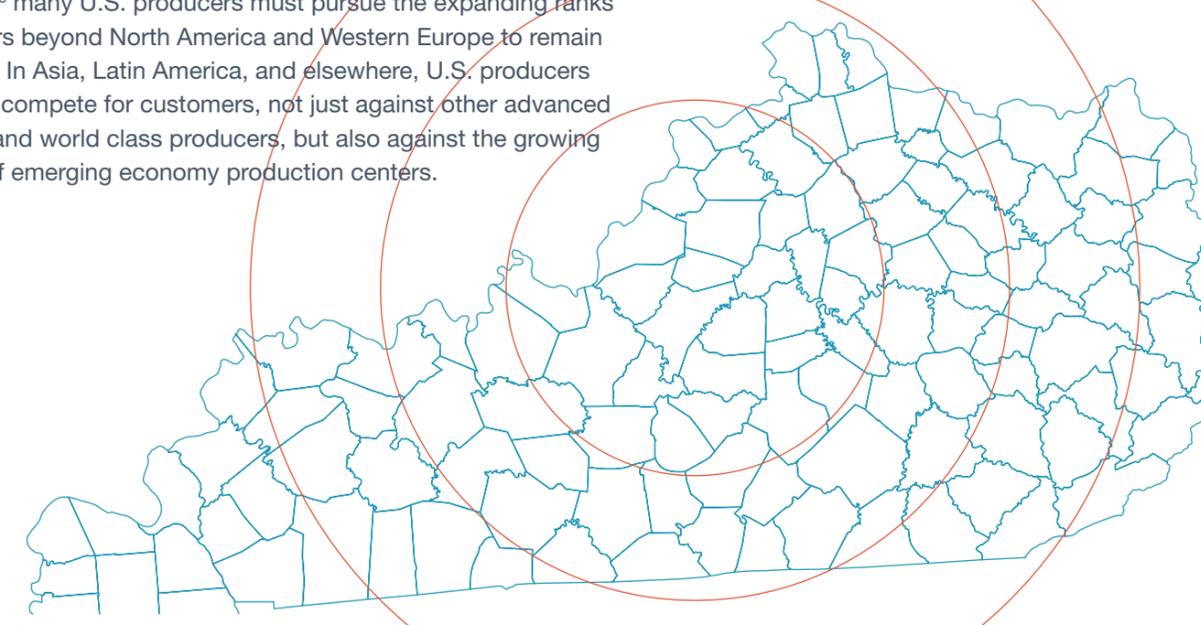
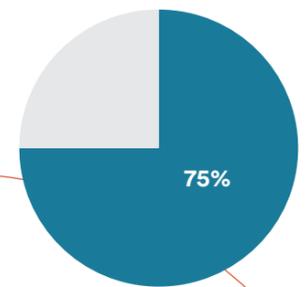
15 Donahue, Ryan, and Brad McDearman. "Recognizing the Global Opportunity in the Middle Market." The Brookings Institution. The Brookings Institution, 27 May 2015. Web. 20 July 2016. <http://www.brookings.edu/blogs/the-avenue/posts/2015/05/27-global-opportunity-middle-market-donahue-mcdearman>

The Intersection Between Exports and FDI

As is the case with FDI performance, the nation's top 100 metros account for the majority of U.S. exports. Seventy-five percent of all U.S. exports are produced in these cities. This is not coincidental; foreign firms account for over 20 percent of U.S. exports, according to Brookings.¹⁶ Just as FDI contributes more than jobs, export production adds more than sales to U.S. companies. Research shows that exporting firms withstand domestic downturns better and compensate employees more than non-exporting firms.¹⁷

The stakes are rising for U.S. companies to begin and expand exporting activity. With 70 percent of the world's purchasing power located outside the U.S. and unprecedented growth in emerging economies,¹⁸ many U.S. producers must pursue the expanding ranks of consumers beyond North America and Western Europe to remain competitive. In Asia, Latin America, and elsewhere, U.S. producers increasingly compete for customers, not just against other advanced economies and world class producers, but also against the growing capacities of emerging economy production centers.

U.S. Exports produced in top 100 Cities



16 Donahue, Ryan, and Brad McDearman. "Recognizing the Global Opportunity in the Middle Market." The Brookings Institution. The Brookings Institution, 27 May 2015. Web. 20 July 2016. <http://www.brookings.edu/blogs/the-avenue/posts/2015/05/27-global-opportunity-middle-market-donahue-mcdearman>

17 U.S. International Trade Administration, <http://www.trade.gov/cs/factsheet.asp>

18 U.S. International Trade Administration, <http://www.trade.gov/cs/factsheet.asp>

BEAM Regional Export Plan Achievements

Mayors' Goal: Increase Export Successes by 50 percent in Five Years

Companies reported more than 700 export successes (first-time sales to new international markets and increased sales to existing international markets, measured year-over-year.)

Outcome: Reached Mayors' 5 year goal to increase exports successes in only 3 years

- **Export Sales:** Nearly \$14 million in SME export sales supported through \$170,000 JPMorgan Chase-funded export grant
- **Export Support:** Ongoing outreach to 160+ internationalizing firms
- **Tomorrow's Workforce:** 200+ MBA students served to date with BEAM/World Trade Center international commerce course
- **Thought Leadership:** JPMorgan Chase funds brought national experts in international business to two IdeaFestivals and Kentucky World Trade Day

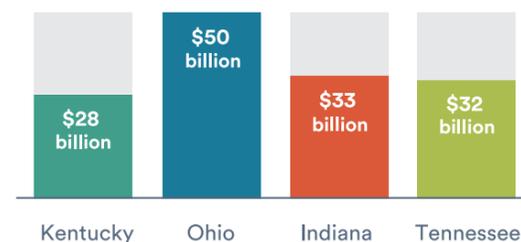
In exporting, as in FDI, signs of the potential of the middle market abound. Even though small and mid-sized businesses (SMEs)¹⁹ comprise 98 percent of all exporters, they contribute less than one third of known export value. Fifty-eight percent of exporting SMEs sell to only one foreign country.²⁰ While large exporters account for much of the country's exporting dollar value, there is enormous growth potential among SMEs. Many of these are middle market firms, defined by Brookings as firms with at least 20 employees and \$10 million - \$1 billion in annual revenue.

Kentucky exports reached \$28 billion in 2015 and the state saw its fifth straight year of record-breaking performance. While Ohio, Tennessee, and Indiana export more than Kentucky, the state achieved these gains even as 2015 exports fell in these neighboring states and exports across the country dropped 4.8 percent. Kentucky's per capita exports rank fifth in the nation, ahead of these states.²¹

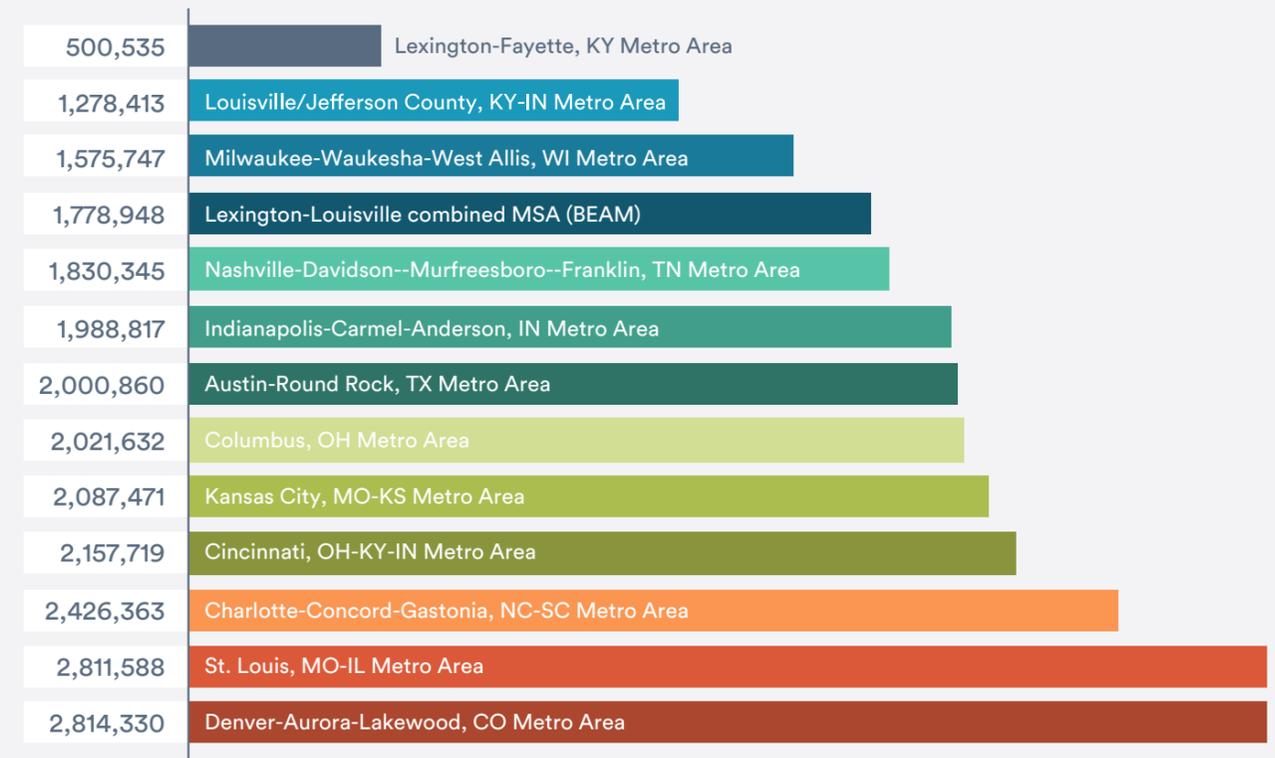
Considering the substantial contributions of foreign firms to export production, efforts to increase FDI could help Kentucky continue to gain ground in export performance. While a smaller population accounts for some of the difference in overall export performance between Kentucky and its neighbors, a size comparison of the top 100 metros in these states suggests an opportunity to narrow the gap.

If the BEAM region (which accounts for nearly half of Kentucky's exports) were a top 100 metro, its population would place it close to Nashville and Indianapolis in size. These metros currently outperform Louisville metro in percentage of FOE employment.²² With so much FDI and export activity concentrated in top metropolitan areas, future metropolitan success in FDI cultivation could help counter the limitations of Kentucky's smaller population when it comes to export performance.

Kentucky and Peer States Exports 2015²³



2015 Population: Lexington, Louisville and Peer Cities



19 There is no universal definition of an SME, but the U.S. International Trade Administration and others define an SME broadly as an enterprise with fewer than 500 employees. The vast majority of SMEs in the U.S. have fewer than 20 employees. <https://www.usitc.gov/publications/332/pub4125.pdf> Jan 2010.

20 U.S. International Trade Administration, <http://www.trade.gov/cs/factsheet.asp>

21 U.S. Census Bureau, U.S. exports by state 2015. American Community Survey, One-Year estimates U.S. Population by State 2015

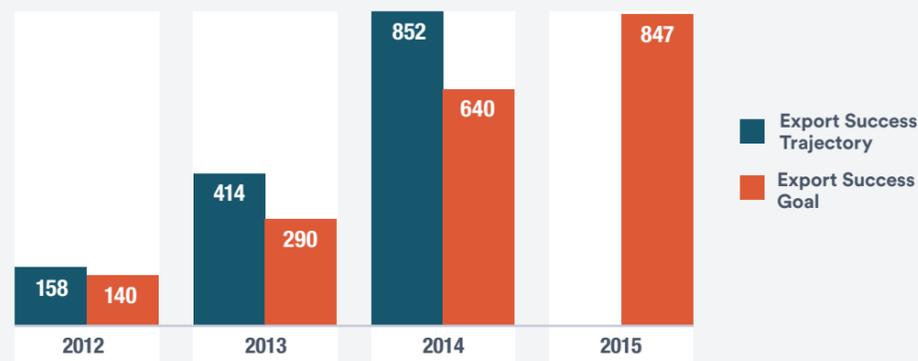
22 Brookings Institution, customized research. 2011 data.

23 U.S. Department of Commerce, International Trade Administration. www.tse.export.gov/tse/tsehome.aspx

BEAM Regional Export Initiative

Organized under the Mayors' goal to increase export successes by 50 percent in five years, the BEAM Export Initiative focuses on helping SMEs to increase the number of countries to which they export and to increase sales activity in existing foreign markets. Supported by the Brookings Global Cities Initiative (GCI) and a grant from the Bloomberg Foundation, the BEAM Regional Export Plan was released in 2013, with short-term, medium-term, and long-term goal to address the unmet export potential SMEs.

BEAM Region Export Successes Reported



Export successes are defined as a company's first-time sales to new international markets and increases in sales to existing international markets, measured year-over-year.

BEAM launched a successful grant program in early 2014, which was funded by the JPMorgan Chase Foundation and awarded \$170,000 in micro-grants to 40 companies. These grants supported companies' immediate goals to begin and/or to expand exports to particular markets. To date, this grant has supported nearly \$14 million in reported sales by these companies. JPMorgan Chase has since replicated the BEAM grant model across various markets.

The BEAM regional trade partnership continues to guide the region's exports engagement. It is supported by the U.S. Commercial Service, World Trade Center Kentucky, Kentucky Cabinet for Economic Development, Louisville Forward, Commerce Lexington Inc., Greater Louisville Inc. (the region's largest chambers of commerce), and other partners who have undertaken the implementation of this plan. Ongoing outreach to approximately 160 firms has improved continuity of support for SMEs, provided education and raised awareness, and built valuable relationships. In partnership with BEAM, World Trade Center Kentucky

developed and delivers a 20-hour global certificate program for MBA students at the University of Kentucky. The program has been expanded to Bellarmine University in Louisville and has served over 200 future professionals.

These and other initiatives help develop the skillsets and mindsets that advance international business in the BEAM region. They helped the region achieve over 700 export successes and reach its goal to increase export successes by 50 percent in just three years—two years ahead of schedule. Spurred by these accomplishments, the Mayors set a new goal to increase export successes by 50 percent once again by 2019.

The outreach, education, and assistance that foster gains among exporting firms also bolster the middle market more broadly. This connection has implications for FDI, particularly M&A. Exporting firms demonstrate a resiliency, growth orientation, and customer footprint attractive to purchasing companies. Specialization tends to aid exporting firms, as differentiated products compete better against local and lower-priced producers. This specialization can draw the attention of foreign firms, which often owe their own success in foreign markets to their ability to specialize.

BEAM Brookings Export Plan Initiatives & Activities

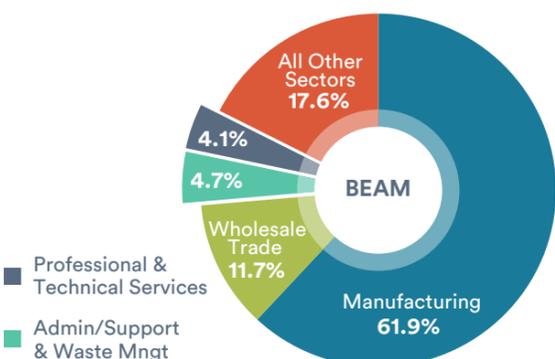
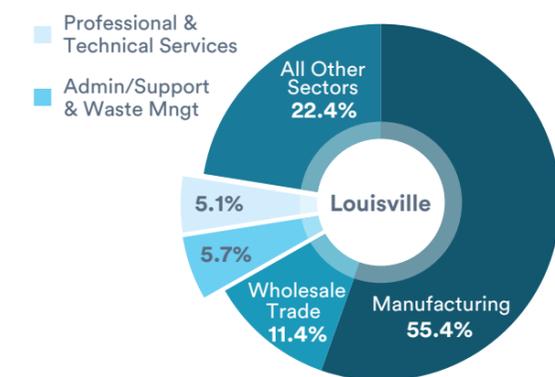


Situating the Region

The BEAM region's favorable geographic location and logistics infrastructure are among its prime assets. From the auto industry's exacting "just-in-time" standards to next-day distribution of live lobsters by Canadian company Clearwater Seafood, the BEAM region's logistics strength is a primary and often decisive factor in location and expansion decisions of foreign and domestic firms. The UPS Worldport at the Louisville International Airport is the largest fully automated packaging facility in the world, currently turning over 130 aircraft and processing an average of 1.6 million packages every day. Lexington is served by the largest UPS ground hub in the state, with the ability to process over 600,000 packages and documents per day and to deliver to 60 percent of the U.S. population in 2 days via ground and to 79 percent in 3 days.

Kentucky's roadway system, including I-64, I-75, and I-65 gives access to two-thirds of the U.S. population within one day's drive. The Ohio River winds past Louisville, providing another avenue to transport manufactured goods to ports and waterways. With two public inland ports and 48 private terminals, products can be shipped via the U.S. inland waterway system from the St. Lawrence Seaway to the Gulf of Mexico. The region is also served by Class I railroads such as Canadian Pacific, R.J. Corman, CSX, and Norfolk Southern. They provide direct rail service to all markets east of the Mississippi River and connecting service to the west coast. With the Lexington, Louisville, and Northern Kentucky airports within one hour's drive of each other, the region offers close to 100 direct flights daily. Recent additions of direct passenger flights to Kansas City, Pittsburgh, and Raleigh from Louisville's airport and direct passenger flights to Minneapolis-St. Paul, Baltimore, Washington D.C., and New York City from Lexington's airport have enhanced access to and from the region.

FOE Employment by Sector as a Share of Total FOE Employment, 2011



Foreign direct investment in the BEAM region—as across the country—is heavily concentrated in manufacturing, led by investments from Japan and Germany. Lexington and surrounding BEAM counties outpaced the region in FOE manufacturing jobs as a percentage of total FOE employment in 2011 with 69.2 percent (16,843 jobs). In Louisville and surrounding BEAM counties, manufacturing accounted for 55.4 percent of FOE employment (15,033 jobs). Other areas of foreign investment in the region include wholesale trade, administration/support & waste management, and professional and technical services.²⁴

A comparison of the BEAM region cities to peer cities reveals that with 10.5 percent FOE share of private sector employment, the Lexington area (largely due to Toyota) outpaced the national average and peer cities in both FOE share of overall private employment and in its share of FOE employment in advanced industries. With 4.6 percent of the Louisville MSA's private sector employment accounted for by FOEs, the state's largest city lagged most peers in both categories. This number fell short of the national average and of Lexington, Indianapolis, Dayton, Cincinnati, Memphis, Nashville, and Columbus.

The Kentucky Cabinet for Economic Development's (CED) data (on business activity in which it was involved) shows that the state experienced its highest investment levels ever in 2014, with 30 percent of investment and 20 percent of jobs announced in 2014 coming from FDI. Expansions of existing firms (domestic and foreign) accounted for 71 percent of investment, 85 percent of announced investment, and 72 percent of jobs in 2014. The same data showed that investments of under \$10 million comprised more than 80 percent of all projects. This information points to the importance of multiple smaller investments by existing companies—not just occasional large investments by new companies—to fostering dynamic economic growth.

In recent years, renewed focus on existing companies reflects a growing understanding of the economic power of business retention and expansion. KentuckyUnited, a public-private partnership of state, local and regional economic development organizations (EDOs) that market Kentucky, now focuses increased attention on business retention and expansion (BRE) activities with headquarters of existing business operations. At the Cabinet for Economic Development (CED), streamlined customer service practices, re-vamped incentives, proactive attention to existing firms, and increasing attention to mid-sized firms have supported this shift.

Kentucky Cabinet for Economic Development 2014



Progress on Workforce Needs

Issues about both supply and preparation of the available workforce accompany most economic development discussions in the BEAM region, across Kentucky, and nationally. Local concerns reflect nationwide challenges of STEM field participation, secondary level preparation, and technical skills training, as well as the legacy of insufficient investments by a poor state. Various efforts support the broadly held desire to increase both the sheer numbers and the skill level of the region's workforce.

Louisville and Lexington are engaged in the Ford Motor Company's Next Generation Learning. This program works with educators, employers, and community leaders in competitively selected communities to foster preparation of young people for college, career, and participation in the next generation workforce. In July 2016, Governor Matt Bevin announced the Work Ready Skills Initiative, a \$100 million bond program to support the facility and equipment costs of local workforce projects, particularly those that include participation of a private employer, educational agency, and other interested partners.

Multiple universities and colleges provide opportunities for higher education throughout the region and are committed to increasing enrollment, retention, and graduation rates. Louisville's 55,000 Degrees program seeks to dramatically increase the number of post-secondary degrees held in the Louisville area by fostering a mindset of education and by helping to make education accessible and affordable. The Kentucky Federation for Advanced Manufacturing (KY FAME) is a manufacturer-led hybrid education and apprenticeship program that results in a debt-free, two-year degree. The program began at Toyota and has now been launched or is starting up in ten chapters throughout the state. Louisville's Mayor Greg Fischer was honored at the 2016 U.S. Conference of Mayors with the National Education Pathways award for the city's Cradle to Career Initiative, which takes a comprehensive approach to improving citizens' lives and educational outcomes, beginning with early childhood education and culminating in workforce skills training.

A number of programs have been launched in recent years to foster skills growth in the software, IT, and computer programming fields. Code Louisville offers free online training, supplemented by in-person mentoring sessions with local industry leaders to prepare interested individuals for entry-level coding jobs. The Software Guild recently launched its third intensive 12-week "programming boot camp" to develop junior-level programmers. Lexington's Awesome Inc. U teaches children, adults, and organizations coding and software development skills for mobile app, website, and video game development. These programs have aggressive expansion plans to supply the BEAM region with an increasing level and pool of IT talent in the years to come.

Given the importance of attracting and retaining young talent (ages 25 – 44) to meet employment needs, urban amenities are more important to workforce issues than they might at first appear. Both Louisville and Lexington have made substantial (and ongoing) investments in biking and walking trails that connect urban and natural spaces, including Lexington's Legacy Trail and Louisville's Parklands. They have also made investments in other public spaces, including Louisville's waterfront and Lexington's Fifth Third Bank Pavilion. A growing number of craft beer, bourbon distilleries, and local food establishments characterize a unique, authentic culture in both cities.



Key Findings



Middle market firms are essential for economic growth, yet vulnerable to underperforming.

Across the country, small and mid-sized businesses—many of them also middle market firms—are a bedrock of the economy. The BEAM region’s small and mid-sized producers account for about 75 percent of the region’s employment in the manufacturing sector. Of the Kentucky Cabinet for Economic Development’s list of all FEOs in the BEAM region, only 16 (or 6 percent) of 251 firms have more than 500 employees.

The Institute for Exceptional Company Growth found that among all firms founded before 2005 that were still in business after 2010, “a slim one percent created 72 percent of all net new jobs.” These jobs were concentrated among firms with fewer than 100 employees. They created an average of about 8 jobs in a year with net growth from 2005 to 2010. It was their ability to *repeatedly* grow that created net new jobs and distinguished them from firms not in this one percent.²⁵ Across the country and in the BEAM region, middle market firms are at the heart of the generally incremental gains that sustain economic advancement. Notwithstanding the transformative impact of an occasional large greenfield project, overall it is the *number* of these companies and not their size that creates the diversity of jobs and density of activity that characterizes dynamic industry clusters.

Yet, these firms are also vulnerable. The 2013 exports market assessment found that these companies are often family-owned and founder-led by members of the baby boom generation. Interviewees and survey respondents reported risk aversion, concern about making decisions with imperfect information, and lack of awareness about available resources. These factors can slow or stop export growth, with grave consequences at the firm level and for the regional economy. The FDI market assessment interviews conducted in 2015 and 2016 revealed that many of the region’s middle market firms— including some considered top success stories of export growth and EDO collaboration—have not adequately invested in succession planning. They have not identified new leaders, proactively looked for investors, or sought professional help to value their companies.

²⁵ *Building Scale and Sustaining Growth: The Surprising Drivers of Job Creation*. Gary Kunkle, PhD. Pages 2, 9. Feb 2013. Institute for Exceptional Growth Companies.

Interviews with a local financial consulting firm confirm these findings from the market assessment. Leaders reported that they commonly meet with firms that have neglected to allow a sufficient time horizon for succession planning, to reinvest adequately in the firm, or to maintain unallocated capital apart from reinvestments and the owners’ revenue. A Harvard Business Review report warns that as many as 4 million businesses across the country could be sold over the next 20 years as the baby boom generation retires and completes its exit from the workforce. A reported 75 percent of these businesses do not have an exit strategy.²⁶



²⁶ Allison Tepley, *Retiring Boomers Should Consider Selling their Companies to Millennials*, December 23, 2014. <https://hbr.org/2014/12/retiring-boomers-should-consider-selling-their-companies-to-millennials>

2

Middle market M&A activity is significant, exporting supports it, and EDOs can help.

The majority of FDI enters the U.S. market through M&A, and growth-oriented firms are frequent targets of this activity. M&A accounts for the presence of over half of all FOEs in the BEAM region. Market assessment interviews revealed that companies are interested in learning more about possible M&A opportunities. A number of middle market firms reported that they received M&A inquiries from foreign or domestic firms, or both, in the last year. Several reported seeking out M&A opportunities—either to buy or to be bought. Most BEAM Region firms indicated that if they decide to consider M&A offers, they would consider offers from both domestic and foreign firms. Several responded that they had purchased or explored purchasing firms overseas.

Viewed together, exports and M&A FDI can be understood as part of a virtuous cycle of middle market company growth: small companies become middle market companies through intentional export growth, which fosters repeated, incremental expansion and may position the company to acquire or be acquired in a future transaction that, in turn, increases export production. Conversely, a company's insufficient attention to export growth, expansion, and succession planning can hamper growth and changes in leadership. These factors can dramatically reduce a firm's ability to sell well, or even at all, (in a foreign or domestic transaction) when the time comes.

Through business retention and expansion (BRE) efforts, economic developers foster the incremental company growth that establishes and strengthens most robust companies. BRE that is adapted for the needs of M&A companies and designed to build new relationships with transitioning companies, can be a critical element of effective economic development. In both cases, the goal is to help companies achieve sustained, repeated growth in the communities of which they are a part. When asked how economic developers could help with M&A, a representative of a Louisville company said, "Be a convener. Help bring people to the table so companies understand these issues and get better connected."

While M&A brings inherent uncertainty—acquired firms may be moved or closed—BRE tools for M&A firms can be utilized to good effect. For this to happen, though, the region's economic developers must be aware and prepared. This reality poses a challenge and an opportunity for the BEAM region, as it does for metros across the country. There is a knowledge gap among economic developers about M&A activity. Most economic developers interviewed for the market assessment reported that neither M&A nor succession planning are an embedded part of BRE interviews. Metrics used to measure economic activity and impact often don't capture this activity at all. This is partly because M&A can be difficult to track; it happens more quietly than most greenfields and the transactions often do not involve economic developers. Most economic developers indicated an interest in learning more about the process and conditions that lead to M&A.



3

BEAM region core strengths hold opportunity in the 21st century economy.

In the BEAM region and elsewhere, advanced industry growth has led the country's recovery from the Great Recession. Louisville MSA's advanced industries directly account for nearly 9 percent of all jobs, a share that ranks the city 45th among top 100 large metros. Lexington MSA's advanced industries account for nearly 11 percent of all jobs and rank the city 37th among 281 small metros on this indicator. From 2013 – 2015, Louisville's annual average job growth of 3.42 percent and Lexington's of 2.87 percent in advanced industries outpaced the national average of 2.46 percent.²⁷ Louisville's post-recession (2010 – 2015) overall manufacturing jobs growth of 43 percent far exceeded the national average of 8.7 percent.²⁸

Continued progress in cultivating the high-wage, specialized activity of advanced industries will support long-term competitiveness in manufacturing. This will help counter the falling wages, widening skills gaps, and growing wage disparities that challenge traditional manufacturing nationwide²⁹, and balance the region's historic reliance on low-cost labor, land, and electricity. Evolving skills and production specializations will help differentiate the region, foster knowledge concentration, and support broad economic development goals for prosperity in a 21st century economy. Several areas – namely, chemicals, life sciences, and advanced scientific and medical activity requiring specialized logistics – hold promise for fostering increased specialization and higher wages within the region's existing industry clusters.

Chemicals are among Kentucky's major industry sectors. At \$4.4 billion of exports in 2015, chemicals represented about 16 percent of the state's exports. They are the second largest category after transportation equipment, which accounts for approximately 51 percent of exports.³⁰ The Cabinet for Economic Development's database of nearly 190 companies in the chemicals sector shows a concentration around the Louisville area of companies engaged in production of coatings, inks, paints, resins, and adhesives. These companies are a mix of middle market and large companies, and foreign and domestic companies. Investments from Clariant (Switzerland), American Synthetic Rubber Company (France), BASF (Germany), Zeon (Japan), and others help anchor this sector. With an average wage of \$74,984 in Louisville (MSA), salaries are high in this advanced industry.

²⁷ Brookings Institution, *Advanced Industries*.

²⁸ U.S. Bureau of Labor Statistics, *Quarterly Census of Employment and Wages*.

²⁹ Ruckehaus, Catherine and Sarah Heberstein, "Manufacturing Low Pay: Declining Wages in the Jobs That Built America's Middle Class" Nov 2014.

³⁰ U.S. Department of Commerce, International Trade Administration. www.tradestatesexpress.com

Chemicals represent the largest and fastest growing area of manufacturing FDI in the U.S. Investments have grown by more than \$105 billion since 2014.³¹ A comparison of foreign companies' chemicals activity in Kentucky, Indiana, Ohio, and Tennessee offers insight into this sector's potential. All four states offer similar advantages in cost, urban center attributes, and logistics; the industry make-up in these four states is comparable, as well, partly for these reasons. While the numbers of projects are small, these four states captured 15 – 30 percent of reported greenfield U.S. investment (M&A data is not available from this source) in chemicals from Germany, Japan, the UK, and Switzerland between 2009 and 2016 (YTD). These countries represent four of the top five sources of chemicals investments in the U.S.).³² However, more projects located in the other three states than did in Kentucky. This data suggests the others are receiving investment that Kentucky may be able to capture.

Lexington's biotech sector hosts more than 50 companies and has developed a specialization within the plant and genetic engineering segment of the life sciences industry. Supported by the University of Kentucky, which includes a College of Pharmacy ranked 6th in the nation by U.S. News, this area of activity has grown steadily in recent years. Cutting-edge medical research on drug development and disease conducted by graduate students and faculty has benefited the area and the nation. The sector includes 25 start-up companies created by faculty members. Lexington has also recruited 29 federally-funded Small Business Innovation Research (SBIR) companies, leveraging the state's competitive SBIR matching program. These companies bring high wage and high tech jobs to the biotech industry.

The biotech sector in Lexington has generated interest from foreign investment, resulting in at least two acquisitions. Coldstream Laboratories was bought by Indian firm Piramal Pharma Solutions and Allylix was purchased by Swiss firm Evolva. These purchases suggest additional potential among both established and emerging sources of investment. Biotech is already a priority area for Lexington and the region will support ongoing efforts with enhanced BRE that incorporates FDI and M&A. Existing relationships in Germany and Japan may facilitate increased attention to the life sciences, chemicals, and pharmaceuticals industries in both markets, supplementing a long-time focus at the state level on automotive and other manufacturing areas.



³¹ U.S. Department of Commerce, Bureau of Industry and Analysis. (SelectUSA presentation, 2016)

³² FDI Markets, a subscription data source of the Financial Times. Greenfield foreign investments in U.S. 2009 - 2016.

Lastly, UPS has launched an initiative to increase investments in “small package, high value” activities involving the healthcare and biomedical industries. Citing downward pressures on healthcare prices within the industry, UPS plans to capitalize on companies’ incentive to simplify, lower costs, and reduce risk in supply chain. The company has begun targeting healthcare and food and beverage firms to establish “end-of-runway” testing and diagnostic services, working to maximize the advantages of speed and proximity of shipping for returning processed lab work to its origins. Eurofins Scientific, a 22,000 employee company based in Luxembourg, has invested in the region for this reason. The company has added over 100 high-wage jobs, including lab technicians, chemists, and biologists, as well as positions in customer service, logistics, information technology, administration, and finance and accounting. Eurofins Scientific is also pursuing acquisitions of new companies.

More activity of this nature could counter one of the few negatives of the region’s logistics activity. These jobs have some of the lowest median wages among the region’s top sectors. Employment is heavily concentrated in lower skilled areas, with limited opportunities for advancement in skills and pay. Jobs created by these nascent, end-of-runway services are high skill and high wage, a key area of focus for the region.

4

Professional and technical services hold opportunities beyond BEAM’s manufacturing stronghold.

The BEAM region as a whole—and Louisville and Lexington individually—saw a sharp increase in FOE employment in professional and technical services from 1991 to 2011.³³ Software and information technology (IT) saw 26 percent growth in the BEAM region between 2010 and 2015, accounting for approximately 21,000 jobs or 2.4 percent of all jobs in the region. Importantly, the average annual salary for software and IT occupations ranges from 0.8 to 2.6 times higher than the average annual salary for all jobs and 1.7 times higher than the median wage.³⁴

The region has had some success with FDI in specialized business and software and IT services, including Louisville’s Computershare (Australia) and Lexington’s Lexmark acquisition by Apex Technology and PAG Asia Capital (China). These and other projects point to what is possible in these sectors. Research on global FDI activity shows that software, IT, and business services are a top category for investment in the U.S. among a number of countries, including the UK, Netherlands, France, Canada, and India. These projects range from specialized technical and professional services to call centers, with varied wage rates, depending on activity. To date, however, almost none of the greenfield projects from these countries has located in Kentucky, Indiana, Ohio, Tennessee, or Indiana, according to FDI Markets.³⁵

Overall employment in the BEAM Region is projected to grow by 16.7 percent, with more than 148,000 jobs to be added by 2020. Many of these jobs will require at least a bachelor’s degree, according to a 2012 University of Kentucky Center for Business and Economic Research (CBER) and Department of Economics report. The highest growth is expected in construction, healthcare, and professional services.³⁶

By contrast, the report finds that manufacturing jobs are expected to increase by less than 3 percent, due to advances in technology and other factors. While jobs will continue to be added in manufacturing, the sector will experience an overall decline in the share of total jobs in the region and comprise a small part of the BEAM Region’s overall projected growth.³⁷ KentuckianaWorks, the Workforce Development Board for the Greater Louisville region, cites data that the region’s manufacturing sector is projected to lose jobs by 2020, and that the most new jobs will be added in healthcare-related services, such as practitioners and support occupations.

33 Brookings Institution, customized research. 2011 data.

34 U.S. Bureau of Labor Statistics, May 2010 to 2015 Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates

35 FDI Markets, a subscription data source of the Financial Times. Greenfield foreign investments in U.S. 2009 - 2016.

36 Bollinger, Christopher R. and Troske, Kenneth R., “Industry and Labor Characteristics and Projections: The BEAM and WIA Regions” (2012). CBER Research Report. Page 18.

37 Bollinger, Christopher R. and Troske, Kenneth R., “Industry and Labor Characteristics and Projections: The BEAM and WIA Regions” (2012). CBER Research Report. Page 18.



5

Japan, Germany and other investment sources offer opportunities in traditional and emerging areas of BEAM strength.

Japan ranks as the region’s largest source of foreign investment, comprising 44 percent of all manufacturing jobs in FDI in 2011. Providing more than four times as many jobs as Germany (the region’s second largest foreign investor and foreign employer), Japan’s contributions to the auto industry have helped Kentucky build an impressive industry specialization and production record. Today, the state is home to 180 Japanese-owned firms, the majority of which are auto suppliers located in the BEAM region. Kentucky is ranked third nationally in car production and second in light truck production, due to the state’s four auto assembly plants, including two Ford plants located in Louisville and the Toyota plant in Georgetown.³⁸ Japanese investments in bourbon, such as Beam Suntory’s, have followed automotive investments, bringing expanded access to markets, infusions of capital, and profitable new ideas to another key Kentucky industry.

Kentucky directs the most resources to its top two foreign investment sources. The state maintains FDI offices in Japan and Germany. Governors and mayors have made trips to both destinations. Germany comprises 7.2 percent of the BEAM region’s manufacturing FDI jobs, and the country has been the focus of increased state-level efforts in recent years. Brazil, the UK, and France made up a combined 16 percent of the BEAM region’s manufacturing FDI in 2011.³⁹ These countries have made important investments in the BEAM region and continue to increase their commitments across the nation, but have not had significant government-level outreach about investment. Recent Kentucky trade missions have targeted Canada and Mexico for exports and investment. Opportunities to export to China have historically received more attention than Chinese investment possibilities.

FDI in the U.S. from several key emerging markets shows smaller investment amounts, but larger year-over-year percentage gains in recent years than any of the traditional top sources of FDI. Investment from South Korea increased 17 percent from 2010 – 2015. Investment from China increased nearly 31 percent during the same period. China invested \$120 billion overseas in 2015. Its U.S. investments accounted for about one-eighth of this total. The country still invests substantially more in Europe than in the U.S.⁴⁰ Chinese investment in the U.S. is projected to be \$20 – 30 billion in 2016, easily topping record investments of \$15.7 billion in 2015 and \$11.9 billion in 2014.

38 Brookings Institution, customized research. 2011 data.

39 U.S. Bureau of Labor Statistics, May 2010 to 2015 Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates

40 FDI Markets, a subscription data source of the Financial Times. Greenfield foreign investments in U.S. 2009 - 2016.

Top Countries per Largest FOE Employment Sectors, 2011

	Jobs in FOEs	Number of FOEs	% of Sector FOE Jobs
Japan	14,296	43	44.8%
Germany	2,288	14	7.2%
England	1,778	12	5.6%
Brazil	1,661	4	5.2%
France	1,520	11	4.8%
Netherlands	1,035	6	3.2%
Canada	1,021	7	3.2%
New Zealand	1,013	5	3.2%
Italy	655	2	2.1%
Ireland	538	8	1.7%
Switzerland	429	8	1.3%
Australia	419	6	1.3%
Sweden	340	2	1.1%
Mexico	200	4	0.6%
Total Top Countries	27,194	142	85.3%

The \$5.4 billion Haier acquisition of GE Appliances could account for up to one quarter to one-sixth of all 2016 Chinese investment in the U.S. and shifts approximately 6,000 existing jobs to FDI in Kentucky. Rough calculation suggests the acquisition places China as the second largest investor by job totals in the BEAM region manufacturing sector, behind Japan and ahead of Germany (again, assuming no jobs were lost or gained since 2011). If finalized in 2016, the pending Lexmark acquisition would bring Chinese investment in the region to \$8.7 billion for the year. The move would attribute an additional 2,200 existing jobs to FDI in professional and technical services. It would likely place China as the number one investor in this category, ahead of smaller investments by Japan, Canada, England, and South Korea (again, assuming no jobs were lost or gained since 2011).

Competition for Chinese investment is fierce and resource-intensive for U.S. metros. However, recent acquisitions can reasonably be expected to improve name recognition and increase interest in Kentucky and the BEAM region among firms in the Guangdong and Shandong Provinces. These considerations matter as stakeholders weigh how to allocate limited resources for FDI attraction. Balancing the opportunities and risks of established and emerging sources of investment is a key challenge. The risks of doing business may seem lower in established markets than in less proven ones, but over-reliance on top markets can hinder effective exploration of new opportunities. This exposes the region to the risk of being left behind as other regions forge new connections globally.

6

Workforce concerns create challenges to increasing the region's FDI and exports.

Foreign and domestic firms are similarly affected by workforce shortages, but they may respond to these shortages differently. For established, domestic firms, re-location over workforce issues represents an enormous and generally unattractive expense. The new location would have to compensate for this expense with numerous economic advantages. For foreign firms, on the other hand, location and re-location expenses are an expected part of the growth they have chosen to undertake. These firms are mobile, and their return on investment (ROI) calculations may permit them to consider multiple options. For these firms, workforce concerns are likely to play a determinative role in whether they locate and/or expand in the BEAM region. Success in addressing workforce concerns—already receiving substantial and growing focus in the BEAM region—is essential to realizing the region's aspirations for business development, including foreign direct investment.

Among cities with at least 300,000 people, Lexington ranks 13th in the nation for both bachelor's degree attainment and advanced degree attainment, and Louisville ranks 25th in advanced degree attainment. As a whole, the BEAM Region outperforms Kentucky in attainment of associate's, bachelor's, and advanced degrees, and keeps pace with the national average. Individually, BEAM counties demonstrate significant variation along these indicators, with a number of them falling below the national average.

While the best-performing counties are also home to much of the BEAM population, the varying educational levels across the region account for some of the difficulties reported by employers in finding sufficient, qualified workforce. Employers consistently identify workforce shortages as a key issue, often highlighting the lack of "middle-skilled workers" and even basic job-readiness for positions that may not require a degree. Other employers cite a shortage of higher-skilled employees, while the rural factor is variously described as a strength and a weakness in terms of workforce recruitment. Their reported experiences reflect the combined influence of the region's strengths and weaknesses in degree attainment, workforce preparedness, and supply and demand.

The marked drop in the unemployment rate, combined with region's impressive growth in manufacturing in recent years, has applied further pressures to workforce challenges. In May 2016, the unemployment rates for Jefferson (Louisville) and Fayette (Lexington) counties were both down from the previous year, measuring 4.4 percent and 3.6 percent respectively. The statewide rate was 4.9 percent, and the national rate was 4.5 percent in May 2016. Woodford County, bordering Fayette, had an unemployment rate of just 3.3 percent, the lowest in the state for that month.

Efforts to address workforce issues can be found throughout the region and were mostly favorably viewed by market assessment participants, though a number of firms commented on the need to significantly scale current initiatives. Reinforcing the innovative contributions of foreign firms, Toyota addressed these challenges by launching KY FAME, which has become a model for the state. The company saw the need for this program despite its proximity to Lexington, home to one of the nation's highest rates of degree attainment. This suggests the supply of trained workers—even in areas with higher educational attainment—is simply insufficient to meet the demand.



7

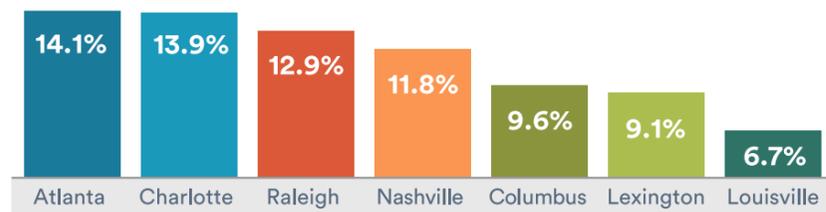
A globally diverse population is important to increasing BEAM region FDI and exports activity.

The BEAM exports market assessment identified the need to foster a culture of global fluency, which nurtures the hard and soft skills that make international business successful. Effective targeting, recruitment, and expansion of FDI also require this global fluency. Skilled workers, including leaders of foreign companies, are drawn to places that offer the mix of economic strength, spirit, amenities, and diversity that characterizes destination cities.

The role of foreign-born and culturally competent workers in a healthy economic ecosystem is well understood. Across the country, immigrants start businesses at nearly twice the rate of native-born Americans.⁴¹ They bring connections from around the world, deepen the bench of linguistic resources, hold a higher percentage of patents, and are disproportionately trained in the coveted STEM fields. Fifty-one percent of U.S. billion dollar start-up companies had foreign-born founders.⁴² In Kentucky, foreign-born individuals account for five percent of entrepreneurs, though they represent only 3.6 percent of the population.⁴³

The BEAM region's foreign-born population totals about 106,000 people (approximately 69,000 people in Louisville BEAM counties and 37,000 in Lexington BEAM counties.) The region's growth of nine percent in immigrant populations statewide between 2010 and 2014 outpaced national average growth rates. Nevertheless, Lexington's 9.1 percent foreign-born population and Louisville's 6.7 percent trail Atlanta, Charlotte, Raleigh, Nashville, and Columbus. Nearly 74 percent of BEAM immigrants live in either the city of Lexington or the city of Louisville. For comparison, 52 percent of the BEAM region's total population lives in either city. Most foreign-born BEAM region residents come from Latin America or Asia. Mexico is the leading country of origin, followed distantly by Cuba, India, and China.⁴⁴

Foreign-Born Population in Louisville, Lexington, and Peer Cities



41 Arnobio Morelix et al., "The Kauffman Index 2015: Startup Activity | State Trends," SSRN Scholarly Paper, Social Science Research Network, 2015, www.papers.ssrn.com/abstract=2614598.
 42 Stuart Anderson, "Immigrants and Billion Dollar Startups," NFAP Policy Brief March, 2016, www.nfap.com/wp-content/uploads/2016/03/Immigrants-and-Billion-Dollar-Startups.NFAP-Policy-Brief-March-2016.pdf.
 43 Arnobio Morelix et al., "The Kauffman Index 2015: Startup Activity | State Trends," SSRN Scholarly Paper, Social Science Research Network, 2015. Pg.2. www.papers.ssrn.com/abstract=2614598.
 44 U.S. Census Bureau, www.census.gov

Kentucky colleges hosted 8,104 foreign students in 2015, according to the NASFA (formerly National Association of Foreign Student Advisers, now Association of International Educators) Open Doors report. The University of Kentucky in Lexington led the state with over 30 percent of the foreign student enrollment, while the University of Louisville claimed less than 9 percent. Ohio, ranked number eight nationally for its number of foreign students, hosted nearly four and half times as many foreign students as Kentucky in 2015; tenth-ranked Indiana welcomed nearly three and a half times as many as Kentucky. At number 28, Tennessee lags these peers but still comfortably exceeds Kentucky's figures, which place it 30th among U.S. states. China, Saudi Arabia, and India are the top three sources of foreign students in all four states.⁴⁵

BEAM Foreign-Born Population Country of Origin

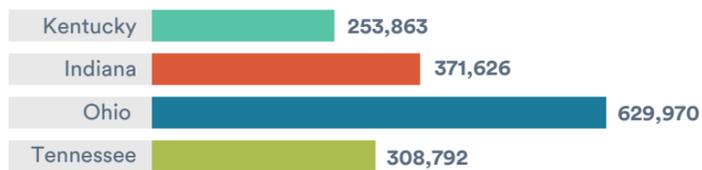
Country of Origin		
COUNTRY	BEAM Region	
Mexico	25,286	23.84%
Cuba	7,581	7.15%
India	6,765	6.38%
China:	5,822	5.49%
China, excluding Hong Kong and Taiwan	5,182	4.89%
Germany	3,266	3.08%
Vietnam	2,886	2.72%
Guatemala	2,854	2.69%
Korea	2,499	2.36%
United Kingdom (inc. Crown Dependencies)	2,476	2.33%
Philippines	2,445	2.31%

45 Open Doors Report on International Educational Exchange, Institute of International Education, 2015.

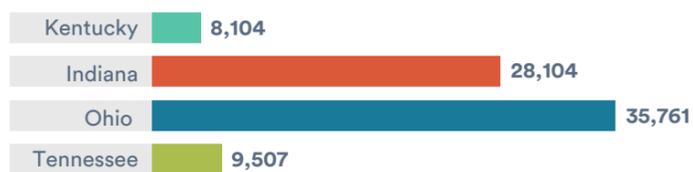
Louisville's Office of Globalization is tasked with encouraging multiculturalism, engaging international residents more fully in the city's economic development, and assisting the resident international population to achieve self-sufficiency and success. This office set a goal in 2016 that the foreign-born will account for at least 12.5 percent of the city's population by 2025. Achieving this goal will require the city to add 42,000 new foreign-born residents and will place Louisville among the top 50 U.S. cities by this measure. A multi-pronged focus on attracting, integrating, and empowering the foreign-born will support this goal. Given that Louisville residents are employed (and employ others) throughout the region, success in this initiative will enhance the workforce far beyond the city's borders.

Foreign Student Population

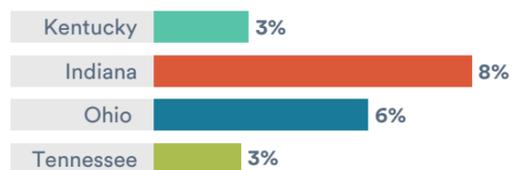
Fall 2014 Total Enrollment



Foreign Students Studying in State, 2015



Foreign Students as Percentage of Total Enrollment



GOAL: Foster an ever-strengthening ecosystem of foreign and domestic firms, prepared to meet the challenges of a 21st century global economy

Objective: Probe key industries for areas of FDI and export growth opportunity that support increased specialization, skills differentiation, and the broad economic goals of prosperity and economic inclusion.

1. Harness business retention and expansion efforts for best M&A outcomes among existing foreign and domestic companies, particularly in the middle market
2. Increase exporting activity among middle market firms
3. Expand foreign direct investment in traditionally strong manufacturing sectors
4. Cultivate foreign direct investment from emerging economies in Asia and Latin America
5. Focus efforts within selected sectors at the intersection of FDI, growth-oriented middle market firms, and high-wage/high-skill jobs

Strategies and Tactics

I. UNLEASH THE GLOBAL POTENTIAL OF THE MIDDLE MARKET

Implement robust programs for business retention and expansion, focused on increasing global engagement of a targeted set of middle market firms.

The middle market represents a prime opportunity for cultivation of exports, M&A, and greenfield activity. This is where most global activity takes place and where the majority of job growth occurs.⁴⁶ The EDO toolkit of counseling, incentives, and networking assistance is influential among middle market firms which, unlike large firms, often do not have similar resources internally or through other connections. The BEAM region will focus on middle market companies in two areas: 1.) the manufacturing industry cluster, with attention to the sectors comprising chemical and life sciences activities; 2.) the business services and IT sectors, which represent the bulk of projected growth in high wage jobs in coming years. The manufacturing focus represents a concentration of high wage jobs within the region's production strength. The business services focus represents an area of some demonstrated success and growing opportunity. These sectors are characterized by a mix of middle market and large firms, both foreign and domestic.

Tactics

- **Implement a targeted business retention and expansion program for the middle market:** Update and expand the existing list of approximately 160 middle market firms, which was originally compiled for BEAM outreach on export growth. Focus on companies with 20 – 350 employees predominantly in manufacturing, chemicals, life sciences, and business services. Concentrate BRE outreach and relationship-building on yearly or biannual meetings or calls, ongoing research on sector and company-specific developments, and questions to company stakeholders about exports and M&A experiences.
- **Connect with M&A firms:** Develop rapid response and specialized BRE practices for the region's newly located or newly acquired firms to detect and respond to unique needs. Incorporate outreach and relationship-building, connection with the parent firm, knowledge of industry trends, and information about unique considerations uniformly into EDO M&A aftercare practices. This information will help ensure local operations remain and grow in Kentucky, and that they can effectively compete with other operations within the global firm for new investment and resources. This enhanced BRE will be carried out by EDOs who have participated in training on how to conduct this process and how it differs from traditional BRE calls.

⁴⁶ Building Scale and Sustaining Growth: "The Surprising Drivers of Job Creation." Gary Kunkle, PhD. Page 2. Feb 2013. Institute for Exceptional Growth Companies.

- **Develop Enhanced BRE Training for EDOs:** Work with EDO partners and outside experts to identify needs and propose training content to Kentucky Association for Economic Development, fostering EDO engagement on the full spectrum of company life cycle issues. Key focus areas will include sharing best practices in BRE, disseminating research about the role of M&A in foreign investment growth, improving education on succession planning, increasing understanding of exports and FDI, and highlighting the key role of the middle market in economic growth.
- **Establish an M&A advisory group:** Convene group of BEAM region bankers, attorneys, commercial real estate brokers, and accountants to advise economic developers on foreign investment and M&A activity in the region. Hold periodic roundtables to discuss strategies, industry trends, and local activity among middle market firms. Incorporate recently acquired and acquiring firms into this advisory group to discuss the M&A process and share insights.
- **Encourage firms to commit to succession planning:** Beginning in the start-up phase, educate leaders of companies to prepare for eventual changes in leadership, ownership, and structure. Partner with existing resources at the University of Louisville, University of Kentucky, and other institutions to help middle market companies understand the significant time horizon required for succession planning. Educate companies about investing in this process to protect owners, employees, customers, and the greater economy. Encourage business development organizations to partner with financial planning resources to hold educational seminars for company owners. Incorporate succession planning questions into BRE activities. Involve the Mayors of Lexington and Louisville (each of whom has a strong business background) to create public service announcements and other messages for the region's business community.
- **Bring financial resources to the effort:** Pursue grant funding assistance for BEAM region SMEs to begin and expand export development.



II. FOSTER HIGH WAGE, SPECIALIZED ACTIVITY IN ESTABLISHED AND EMERGING INDUSTRY CLUSTERS

Cultivate knowledge and innovation-focused activities that advance development of industry clusters and command higher wages.

With a geographic location known for offering low wages, electricity costs, and land prices, the BEAM region has long marketed itself as a low-cost destination for business and manufacturing. As metropolitan areas throughout the world work to secure their place in the 21st economy, the region needs a new approach to differentiate itself, assure long-term commitment from investors, and foster prosperity. It must vigorously cultivate the enduring and hard-won advantages of industry knowledge concentration, high value production, and exceptional human capital to complement geographic advantages. Data suggests the region also needs to build the capacities to become a center for business services for both domestic and foreign firms. Success in this work will be key to achieving future desired growth in jobs and wages.

Tactics

- **Recruit and maintain early career business services professionals:** Recognizing that recent graduates are easier relocation targets than mid-career professionals, market IT and other business services opportunities in the BEAM region to students graduating from colleges and universities within Kentucky and in bordering states. Support Louisville's Office of Globalization, GLI Inc., and other partners to retain graduating foreign students through Optional Practical Training (OPT). OPT permits students to pursue temporary U.S. employment while maintaining their student visa status for up to three years. Support the talent attraction efforts of GLI and others to conduct outreach, connect new arrivals, and enhance the profile of the region. EDOs, companies, and education partners will collaborate to market the region to national professional networks, university career offices, and industry associations.
- **Develop the emerging software/IT industry:** Cultivate new FDI in software and IT services from geographic sources with a demonstrated history of investment in more established industry sectors. Focus initial efforts on Canada, because of its history of services investment in this region of the country. Review industry and economic changes for trends in M&A. Maintain close contact with company leaders. Support scaling of workforce programs to meet evolving employment needs.

- **Partner with UPS to expand "High Value, Small Package" logistics focus:** Support UPS business recruitment focus on end-of-runway testing and analysis services for the healthcare, food and beverage, and biotech sectors. BEAM representatives and UPS will work to identify, vet, and approach firms of interest to build on the nascent success of this model. Collaboration on industry research, outreach efforts, and contacts networks will facilitate location of high-skill, high-wage jobs in the region from foreign and domestic sources.
- **Focus on chemicals and life sciences sectors:** Foster growth among chemicals and life sciences firms, which represent high skill and high wage jobs. Pursue green chemistry firms, which represent an evolving specialization within this massive sector of U.S. production. Foster expansion and new locations of responsible corporate investments, such as those made by Clariant, BASF, and others in the region. Apply understanding gained from robust BRE activities in the region to concentrate on new FDI, as well as M&A and succession planning among middle market firms. Target top foreign market sources in these sectors, based on their demonstrated FDI activity in this sector. Build relationships and awareness of Kentucky and BEAM region in these areas.



III. FOCUS ON KEY GLOBAL GEOGRAPHIC TARGETS FOR FDI AND EXPORTS GROWTH

Expand on successful relationships with Japan and Germany to strategically focus on 3 – 5 additional markets, including other top FDI sources and emerging markets.

The BEAM region trade partners will foster coordinated metropolitan engagement to recruit industry cluster-supporting activity in priority markets. Activities will complement ongoing efforts at the state level and expand focus to additional areas of opportunity.

Tactics

- **Prioritize markets for proactive engagement:** Concentrate efforts among FDI sources (including Germany, Japan, UK, Switzerland, Canada, and Italy) with a history of investing in priority sectors in Kentucky and neighboring states. Narrow the focus by the degree to which these sources support more than one identified investment area and by overall cost of building and maintaining relationships, relative to the potential of market. Review emerging sources of investment (including Brazil, India, and China) by the same criteria. Preliminary research suggests that Switzerland, Canada, China, and the UK are strong sources of chemical sector investments in this part of the country. Business, software and IT services are top investment categories for some of these same countries, though not in Kentucky or its surrounding states.
- **Make a data-based selection of 2 - 3 established markets for renewed focus and 1 – 2 other markets for proactive engagement.** Build a list of companies that fit strategic, cluster-specific targets by geography. Engage elected officials, businesses, and trade partners to retain, grow, and diversify investment from these sources. Utilize relationships with existing business to deepen sector-specific understanding of these markets. Elevate middle market awareness of investment and export opportunities in these markets through trade partner-led education, company outreach, travel, and trade missions. Develop a portfolio of specific opportunities, including properties and companies for sale, EB-5 projects, etc.
- **Evaluate long-term possibilities of China:** Explore the advantages of name recognition and the nascent partnerships afforded by recent Shandong-based Haier's acquisition of GE Appliance Park and Guangdong-based Apex Technology's acquisition of Lexmark to understand additional investment possibilities in these two regions. Coordinate outreach efforts among BEAM partners and companies to maximize the region's trade and investment profile.

- **Collaborate to serve future investors:** The World Trade Center will lead provision of trade services to foreign middle market companies that need better access to the U.S. market (distributors, agents, customers, etc.) but are not yet ready to invest. Trade partners will provide referrals to these services as they encounter foreign companies with these needs. Use this emerging network of clients to identify and cultivate future investors.
- **Bring new resources to market exploration efforts:** Pursue grant funding and address budget allocations to support targeted exploration of selected FDI markets by economic development organizations. Utilize expanding resources of SelectUSA to access research and participate in yearly summits.



IV. BUILD THE WORKFORCE TO SUPPORT INCREASINGLY HIGH VALUE ACTIVITY IN INDUSTRY CLUSTERS

Support and expand degree attainment programs, stackable certifications, apprenticeships, and career path awareness-raising efforts among current and future workforce.

The BEAM region needs a workforce that meets the needs of companies today and evolves in tandem with ever-more differentiated and sophisticated industry clusters. To meet the demand for skills and people, the region needs to expand the technical and professional education of its resident population, recruit talent from outside the region, and increase retention of workforce from all sources.

Tactics

- **Replicate and expand existing programs:** Continue industry-led expansion of KY FAME to additional manufacturers and examine the possibility of expanding this apprenticeship model to other industries. Support expansion of Lexington's Awesome Inc. U's coding program, Code Louisville, the Software Guild, and other IT training programs to address the regional (and national) shortage of this workforce. Support industry-led focus on identification of skills gaps and communication of training needs to workforce educators, students, and workers.
- **Attract and retain international students:** Continue ongoing efforts by the University of Kentucky, University of Louisville, and others to expand recruitment of foreign students to Kentucky's universities and colleges, thereby increasing education exports and enriching the region with global talent. Support the U.S. Commercial Service's initiative to assist colleges and universities to market to students overseas. Support connections among universities and employers to promote job fairs and other opportunities in the region for foreign students. Work with Louisville's Office of Globalization and other partners to help companies connect with recently graduated students for Optional Practical Training (OPT) opportunities.
- **Attract and retain new global talent:** Work with Louisville's Office of Globalization, GLI, and other partners to disseminate information tailored for different ethnic groups to local recruiters and human resources professionals. Market the region and specific communities to international and national media outlets that serve global audiences. Support networking and social opportunities to connect international communities with the broader community.

- **Build the professional skills pipeline for international business expansion:**

Expand the World Trade Center's professional global certification program, which serves the region's businesses with education about exporting. Develop a next level professional class for more complex and/or granular level focus on in-demand topics. Partner with colleges and universities to expand the World Trade Center's successful university global certification program to more students throughout the region. The program is currently available at the University of Kentucky and Bellarmine University.



Measuring and Tracking

The research of Brookings and others makes clear that foreign direct investment is strongly linked with metropolitan success in building and growing innovative production centers. However, experts are less clear on how to determine which indicators accurately capture progress against the broad economic development goals which FDI is credited with supporting. There are several key difficulties with selecting, measuring, and tracking this data.

First, there is no single method by which to capture all FDI activity. Brookings and others used complex and expensive methods to produce the data that undergirds their findings. It is beyond the purview and budgets of most economic development organizations to produce this kind of research once, much less to repeat it. Brookings itself does not plan to repeat its study, which presents data through 2011.

Secondly, achieving any proposed goal to increase the overall number of foreign acquisitions does not necessarily guarantee an improved local economic picture; acquired firms may be moved or closed. A goal to increase greenfields might be met by opening new retail establishments, which generally do not carry the wage, skill, research, or spin-off benefits of advanced industries or certain business services. A goal to increase the percentage of foreign-owned firms as a percentage of all firms—even given significant foreign investment activity during the year in question—could be mathematically impossible to meet if domestic activity increased the percentage of U.S.-owned firms during the same year.

A successful middle market-focused FDI strategy ultimately belongs to the broader goal of helping firms achieve sustained growth. Firms do this in a variety of ways. Whether or not a company ever engages in M&A or is part of an FDI transaction is not the core issue. Rather, the essential question is whether firms are prepared with the universally valued attributes of relevant skills, demonstrated growth history, evolving knowledge base, and financial resources to consider the various growth strategies that require these attributes. The job of economic developers is to assist companies to develop these strengths so they may reasonably access those opportunities that best advance their overall goals.

Given the demonstrated importance and needs of the region's middle market firms, efforts to track and foster FDI will be carried out in the context of middle market-supporting practices. A group of approximately 200 middle market firms in the region will be targeted for enhanced BRE and education on export development, M&A, succession planning, supply chain efficiency, workforce training, and a host of other inputs that help foster a firm's repeated expansions over time. Baseline data will be collected on key metrics that point to the growth trajectory of these companies and help tailor effective BRE. The region will track new and announced investments from target countries in identified priority sectors to gauge advances in areas of geographic focus. Firm-level and sector-level results will be tracked over time.

Policy Recommendations

Several policy concerns affect efforts to grow FDI in the BEAM region, but lie outside the direct control of local and regional stakeholders. Changes in the following areas of focus would support this work and advance the overall vision for the region:

Immigration Reform: Federal visa restrictions and immigration hurdles hamper efforts to retain the region's foreign-born population after graduation from educational institutions and restrict recruitment of foreign-born talent with needed skillsets.

Buy American Legislation: Deter "Buy America legislation," which sends a message at odds with the dedicated business recruitment efforts happening across the state.

Incentives: A state-level incentive program to support pre- and post-acquisition middle market company growth could reward companies for job retention and the maintenance of substantial operations in the region following an M&A transaction. Such a program would provide a valuable tool for acknowledging and influencing the substantial role of M&A in the region.

Conclusion

With forward-thinking leadership in Kentucky's two largest cities, the BEAM region has followed a trend of increasing commitment at the metropolitan level to the goals that define successful 21st century cities. By building on long-standing strengths and candidly addressing vulnerabilities, Mayor Fischer and Mayor Gray are positioning their cities and the region to participate even more fully in the world economy.

Middle market companies are at the heart of this work and success begins at home. By cultivating the inputs of strong firms—innovation, education, adaptation, excellence, and global competency—we build industry sectors with the resilience to fulfill the region's aspirations for prosperity and advancement. The BEAM region's long-standing FDI investments must continue to be supplemented by newer M&A investments, by investments from new and historically strong geographic sources, and by advances in emerging and established industries. Pragmatic attention to the needs of firms must help them position for eventual changes in ownership, including acquisition. Such actions position economic developers to court a best case scenario, in which new owners of a thriving firm commit to its continued growth in the region.

New and collaborative approaches to FDI must share a cohesive vision of prosperity, undergirded by the region's rich performance in manufacturing and expanded by the possibilities for high wage employment growth in software, IT, chemicals, life sciences, business services, and other areas. The stakes have never been higher and the opportunities have never been more plentiful. New partners await, ready to take their place alongside the substantial investment successes that have already indelibly marked the vibrant region we know today.

About the Global Cities Initiative

The Global Cities Initiative (GCI) is a joint project of the Brookings Institution and JPMorgan Chase, designed to foster data-based examination of key elements of 21st century metropolitan competitiveness. GCI activities include producing data and research to guide decisions, fostering practice and policy innovations, and facilitating a peer-learning network. The Global Cities Initiative is chaired by Richard M. Daley, former mayor of Chicago and senior advisor to JPMorgan Chase. It is directed by Amy Liu, vice president and director of the Brookings Metropolitan Policy Program.

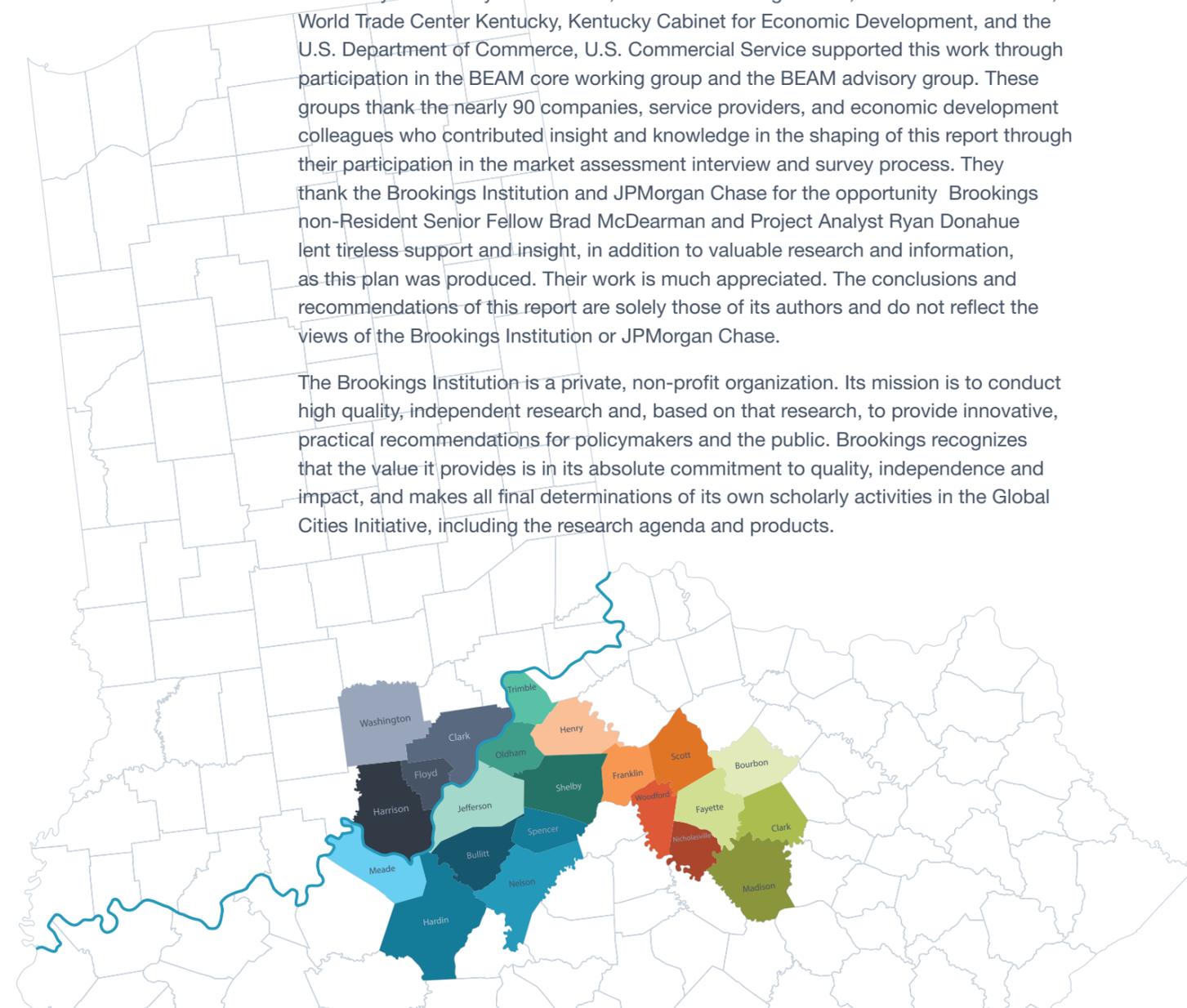
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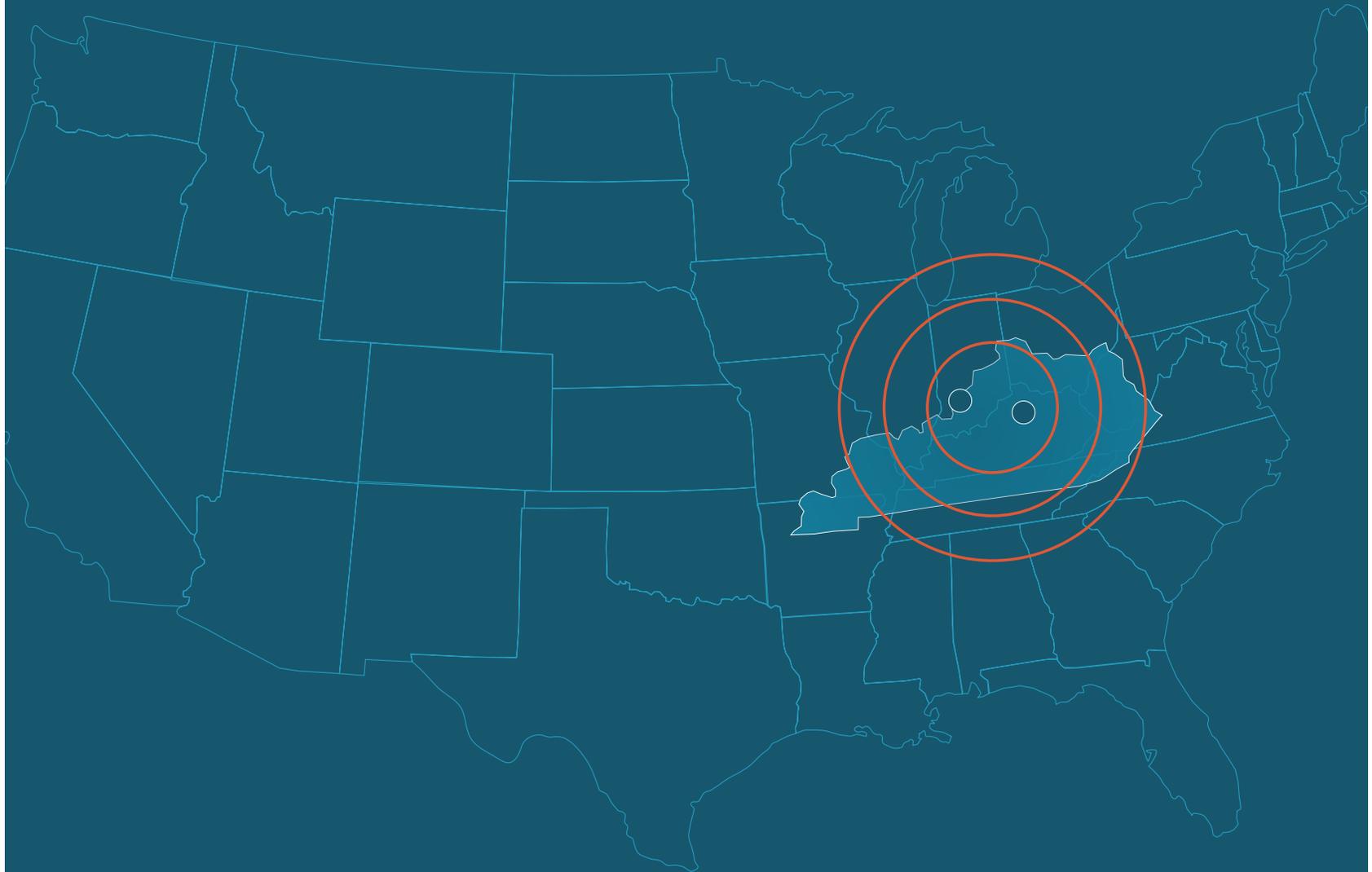
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*The complete BEAM Global Trade and
Investment Plan is available online.*