

Michigan's Urban and Metropolitan Strategy

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Business Leaders for Michigan
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This strategy was developed with significant input from metropolitan stakeholders throughout the state. The process involved meetings with regional leaders representing local municipalities and economic development organizations, several meetings with a small advisory group and a philanthropic leaders group, and individual meetings with over one hundred municipal leaders, state agency staff, foundations, business leaders, and nonprofit organizations. These discussions were used to identify priorities for urban and metro economic revitalization, evaluate best practices, and understand applicable state policies and programs. We are very grateful for the time, energy, and passion that all of these people brought to the process of shaping this strategy.

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About this Report

Business Leaders for Michigan (BLM) hired Public Sector Consultants (PSC) to outline strategies that the State of Michigan can implement to help its regions and cities achieve their economic and urban development goals. The Brookings Institution Metropolitan Policy Program substantively shaped and contributed to this project under the auspices of the Brookings-Rockefeller Project on State and Metropolitan Innovation, which works to present fiscally responsible state policies and practical, metropolitan-led solutions that leaders can use to create the next American economy.

Working together on this effort, PSC and Brookings have focused on state-level interventions that will support and empower metropolitan areas in their ongoing economic and urban revitalization efforts. This strategy recognizes that much of the heavy lifting regarding urban and metropolitan revitalization must be done at the local level, and that there is an abundance of work focused on local urban revitalization efforts. This strategy is intended to build on those efforts, and make recommendations regarding what the state (and other stakeholders) can do at both the state and metro-specific level to help urban metropolitan areas achieve their prosperity goals.

In developing this strategy, the Brookings Institution Metropolitan Policy Program first developed Economic Condition Assessments for the state's eight largest metro areas. They included economic data for 1980–2009, information that helps Michigan's metropolitan areas understand their strengths in the next economy, and demographic data for the period 2000–2009.

With the Economic Condition Assessments completed, the BLM/PSC/Brookings team solicited substantial input from leaders across Michigan regarding priority areas for state policy support of urban metro areas. As part of the project, the team convened an 18-member Advisory Group consisting of local municipal, economic development, and business leaders, and met with this group on five occasions. We also met several times with a group of philanthropic advisors from ten of Michigan's largest foundations (see Acknowledgments page for a list of advisory and philanthropic group participants). In addition, we hosted two meetings of regional leaders from throughout the state to get further input on ongoing efforts and local priorities.

This strategy is meant to transcend administrations and recommend actions that provide lasting frameworks for the state, local governments, and other partners to align efforts and leverage resources. It is based on feedback received from stakeholders as well as research that included:

- Development of Economic Condition Assessments for Michigan's 14 Metropolitan Statistical Areas (MSAs) that highlight the next economy strengths of Michigan's metro areas (exports, innovation, low carbon), their current economic condition, and key social indicators
- Evaluation of best practices from other states and nations
- Commissioning of a report by Anderson Economic Group on benchmarking key business cost factors that Michigan's state and local governments can influence
- Interviews with over 20 state program managers to evaluate Michigan's existing program and resource tools that are applicable to metropolitan economic revitalization.

Throughout the process, stakeholders encouraged the team to identify goals and recommendations that are focused and prioritized, and avoid the pitfall of trying to address all metro issues. Instead, the strategy is focused on key areas of state support that can shift momentum, have a transformative effect, or change the overall market in a way that enables metropolitan areas to individually and collectively strengthen their economies.

Executive Summary

The right strategy for Michigan will help the state achieve three goals essential to the health of its cities, its metropolitan areas, and the state as a whole:

- Michigan strengthens the link between innovation and manufacturing to increase regional exports and attract global investments.
- Michigan supports strong regional systems to train existing workers and welcome new ones to fuel economic growth.
- Michigan makes targeted investments that leverage distinct assets in urban and metropolitan areas to transform regional economies.

WHY A METROPOLITAN STRATEGY?

We were asked to create an urban strategy for Michigan. The kind of strategy that's most likely to strengthen urban areas in a global, networked, rapidly changing economy will focus on:

- **The right assets.** Traditional urban policy has focused exclusively on the physical and market failures of cities, but urban areas will achieve better economic recovery when they build on their strengths—their essential, economic reason for being and their unique mix of institutions, amenities, and opportunities.
- **The right geography.** Metropolitan areas are the true units in the global economy, and cities are one economic node within metropolitan areas. Metropolitan prosperity drives city prosperity. There are reasons to pay particular attention to central cities within a metropolitan context: central city decline and wide disparities between city and suburban prosperity are associated with slower regional income growth, and job gains in a central city have a positive effect on housing prices in the suburbs. But fundamentally, the economy tends to be organized around metropolitan areas.
- **The right strategies.** Understanding the economic assets of urban areas and their metropolitan context drives the policy recommendations that help leverage the special assets of urban and metropolitan areas in Michigan. In some cases, these assets are widely shared, and in other cases, they are unique to particular metropolitan areas.

Michigan's assets are concentrated in its metropolitan areas. The state's top 14 metropolitan areas are home to 82 percent of the population, 84 percent of the jobs, 86 percent of state gross domestic product, 85 percent of exports, 91 percent of science and engineering jobs, and 85 percent of postsecondary-degree holders.

Michigan's metropolitan areas are particularly strong in critical elements for the next economy. This next economy will be oriented toward **innovation, particularly in the manufacturing sector**, to spur growth through ideas and their deployment. The next economy will demand and reward **global engagement**, including **exports** to take advantage of growing global demand, and the ability to attract **global investment**. The next economy will be powered by **low-carbon technology, processes, and products**. And, the next economy will provide **greater opportunities** for workers at all skill levels, including workers who want to immigrate to Michigan.

Michigan's metropolitan areas are positioned to succeed in the next economy because of their strong history in manufacturing and innovation, significant share of Michigan's existing export

economy, high concentration of global talent and investment, and substantial inroads on the production side of the low-carbon economy.

- Michigan's metropolitan areas are where innovation prowess meets manufacturing experience. Ninety percent of the state's high-tech industry employment and 80 percent of its advanced manufacturing jobs are in metropolitan areas. Six Michigan metropolitan areas had a higher number of patents per 1,000 workers from 2001 to 2010 than the average U.S. metropolitan area.
- Metro innovation and production strength shows itself particularly in aspects of the clean economy. Detroit ranks fourth among large metropolitan areas in electronic vehicle technology specialization, and Grand Rapids ranks second for green consumer products production and development. Jackson and Bay City are especially strong in innovations in biofuel and wind energy technology. Seven of Michigan's metropolitan areas meet or exceed the national average for intensity of clean jobs.
- Michigan's metropolitan areas are also exceptional at producing goods and providing services that are in demand abroad. Of the 20 largest metropolitan areas in the United States, Detroit is first in terms of export intensity (the share of its output that is exported). Grand Rapids ranks tenth among the 100 largest U.S. metropolitan areas in terms of export intensity. Ten of Michigan's 14 metro areas are more export-intense than the U.S. average.
- Michigan's metropolitan areas are home to strong and emerging industry clusters and powerful anchor institutions like universities, medical centers, and research institutes.

Michigan also has some hurdles to overcome.

- The growth of the working-age population in 13 out of 14 metropolitan areas is slower than the national average, and the working-age population in cities in particular has low levels of educational attainment. As of June 2011, nine of Michigan's 14 metro areas had an unemployment rate above the national average of 9.3 percent.
- Michigan's metropolitan areas have very few foreign-born residents, although those foreign-born residents show impressive educational attainment when compared to immigrants nationwide. Foreign-born residents in 12 of Michigan's 14 metros, including smaller metros such as Saginaw, Niles, Monroe, and Bay City, have rates of graduate or professional degree attainment higher than those of foreign-born residents nationwide.
- Many of Michigan's metropolitan areas do not leverage the power of their anchor institutions and the clusters of firms throughout the metros so that these anchors and clusters spark additional job creation, innovation, and distinctive, vital physical environments.
- Michigan's state leaders have tended to spread funds for revitalization or economic growth evenly around the state, rather than focusing on game-changing investments in a small number of places.

RECOMMENDATIONS FOR ACCELERATING MICHIGAN METROPOLITAN ECONOMIC GROWTH

Given this combination of strengths and weaknesses, Michigan needs a strategy that will help the state achieve three goals essential to the health of its cities, its metropolitan areas, and the state as a whole:

- Michigan supports strategies to strengthen the link between innovation and manufacturing to increase regional exports and attract global investments.

- Michigan supports strong regional systems to train existing workers and welcome new ones to fuel economic growth.
- Michigan makes targeted investments that leverage distinct assets in urban and metropolitan areas to transform regional economies.

What are the specific strategies that Michigan leaders—state elected officials, mainly, but also philanthropic, civic, private-sector, and local elected leaders—can pursue to realize these goals?

Goal 1: Michigan strengthens the link between innovation and manufacturing to increase regional exports and attract global investments.

- Reorient the 21st Century Jobs Fund to include manufacturing and innovation, particularly among small manufacturers.
- Create a strong foreign direct investment (FDI) strategy to attract innovative firms that fill gaps in key manufacturing clusters.
- Help small manufacturers and service businesses increase exports through robust export assistance, promotion, and financing.

Goal 2: Michigan supports strong regional systems to train existing workers and welcome new ones to fuel economic growth.

- Use existing workforce dollars to drive regional workforce strategies that match cluster strengths.
- Seize the opportunity to demand changes in federal workforce laws.
- Help highly educated immigrants gain Michigan professional certifications.

Goal 3: Michigan makes targeted investments that leverage distinct assets in urban and metropolitan areas to transform regional economies.

- Support a small number of urban and metropolitan industry clusters with grants tailored to the specific needs of emerging, existing, or advanced clusters.
- Designate one to three new “urban innovation districts” that connect innovation-generating anchor institutions with infrastructure, housing, and amenities, and support them with a 21st Century Places Fund.

Michigan's Urban and Metropolitan Strategy:

An Overview

Michigan, like the rest of the nation, is suspended between recession and recovery. Michigan had the second-worst recession among the 50 states and the District of Columbia.¹ The state's unemployment rate is 9.8 percent, higher than the national average of 8.6 percent (Bureau of Labor Statistics 2011). But there is also good news. Michigan has the second-strongest post-recession recovery, trailing only North Dakota.²

As the recovery makes achingly slow but hearteningly steady progress, the challenge for policymakers and others is not only to bring down the unemployment rate, but also to better leverage our key assets to compete globally. The pre-recession economy was driven by consumption, and that consumption was fuelled by dangerous amounts of debt. The next economy will be powered by production, and will have four key characteristics: higher exports, to take advantage of rising global demand; low-carbon technology, to lead the clean energy revolution; innovation, to spur growth through ideas and their deployment; and greater opportunity, to create jobs for people with a wide range of skills.

Metropolitan areas and the cities that anchor them are the driving force of the next economy in Michigan, in the United States, and across the globe. Eighty-four percent of Americans live in metropolitan areas, and 91 percent of U.S. gross domestic product (GDP) is generated in these population and economic powerhouses. Metropolitan areas are home to 85 percent of U.S. exports, 89 percent of science and engineering jobs, and 93 percent of adults with postsecondary degrees. Within metropolitan areas, pragmatic leaders—in government, universities, philanthropy, and the private sector—are developing strategies for growth that are grounded in local realities and connected to regional opportunities. These leaders know that metropolitan areas can drive recovery and are working to strengthen these vital economic engines.

Michigan can flourish if it understands the power of its cities and metropolitan areas to deliver the next economy, which will grow jobs in the short term and drive prosperity over the long haul. To that end, this strategy puts forth recommendations to achieve three metro economic revitalization goals.

- Michigan strengthens the link between innovation and manufacturing to increase regional exports and attract global investments.
- Michigan supports strong regional systems to train existing workers and welcome new ones to fuel economic growth.
- Michigan makes targeted investments that leverage distinct assets in urban and metropolitan areas to transform regional economies.

¹Brookings analysis of data from Moody's Analytics, U.S. Bureau of Labor Statistics, and the Federal Housing Finance Agency. Rankings combine four key indicators: (1) percentage change in employment, (2) percentage point changes in the unemployment rate, (3) percentage change in total state economic output, and (4) percentage change in housing prices. Performance rankings during the recession measure changes in employment, output, and housing prices from the state's pre-recession peak quarter to its trough quarter; unemployment rate change is measured from September 2008 to September 2010. Performance rankings for the recovery measure changes in employment, output, and housing prices is from the trough quarter to the third quarter of 2011; unemployment rate change is measured from September 2010 to September 2011.

² Ibid.

This strategy builds on the very real assets that Michigan's metropolitan areas already have: their export orientation and proximity to the nation's largest trading partner; their innovative institutions and industries, including manufacturing; and their skilled workforce and well-educated immigrants.

METROPOLITAN AND URBAN STRATEGIES FOR A STRONGER MICHIGAN

This discussion of the strengths of metropolitan areas in the next economy may strike some as going beyond the purview of an urban strategy. Safe streets, attractive amenities, and a good business climate are absolutely necessary for urban areas to flourish, but they are not sufficient. State action to strengthen urban areas in a global, networked, rapidly changing economy will also have to address:

- **The right assets.** Michigan's central cities and metropolitan areas, despite the huge challenges that beset many of them, are home to assets that matter in the next economy: universities, medical centers, cultural institutions, waterfronts, unique transportation infrastructure, walkable downtowns and neighborhoods, and innovative and export-oriented business clusters. They also are home to strong economic development institutions such as the Right Place, Detroit Economic Growth Corporation, Saginaw Future, Prima Civitas, and numerous others. While traditional urban policy has focused exclusively on the physical and market failures of cities, urban areas will achieve better economic recovery when they build on their strengths—their essential, economic reason for being and their unique mix of institutions, amenities, and opportunities.
- **The right geography.** Metro areas, which are economically integrated collections of cities, suburbs, and often surrounding rural areas, are centers of high-value economic activity in their respective nations and worldwide. They form the fundamental bases for national and international economies. Housing, labor, and transportation markets operate at the metropolitan scale rather than the local (Brookings and LSE Cities 2010). The fates of cities and their metros tend to rise and fall together (Vey 2007). A 2007 Brookings Institution study, *Restoring Prosperity*, found that 70 percent of economically “weak” older industrial cities are in “weak” metropolitan areas; it is quite rare for a weak city to be surrounded by a strong metropolitan area, or for a strong city to be set in a weak metropolitan area. There are reasons to pay particular attention to central cities within a metropolitan context: central city decline and wide disparities between city and suburban prosperity are associated with slower regional income growth, and job gains in a central city have a positive effect on housing prices in the suburbs.³ But fundamentally, strong cities and suburbs depend on strong economies, and the economy tends to be organized around metropolitan areas. For this reason, this strategy focuses largely on metropolitan areas, rather than cities alone.
- **The right strategies.** Traditional urban policy has focused on housing and community development. Metropolitan-oriented policy focuses on broader issues like trade, workforce,

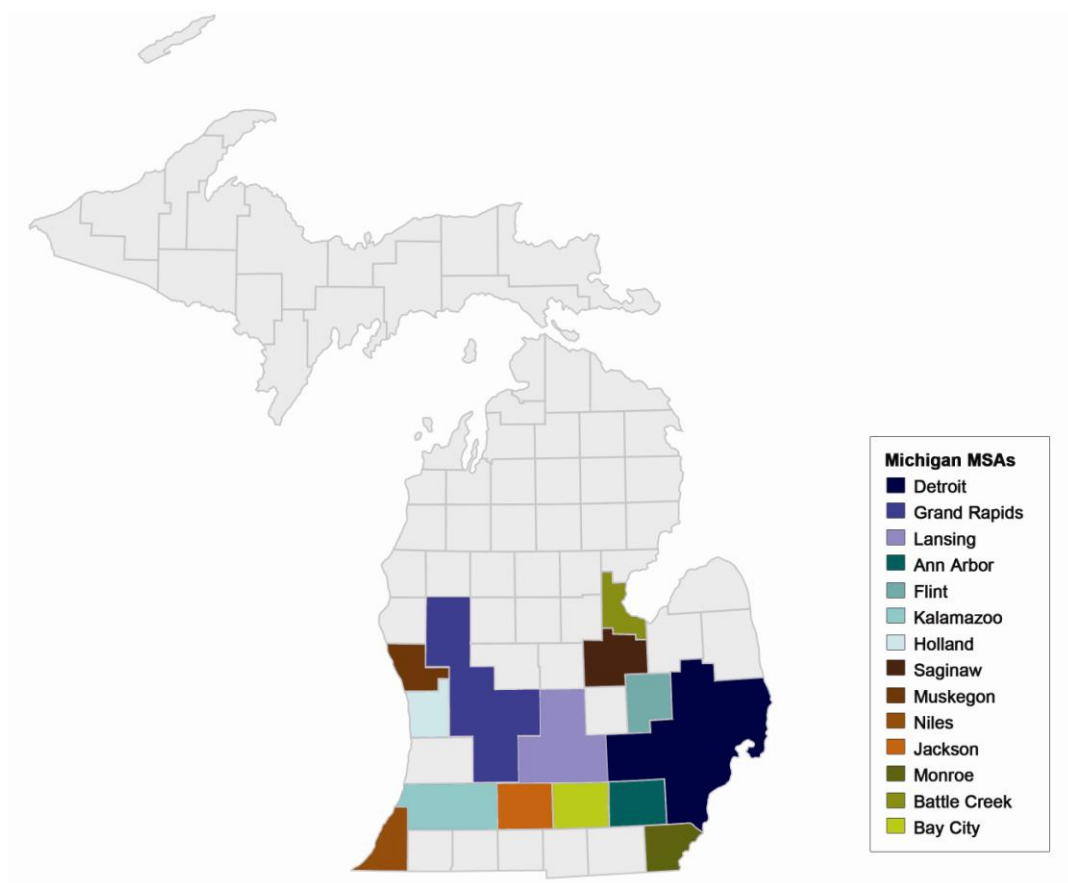
³ See for example: Richard P. Voith, “City and Suburban Growth: Substitutes or Complements?” *Business Review* (September/October, 1992: 21–33), “The Suburban Housing Market: The Effects of City and Suburban Job Growth,” *Business Review* (November/December, 1996), and “Do Suburbs Need Cities?” *Journal of Regional Science* 38(3) (1998): 445–464; H.V. Savitch et al., “Ties That Bind: Central Cities, Suburbs, and the New Metropolitan Region,” *Economic Development Quarterly* 7(4) (1993): 341–357; Larry Ledebur and William R. Barnes, *All In It Together: Cities, Suburbs, and Local Economic Regions* (Washington: National League of Cities, 1993); Edward W. Hill and John Brennan, “America's Central Cities the Location of Work,” *Journal of the American Planning Association* 71(4) (2005): 411–432; all cited in Jennifer Vey, *Restoring Prosperity*.

and innovation to leverage the special assets of metropolitan areas. An understanding of the economic strengths, as well as weaknesses, of metropolitan areas drives the policy recommendations in this report. In some cases, these assets are widely shared; in other cases, they are unique to a particular urban or metropolitan geography.

MICHIGAN'S METROPOLITAN AREAS IN THE NEXT ECONOMY

Michigan is a metro state, driven by the concentration and agglomeration of powerful assets in its major cities and metros. Michigan's assets are concentrated in its metropolitan areas. The state's 14 metropolitan areas are home to 82 percent of the population, 84 percent of the jobs, 85 percent of exports, 85 percent of postsecondary degree holders, 86 percent of state GDP, and 91 percent of science and engineering jobs (see Exhibit 1).

EXHIBIT 1. Map of Michigan's 14 Metropolitan Areas

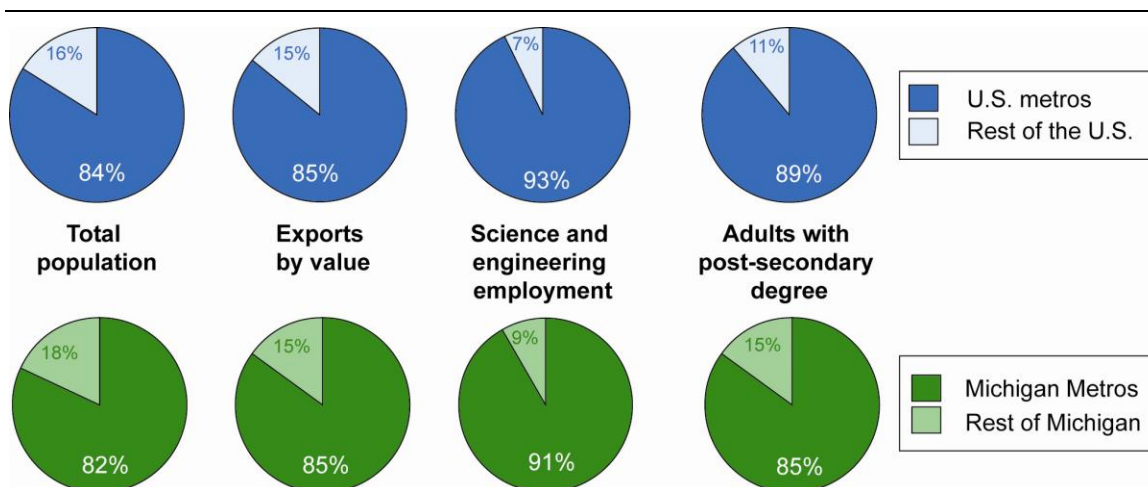


Source: Public Sector Consultants, based on U.S. Census Bureau data.

As a recent Brookings report states, “The economic future for states hinges largely on the performance of their metropolitan economies, which bring together the innovative firms, educated workers, and critical infrastructure that will propel the next wave of U.S. economic growth” (Berube and Nadeau 2011). State leaders must advocate for and adopt a strategy to strengthen Michigan's urban and metropolitan areas because Michigan's overall prosperity hinges on the vitality of its urban and metropolitan areas.

Michigan's two largest metropolitan areas, Detroit and Grand Rapids, by themselves, are the home of the majority of the state's people, jobs, economic output, exports by value, highly educated workers, and scientists and engineers. Michigan's metropolitan areas, taken together, also concentrate an outsized share of assets when compared to their population. Exhibit 2 illustrates the power of the metropolitan area advantage in the United States and in Michigan.

EXHIBIT 2. U.S. and Michigan's Metropolitan Areas Share of National and State Totals



SOURCE: Brookings Institution analysis of Census population estimates, American Community Survey, Moody's Analytics, BEA, and BLS.

The strengths of Michigan's metropolitan areas will matter tremendously in the next economy. The next economy will be **oriented toward innovation, particularly in the manufacturing sector**, to spur growth through ideas and their deployment. The next economy will demand and reward **global engagement**, including **exports** to take advantage of growing global demand, and the ability to attract **global talent and global investment**. The next economy will be powered by **low-carbon technology, processes, and products**.

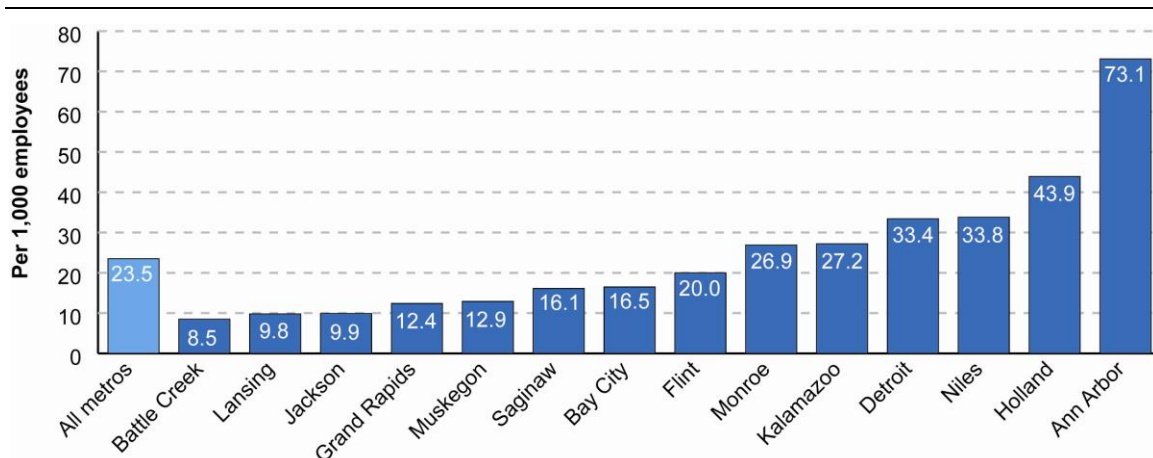
Perhaps most importantly in a state where 9 of 14 metros have unemployment rates above the national average, exporting industries, the clean economy, and an innovative manufacturing sector all offer **opportunities for workers** with a range of skill levels (Katz, Bradley, and Liu 2010; Vey, Austin, and Bradley 2010; Immelt 2009). For every \$1 billion increase in the exports of the industry in which they work, workers in the exporting industries located in one of the top 100 U.S. metro areas earn roughly 1 to 2 percent higher wages. Even workers without a high school diploma who work in export industries earn this premium (Istrate, Rothwell, and Katz 2010). Clean economy jobs generate twice as much value in exports as the average U.S. job, and between 2003 and 2010, clean manufacturers added almost 36,000 manufacturing jobs at a time when the overall economy shed 3.3 million manufacturing jobs (Muro, Rothwell, and Saha 2011).

Michigan's metropolitan areas are positioned to succeed in the next economy because of their strong history in manufacturing and innovation, significant share of Michigan's existing export economy, high concentration of global talent and investment, and substantial inroads on the production side of the low-carbon economy. The facts in the four sections below suggest how Michigan metropolitan areas stack up in the next economy.

Michigan's metropolitan areas are where innovation prowess meets manufacturing experience.

Ninety percent of the state's high-tech industry employment and 80 percent of its advanced manufacturing jobs are in metropolitan areas. Six Michigan metropolitan areas had a higher number of patents per 1,000 workers from 2001 to 2010 than the average U.S. metropolitan area (see Exhibit 3). In 2009, Detroit, Ann Arbor, and Holland all exceeded the national average for ratio of jobs in the STEM (science, technology, engineering, and mathematics) fields.⁴ The link between manufacturing and innovation has been largely ignored over the last 20 years. But, in the words of Andrew Liveris, chairman and CEO of the Dow Chemical Company, "We cannot decouple manufacturing from innovation; we cannot separate what can't be separated" (Liveris 2011, 51).

EXHIBIT 3. Patent Applications per 1,000 Employees



SOURCE: U.S. Patent and Trademark Office courtesy of the Strumsky Patent Database, University of North Carolina at Charlotte.

Manufacturing is inextricably connected to innovation, and Michigan's metropolitan areas tend to do well in both. Eleven of Michigan's 14 metropolitan areas have a higher share of manufacturing jobs than the national average or the U.S. metropolitan average.

In addition to driving innovation for the state, metropolitan-area manufacturing has also yielded strong growth in productivity. Annual output per worker in Michigan's metropolitan-area manufacturing industries was \$116,807 in 2009, a 173.5 percent increase over 1980 levels. By contrast, the average annual output per worker in non-manufacturing industries was \$82,324 in 2009, a mere 12.2 percent increase since 1980. Furthermore, manufacturing directly accounted for 57 percent of metropolitan Michigan's productivity growth during the last 30 years, reflecting both the size and importance of manufacturing to the state's economic prosperity and innovation ecosystem.

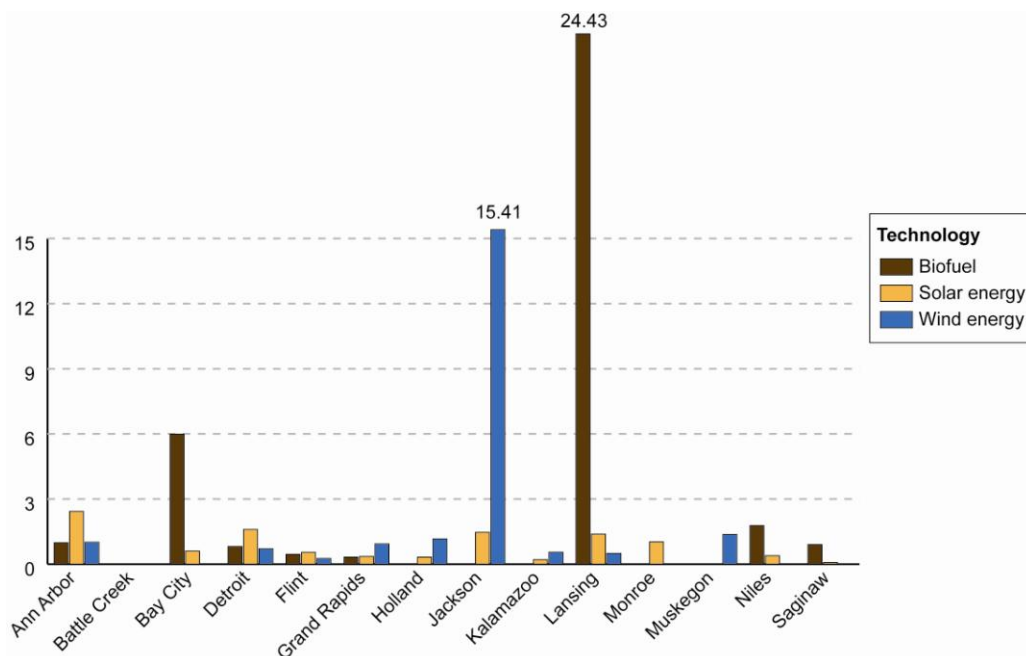
Michigan's advanced manufacturing sector has the potential to serve as a catalyst for continued innovation and economic growth. The future of manufacturing will not be identical to its past, when hundreds of thousands of workers could arrive at the factory gate with no training beyond a high school diploma and move into secure, well-paying jobs. But a strong manufacturing sector is crucial to the state's economy, and will help Michigan stay at the forefront of innovation, fostering job creation and increased productivity in the years ahead.

⁴ Brookings analysis of Moody's Analytics data and BLS Occupational Employment Statistics, 2009.

The manufacturing and innovation strengths of Michigan’s metropolitan areas contribute to and are reflected in their prowess in the emerging clean economy. The clean economy is manufacturing-intensive: almost three times as many clean economy jobs (about 26 percent) are found in manufacturing establishments as jobs in the economy as a whole (9 percent manufacturing). The clean tech subsector of the clean economy—those clean economy industry segments with a median launch year later than 1996, which include battery technologies, biofuels/biomass, carbon storage and management, electric vehicle technologies, fuel cells, geothermal, professional energy services, renewable energy services, smart grid, solar thermal, solar photovoltaic, wave/ocean power, and wind—is particularly innovation-focused.

Michigan’s metropolitan areas have strengths in both the broader clean economy and in clean tech. Detroit ranks fourth among large metropolitan areas in electronic vehicle technology specialization, and Grand Rapids ranks second for green consumer products production and development. According to data from 2001 to 2010, the small metropolitan areas of Bay City, Jackson, Monroe, Muskegon, and Niles all specialize in the research and development of at least one kind of renewable energy technology as reflected in patent applications. Jackson and Bay City are especially strong in biofuel and wind energy technology innovations. Several large metropolitan areas also have developed niches in renewable energy—Lansing has a patent rate in biofuel technology that is 24 times higher than the national average, and both Ann Arbor and Detroit excel at solar technology innovation (see Exhibit 4).⁵

**EXHIBIT 4. Clean Economy Energy Specialization:
Patent Activity as Share of U.S. Metro Average**



SOURCE: U.S. Patent and Trademark Office courtesy of the Strumsky Patent Database, University of North Carolina at Charlotte.

⁵ U.S. Patent and Trademark Office data, courtesy of the Strumsky Patent Database at the University of North Carolina at Charlotte.

Holland, Monroe, and Niles have clean energy job rates that far exceed the national average—more than 7 percent of workers in Holland are employed in clean energy, and more than 5 percent in Monroe and Niles are employed by this sector, compared to a 2 percent national average (Muro, Rothwell, and Saha 2011).

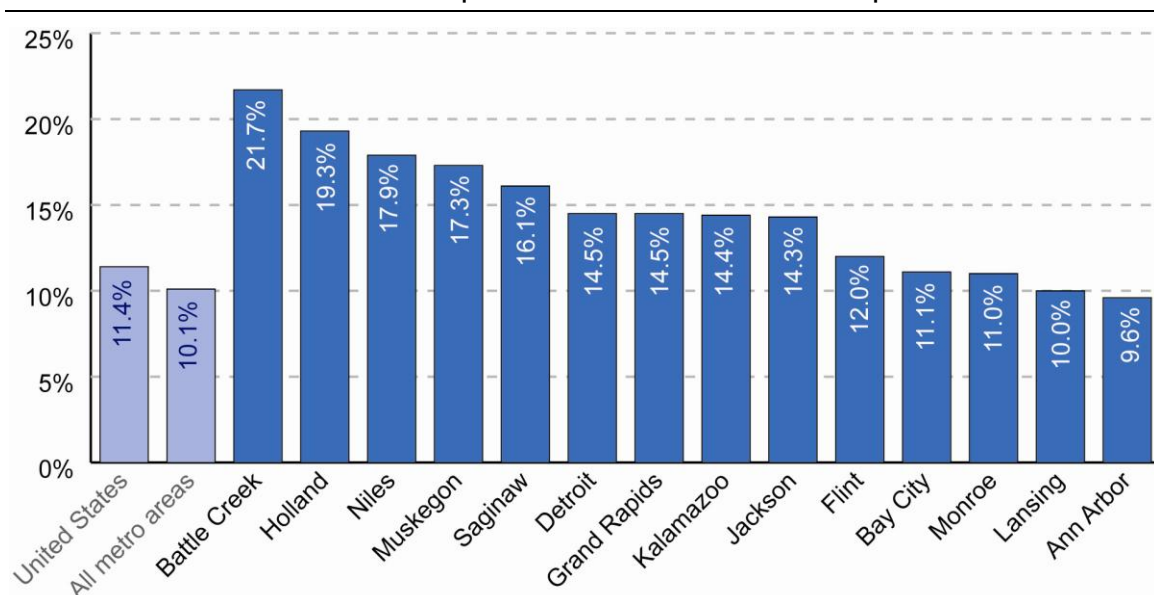
Detroit, Grand Rapids, Kalamazoo, and Saginaw all have a larger share of clean tech jobs than the national average: Saginaw’s clean tech jobs share is ten times the national average.

Michigan’s metropolitan areas are exceptional at producing goods and providing services that are in demand abroad.

Companies looking to engage in the global marketplace must embrace innovation in order to compete. Fortunately, exporting encourages them to make significant investments in new product development because costs are more likely to be recouped if there are vast numbers of buyers across the world (Bradley, Istrate, and Rothwell 2010). Exports are especially critical right now, as rising nations and their growing metros drive global demand for trade and commerce. In 2009, Brazil, India, and China together accounted for more than a fifth of the global economy, surpassing the United States for the first time. According to International Monetary Fund estimates, the BIC share will surpass 27 percent by 2016, reflecting the increasing influence of developing countries in the world economy (Istrate, April 2011).

Michigan’s metropolitan areas drive its export strengths, accounting for 85 percent of the value of goods and services the state sends abroad. Of the 20 largest metropolitan areas in the United States, Detroit is first in terms of export intensity (the share of its output that is exported). Grand Rapids ranks tenth among the 100 largest U.S. metropolitan areas in terms of export intensity. Smaller metros such as Battle Creek, Flint, Kalamazoo, and Muskegon are also highly export-intensive. In fact, ten of Michigan’s 14 metropolitan areas are more export-intense than the U.S. average (see Exhibit 5).

EXHIBIT 5. Exports as a Share of Total Output



SOURCE: Brookings analysis of BEA, USITC, IIE, IRS, and Moody’s Analytics data.

This high export intensity is due in large part to the strength of their manufacturing industries. But Michigan metros are also gaining in services exports. Metros like Ann Arbor are creating new intellectual property; Detroit is providing air transportation services; and Flint is gaining ground in telecommunications service.

Michigan's metropolitan areas are home to many key industry clusters.

Clusters—geographic concentrations of interconnected firms and supporting organizations—are an important element of an “economic gardening” strategy that seeks to create more jobs by growing them at home, rather than poaching them from elsewhere (Muro and Fikri 2011). Clusters hold out the possibility of improved economic performance through the advantages they confer on firms and regions particularly related to innovation and entrepreneurship.⁶ Additional recent research has demonstrated that clusters boost start-up rates in their industries, and have a strong effect on both the employment levels and survival rates of these new firms.⁷ Moreover, clustering has been shown to confer important productivity advantages on firms and industries.⁸ Brookings’ own recent research found that clean economy firms in clusters grew at a higher rate from 2003 to 2010 than isolated ones (Muro, Rothwell, and Saha 2011).

In addition to its automotive cluster, the Detroit metro region has existing or nascent clusters in information technology and biopharmaceuticals, architecture and engineering, and alternative energy (Detroit Works Project 2010 and Anderson Economic Group 2011b). Grand Rapids has identified clusters in advanced manufacturing and alternative energy. Kalamazoo and Portage both have a life sciences and medical devices cluster.

Michigan's metropolitan areas have a fairly high share of skilled immigrants.

In all of Michigan’s metropolitan areas, immigrants comprise a substantially lower share of the population than in metropolitan areas nationally. Although they make up a relatively small part of the population, Michigan’s immigrants show impressive educational attainment when compared to immigrants nationally. Half of Michigan’s metros have a greater proportion of immigrants with a bachelor’s or higher degree than the United States as a whole. About 20 percent of Detroit and Ann Arbor immigrants hold a bachelor’s degree. Michigan’s immigrants have the greatest edge over immigrants nationally in rates of graduate or professional degree attainment. Foreign-born residents in 12 of Michigan’s 14 metros, including smaller metros like Saginaw, Niles, Monroe, and Bay City, have rates of graduate or professional degree attainment higher than those of foreign-born residents nationwide (see Exhibit 6).

⁶ For an overview of clusters, see Muro and Katz 2010.

⁷ See, for example, Delgado, Porter, and Stern, 2010.

⁸ See, for example, Rosenthal and Strange, 2004.

EXHIBIT 6. Immigrant Educational Attainment, 2009

| Metropolitan Area | Some college or associate's degree | Bachelor's degree or better | Graduate or professional degree (includes Master's) | Immigrants as share of population |
|--------------------------------|---------------------------------------|--------------------------------|--|--------------------------------------|
| <i>United States</i> | 18.7% | 15.8% | 11.0% | 12.8% |
| <i>All Metro Areas</i> | 18.7 | 16.1 | 11.2 | 14.3 |
| <i>100 Largest Metro Areas</i> | 18.8 | 16.5 | 11.3 | 16.3 |
| Detroit | 17.4 | 19.9 | 16.6 | 8.9 |
| Grand Rapids | 16.6 | 13.7 | 7.5 | 6.3 |
| Lansing | 18.8 | 15.7 | 37.3 | 5.6 |
| Ann Arbor | 15.8 | 20.5 | 44.4 | 11.5 |
| Kalamazoo | 16.5 | 18.4 | 23.5 | 4.5 |
| Flint | 17.7 | 14.7 | 11.5 | 2.4 |
| Holland | 11.8 | 14.4 | 3.6 | 5.6 |
| Saginaw | 17.9 | 13.6 | 35.0 | 2.3 |
| Niles | 19.4 | 21.1 | 29.5 | 5.5 |
| Muskegon | 20.1 | 12.7 | 19.2 | 2.0 |
| Battle Creek | 26.6 | 22.6 | 16.4 | 4.1 |
| Jackson | 9.0 | 21.8 | 26.3 | 1.8 |
| Monroe | 22.6 | 10.2 | 24.1 | 1.8 |
| Bay City | 24.0 | 17.6 | 25.1 | 1.9 |

SOURCE: U.S. Census Bureau, American Community Survey 1-Year Estimates, 2009

Michigan's metros are asset-rich, but no one can deny that these areas, and particularly the central cities at their heart, have endured a series of crushing economic blows over the past several years, and indeed the past several decades. Between 1980 and 2009, the average growth in economic output for all metro areas in the United States was 126 percent. In Michigan, only Holland and Monroe met or exceeded that mark. Grand Rapids, through aggressive public and private partnership efforts, saw economic growth of 111 percent, putting the area slightly below average while other metros, such as Detroit (35.7 percent), Ann Arbor (30.1 percent), and Lansing (19.1 percent) lagged far behind.

During that same period, the stagnant economy led to very slow job growth. From 1980 to 2009, average job growth for all U.S. metropolitan areas was 44.7 percent. Among all of Michigan's metro areas, only Grand Rapids, Holland, and Monroe met or exceeded this average. Detroit saw a tiny growth rate of 4.6 percent over the three decades and several areas saw a decline in the number of jobs, such as Flint, where jobs fell by 21.8 percent. The state as a whole has lost a million jobs since 2000.

The economic condition assessments prepared as complements to this report⁹ compare the economic growth of Michigan's metros not only to the national average but also with other "peer" and "aspirational" metropolitan areas that have similar populations and industrial compositions. "Peer" metropolitan areas have internal competitiveness factors similar to their Michigan counterparts. Michigan metropolitan areas fare slightly better in this comparison than against the national average numbers cited above. Grand Rapids and Ann Arbor both grew faster than their peers during the same time frame; however, the other 12 Michigan metropolitan areas

⁹ See "About this Report" for a more thorough explanation of the economic condition assessments. These documents can be found at: http://www.brookings.edu/reports/2012/0223_michigan_economy.aspx.

lagged behind peers. When compared to “aspirational” metros, Michigan metros again fall short. “Aspirational” metropolitan areas have internal factors that have enabled their economies to grow more rapidly than those in Michigan. Only Grand Rapids shows greater economic growth than its “aspirational” metros.

The story is roughly the same when Michigan’s job growth rates are compared to its peers. A few of Michigan’s metropolitan areas compare favorably with similar industrial areas, but in general, Michigan’s metros have not gained jobs as fast as other metropolitan areas with a similar industrial legacy over the last 30 years. As America transitioned from an industrial to a service-based economy, other metropolitan areas were able to leverage their existing assets to foster new and expanding knowledge-based industries as other kinds of work moved elsewhere in the United States or offshore. The metropolitan economies of Michigan did not make these same shifts.

Michigan can build on its metropolitan strengths, and help metropolitan areas overcome their weaknesses, in three ways, detailed in the subsequent chapters of this report. In the coming fiscal year, the state should lay the groundwork for strong cities and metropolitan areas using the resources it already has, but in more coordinated, targeted, and purposeful ways: harnessing the private and philanthropic resources along the lines described in this report; and strengthening the relationships among the many public and private institutions (universities, research centers, firms, community colleges, economic development organizations, mayors, and other public officials) that contribute to urban and metropolitan strength in the next economy. In the following year, the state should make some substantial investments in key areas that will drive growth.

The Right Moment for an Urban and Metropolitan Strategy

This is a critical moment for Michigan’s urban and metropolitan areas. The state is using its powers under the Emergency Financial Management Act (EFMA) to address structural economic challenges in its hardest-hit municipalities. Even communities that are not under or on the verge of state financial management face long-term challenges due to declining tax bases and pension obligations (Transformation Advisors 2011).

At the same time, the assets of the urban and metropolitan areas around the state are more important than ever. There is a national recognition that the things that Michigan is good at, such as manufacturing, are important for national economic health. Susan Hockfield, MIT president and co-chair of the Obama administration’s Advanced Manufacturing Partnership, recently stated in a *New York Times* op-ed, “To make our economy grow, sell more goods to the world, and replenish the work force, we need to restore manufacturing—not the assembly-line jobs of the past, but the high-tech advanced manufacturing of the future” (Hockfield 2011). As this chapter has shown, the state’s metropolitan areas are well positioned in the manufacturing sector, in exports, and in the presence of well-educated immigrants.

The tough steps required to arrest the fiscal crises of cities are a necessary precursor for growth. Now, having taken steps to address their shortcomings, state leaders should consider how to support the strengths of Michigan’s urban and metropolitan places. EFMA brings a measure of stability, but it will take strong and sustained economic growth to keep communities fiscally healthy over the long term, and that growth will come from smart, strategic deployment of state resources in support of existing assets.

While this strategy draws on best practices from across the country and around the world, it does not try to make Michigan into the next California or Texas, or Grand Rapids into the next Boise or Boston. It does not shy away from local weaknesses, nor does it present them as the whole story. **Rather, this strategy highlights what Michigan’s metros do well and explains how the state can help them do those things better—for the benefit of all Michiganders.**

Not all of this strategy will be implemented immediately, and it may take years for the benefits to be fully felt. But the opportunities in Michigan's metropolitan areas and the feeling of possibility after years of frustration exist now. The following sections explain in greater detail what state leaders, along with partners in the private, public, and philanthropic sectors, need to do to move Michigan's economic engines into the next economy. While these recommendations may seem bold and expansive in times of fiscal constraint, many of them can be addressed in the short and intermediate term by better aligning and refocusing some existing programs, such as the state's 21st Century Jobs Fund.

Recommendations for Accelerating Michigan Metropolitan Economic Growth

GOAL 1: Michigan Strengthens the Link between Innovation and Manufacturing to Increase Regional Exports and Attract Global Investments

Innovation has been the source of almost all economic growth in the United States, particularly since the Industrial Revolution. It is crucial to the next economy because it will allow Michigan to stay at the forefront of an ever-changing economic world. As economist Paul Romer has noted, “no amount of savings and investment, no policy of macroeconomic fine-tuning, no set of tax and spending incentives can generate sustained economic growth unless it is accompanied by the countless large and small discoveries that are required to create more value from a fixed set of natural resources” (Romer 1993, 345). With the pace of technological transformation steadily accelerating, strong innovation capacity grows more vital by the day. Michigan—and especially Michigan’s metropolitan areas—can play a major part in driving innovation for the nation, provided that the state’s innovation infrastructure is up to the task.

A wide variety of stakeholders, ranging from private firms and financiers to public universities and state and local governments, must work together to create an “innovation ecosystem,” a community of interconnected entities that work together to foster an environment in which innovation can thrive. But the work of innovation involves far more than just idea generation; maintaining a healthy innovation ecosystem also requires a strong manufacturing sector. Although manufacturing represents just 11 percent of the nation’s economy, it accounts for 70 percent of industry-funded research and development and employs more than one-third of the nation’s engineers (Ezell and Atkinson 2011, 14; Helper and Wial 2011, 2). According to a National Science Foundation survey, 22 percent of manufacturing companies reported engaging in product or process innovation in 2008, compared to a mere 8 percent of non-manufacturing firms (Ezell and Atkinson 2011, 14). These innovations not only spur technological advances in manufacturing but also benefit the service sector. Gregory Tasse, senior economist for the National Institute of Standards and Technology, notes that “manufacturing R&D remains the dominant source of service-sector technologies,” with American service-sector companies effectively “importing” technology from the manufacturing sector (Tasse 2009, 6–7).

Over the past few decades, many Americans came to believe that the U.S. economy could focus on R&D and other knowledge-economy services almost exclusively while offshoring manufacturing to developing countries. Adherents of this proposition maintained that American economic prowess could be sustained through idea development alone. Though attractive in theory, in practice this vision proved unsustainable. Not only did American manufacturing go into decline, but as manufacturing moved abroad, so too did innovation. In the electronics sector alone, 90 percent of R&D now occurs in Asia, due in large part to the steady offshoring of manufacturing by American companies since the 1980s (Ezell and Atkinson 2011, 16). The spatial separation between factory floor and research lab inhibited both product and process innovation and, in time, left U.S. companies out of the innovation loop.¹⁰

Some have argued that the sizable job losses Michigan manufacturing has suffered since the late 1970s are evidence of an inevitable trend toward a post-industrial economy. Those who espouse

¹⁰ For further discussion of the strong link between innovation and manufacturing capacity, see Ezell and Atkinson 2011, Tasse 2009, and Pisano and Shih 2009.

this view see Michigan's manufacturers as a holdover from times past rather than a potential source for economic growth and innovation. Unfortunately, this perspective fails to recognize that without manufacturing, Michigan will lose much of its ability to innovate in the future. Furthermore, although the manufacturing sector will not employ as many people as it did in years past, it will continue to be an important source of jobs as industries evolve and new technologies inspire new products and production processes. If the state allows its manufacturing sector to languish, it will soon find itself unable to compete in the global economy.

While manufacturing in Michigan has experienced a lengthy period of decline, the state's metropolitan areas still possess significant manufacturing capability and, by extension, innovation capacity. The state's rich industrial heritage has endowed it with the firms, skilled workforce, educational and medical institutions, advanced manufacturing strength, and other assets essential to helping the nation move toward and successfully compete in the next economy (Duderstadt, Muro, and Rahman 2010, 3).

The recent struggles of the auto industry and the significant decline of manufacturing employment in Michigan have had sizable and, indeed, traumatic effects on the state's economy. At its peak in 1999, Michigan's manufacturing sector accounted for nearly 900,000 jobs, representing one-fifth of all jobs in the state; in the years since, almost half of those jobs disappeared.¹¹ Although these losses have been wrenching for the state's economy and for many Michiganders, Michigan remains one of the most manufacturing-intense states in the country. Manufacturing currently accounts for roughly 12.7 percent of all jobs in Michigan.¹² The state ranks 12th overall in terms of output and eighth in terms of population, but sixth in manufacturing as a share of state GDP and eighth in manufacturing as a share of total employment in 2010 (Zandi 2011).

Furthermore, since the end of the Great Recession, manufacturing has accounted for 43.5 percent of the state's job growth and 53.2 percent of growth in the state's GDP.¹³ According to the Economic Policy Institute, manufacturing jobs tend to create more additional jobs than do jobs in other sectors like business services or transportation (Bivens 2003, 23).

Nowhere is the advanced industry continuum's role in Michigan's economy more evident than in the state's metropolitan areas, which are home to 82.3 percent of the state's manufacturing jobs and 80 percent of its advanced manufacturing jobs. The intertwined relationship between manufacturing and innovation makes Michigan's metropolitan areas the heart of the state's innovation ecosystem, accounting for 90 percent of the state's high-tech industry employment.

In the face of today's competitive economic environment, other states are taking aggressive steps to bolster their metropolitan areas' economic strengths by supporting growth in manufacturing and innovation, workforce development, exports, and immigration. The Southern Growth Policies Board, a nonprofit organization that counts 13 southern states among its members, is exploring how industry-led research consortia and manufacturing workforce development might enhance innovation and growth in the manufacturing sector. The state of Washington is working to boost export levels through its new export initiative. Pennsylvania's Center for Trade Development continues to help state-based businesses expand their engagement in the global marketplace, while the Pennsylvania Center for Direct Investment provides services that draw international companies and investors to the state. Given these and similar efforts, leaders in Michigan's private and public sectors need to work together to determine how best to improve Michigan metros' competitiveness in the global economy.

¹¹ Brookings analysis of Moody's Analytics data.

¹² Ibid.

¹³ Ibid.

Michigan's advanced industries sector has the potential to serve as a catalyst for continued innovation and economic growth. The future of manufacturing will not be identical to the past, when hundreds of thousands of workers could arrive at the factory gate with no training beyond a high school diploma and move into secure, well-paying jobs. But strength in advanced industries is crucial to the state's economy, and will help Michigan stay at the forefront of innovation, fostering job creation and increased productivity in the years ahead. By preserving and cultivating its metropolitan industrial assets, Michigan will be ready to capitalize on new technologies and markets as they emerge. Making manufacturing a state priority and supporting manufacturing and innovation today, by reorienting the 21st Century Jobs Fund now and understanding the direction of state investment for the future, will ensure that Michigan's advanced industries sector can help lead America's transition to the next economy.

Recommendations

Reorient the 21st Century Jobs Fund to include manufacturing and innovation.

Michigan can be the place that reimagines the relationship between manufacturing and innovation, provided that the private sector, the public sector, and nonprofit intermediaries act in concert to make manufacturing and innovation growth a top priority. This requires shifting the emphasis of programs, particularly programs like the 21st Century Jobs Fund, to increased investment in the manufacturing-innovation infrastructure and less investment in individual companies. Ways to do this include increasing funding for programs that expand research partnerships between large manufacturers and universities, investing in training manufacturing-oriented researchers and engineers, and better supporting small manufacturers to take advantage of new ideas and new technologies.

Expanding innovation infrastructure for small and medium-sized manufacturers is particularly important. As Susan Helper and Howard Wial note in a recent paper:

Over the last few decades, suppliers, often small- or medium-sized, have become responsible for designing and making much of the content of manufactured goods. Consequently, innovation in U.S. manufacturing depends increasingly on the capabilities of these firms. Yet most of them do little or no formal R&D and cannot easily take advantage of university-based R&D....

State-supported programs very rarely combine highly applied engineering research with research and education on the problems manufacturers, especially suppliers, face in implementing technological changes. Technological advances are important to improving the performance of U.S. manufacturers but there is little research on the kinds of highly applied problems that are of great importance to a wide range of manufacturers, including suppliers (e.g., joining two kinds of materials together, a key capability in product weight-reduction efforts that reduce energy use). Moreover, the implementation of new technologies often requires changes in management processes, work organization, and relationships between suppliers and assemblers. Manufacturers need to learn about both the technologies and the management/organizational changes they need to make to adopt those technologies (Helper and Wial 2011, 3).

In other words, small manufacturers are essential to keeping the manufacturing-innovation connection strong, yet they have the weakest in-house innovation capacity and the least ability to connect to innovations in universities and elsewhere. Bridging this gap will invigorate Michigan's manufacturing and innovation sector.

While it's true that Michigan has many programs devoted to enhancing innovation and a handful of very strong organizations—such as the Michigan Manufacturing Technology Centers and the Small Business Technology Development Centers—that are devoted to helping small businesses and manufacturers improve their business processes, learn from best practices elsewhere, and gain access to capital, there is no sustained infrastructure dedicated to meeting the need described above. For example, Michigan's 21st Century Jobs Fund, the state's premier technology-based economic development effort, has aimed to build new kinds of industries in Michigan, such as life sciences, alternative energy, and the next generation of automotive and defense. Like similar efforts around the country, such as Ohio's Third Frontier program, 21st Century Jobs Fund has been focused mainly, almost exclusively, on moving ideas from the laboratory through the testing, development, and introduction phases, at which time private capital becomes more readily available. This is a laudable effort, and important role for state governments to play. But in focusing almost exclusively on the commercialization of new technologies, new inventions, and start-up companies, 21st Century Jobs Fund has not addressed the small manufacturing component of the state's innovation infrastructure.¹⁴ Existing small- and medium-sized manufacturers could benefit from an innovation infrastructure focused on their shared needs for guidance in developing and applying new technology, connecting to university research, and bolstering productivity.

Michigan's Small Business Technology Development Centers (SBTDCs) provide consulting services for small businesses and manufacturers looking for access to capital and provide some services for companies looking to apply new technologies. A recent SRI International report praised the SBTDCs for their "exceptionally high impact in business starts and capital infusion" (SRI International 2010). But, it is not their mission to organize consortia of manufacturers to share common problems, or to conduct original research to devise new technological solutions to those problems, nor do they appear to connect small manufacturers with research labs or universities.

Federal programs to strengthen manufacturing also have important gaps. The federal Manufacturing Extension Partnership (MEP) program, represented in Michigan by the Michigan Manufacturing Technology Center (MMTC), is funded jointly by federal and state governments and fees from manufacturers that use its services. MEPs provide technical assistance to small- and medium-sized manufacturers to help them become more productive and competitive. However, MEPs are often underfunded (in part because states have had difficulty meeting their funding obligations during and after the Great Recession), and at the federal level the extension partnership does not coordinate its work with that of the federal laboratories and programs that conduct or fund engineering research on manufacturing methods.

Michigan has the elements of the research infrastructure to support its small manufacturers. For example, the state just announced a \$1.8 million investment in a corporate relations network at six public research universities intended to provide university interns to companies, develop a database of faculty expertise, provide university library resources to small companies, and convene innovation sessions where university experts meet with companies to solve company problems. The University Research Corridor (URC) institutions have already conducted

¹⁴ The Michigan Supplier Diversification Fund is the one aspect of 21st Century Jobs Fund that seems particularly focused on the small manufacturer/supply chain companies, but in terms of actual state dollars invested through 2010, it is among the smallest of 21st Century Jobs Fund's programs. The Supplier Diversification Fund is a loan enhancement program that, as of 2010, had helped seven companies retain more than 1,700 jobs, according to a recent 21st Century Jobs Fund summary report. It does not, nor was it intended to, constitute the kind of infrastructure that could help many more Michigan companies develop or apply new innovations and grow and retain jobs in that way (see MEDC, September 9, 2010).

significant levels of research in support of Michigan's advanced manufacturing industry and have forged partnerships with a number of key players in the manufacturing sector.¹⁵ What are missing are institutions and organizations to build on these elements and deliver them to SMEs (small and medium enterprises).

In the immediate term, state leaders could encourage SMEs to form consortia to promote manufacturing innovation and distribute the costs of worker training required to implement new production innovations. By taking advantage of these economies of scale, Michigan's SMEs will be better positioned to contribute actively to the next economy.

A stronger step would be expanding 21st Century Jobs Fund to include institutions with research capacities analogous to Ohio's Edison Technology Centers. The seven Edison Centers located throughout Ohio assist manufacturers and high-tech companies with research commercialization, technology transfer, incubation services, and production innovation. Each center has a particular focus on a cluster—biotechnology, food technology, advanced materials, welding, manufacturing, or polymers—and links companies with technology experts, university researchers, federal laboratories, and other research institutions (SRI International 2009). What distinguishes these centers from the existing institutions already present in Michigan is their research capacity: many of the centers perform research that addresses the concerns of a range of companies within an industry and foster collaboration among the private sector, federal research labs, and postsecondary institutions. For example, the Edison Welding Institute conducts applied research in joining technologies and owns patents in friction-based processes (Edison Welding Institute 2011). The Edison Materials Technology Center has funded more than \$40 million in cooperative R&D projects and links manufacturers to university and government research (Edison Materials Technology Center 2011). The Edison Centers also serve a critical function as “bridging organizations” that build effective state strategies and linkages between companies, universities, Federal laboratories, and other research institutions. Such organizations are widely recognized to be critical in economic development” (SRI 2009).

While Michigan and other states invested in similar, well-intentioned public-private incubator and research-to-commercialization efforts during the 1980s, such as the Industrial Technology Institute, these efforts ultimately were not particularly successful because they were state government-funded and driven and bureaucrat-led, rather than private sector led, co-investment programs. Ohio's Edison Centers (highlighted here) succeeded because they evolved from an early state-managed model to a market-driven, private sector led organization that marries business needs and opportunities and private sector co-investment with research and new technologies emerging from universities, entrepreneurs and the private sector.

Learning from early lessons, and drawing inspiration from the Edison Centers' evolved model of creating good infrastructure to support commercialization, Michigan leaders could collaborate with other stakeholders, such as universities, community colleges, SBTDCs, MMTC, and the Michigan Manufacturers Association to establish advanced manufacturing research centers that bridge the gap between innovation and adoption of new technologies. A network of advanced manufacturing centers would reduce the barriers to technology creation and implementation that now limit SMEs' ability to embrace the latest technological advances.¹⁶ For a modest annual investment of less than \$10 million per center at the outset, the state could establish one or more centers that specialize in one or more specific areas of advanced manufacturing, which would

¹⁵ Accelerate Michigan, a partnership between the University Research Corridor and Business Leaders for Michigan, has already embarked on an effort to promote “innovation matchmaking” between manufacturers and university researchers.

¹⁶ This recommendation draws directly from Susan Helper and Howard Wial (2011).

complement the state's related 21st Century Jobs Fund investments (Helper and Wial 2011). The centers could require an upfront user fee or private sector co-investment to show market demand. Eventually these centers could shift perhaps as much as 30 percent of their funding to fee-for-service and contract work for particular clients. But consistent state support is critical to success.¹⁷ Moreover, keeping the majority of funding from public sources, rather than clients, would enable the labs to do work that benefits a wide range of companies, and to be part of the broad innovation infrastructure of the state (Helper and Wial 2011).

Create a strong foreign direct investment (FDI) strategy to attract innovative firms that fill gaps in key manufacturing clusters.

FDI will also have a significant positive effect on urban and metropolitan communities, particularly with regard to high-quality job creation. FDI is defined in this way:

FDI occurs when a foreigner invests in an affiliate located in the United States. (An affiliate is a business in which the foreign investor has a substantial interest, defined as ownership of at least ten percent of the voting stock of the business.) This is different from foreign purchases of U.S. equities that do not lead to substantial ownership or purchases of other financial instruments, which are called portfolio investments. FDI is therefore more likely to directly support U.S. jobs than portfolio investment (Payne and Yu 2011).

In addition to creating much-needed jobs, foreign companies buy \$1.5 trillion of intermediate inputs from local suppliers and small businesses and account for 13.8 percent of all American R&D spending, thereby further bolstering urban and metropolitan economies (Organization for International Investment 2009). By fostering stable export growth and encouraging higher levels of FDI, the state can set a clear platform on global economic engagement that will bring great benefit to Michigan's cities and metropolitan areas.

Foreign direct investment is strongly concentrated in U.S. manufacturing. In 2008, manufacturing accounted for more than 42 percent of the total output, and just over one-third of the employees (close to 2 million jobs) of U.S. affiliates of foreign companies.¹⁸ Thirteen percent of the U.S. manufacturing workforce is employed by a U.S. affiliate of a foreign company (Council of Economic Advisers 2011). Given their strong tilt toward manufacturing, many foreign affiliates fit well with the leading sectors of Michigan's economy.

Michigan has a history of significant FDI, or "insourcing." In 2009, foreign-owned companies employed more than 210,000 Michiganders, making the state 10th among the 50 states and the District of Columbia in terms of number of jobs from foreign-owned companies. This is part of a larger national trend; foreign-owned companies employ almost 6 million Americans and pay about 30 percent more than their domestic counterparts.¹⁹ The manufacturing sector leads in both total foreign direct investment and jobs supported by FDI. Given that Michigan's share of FDI-supported employment in manufacturing is well above the national average, the state's existing manufacturing strength represents a significant asset that could be leveraged to attract higher levels of FDI (Anderson and Zeile 2009, 41).

¹⁷ The Ohio Department Services Agency (formerly the Ohio Department of Development) intends to provide roughly 75 percent of the public funding component for the Edison Centers (with the remainder coming from MEP funds). The state also plans to provide export support through the Edison Centers. See Ohio Department of Development, August 18, 2011.

¹⁸ See Slaughter 2011 and Council of Economic Advisers 2011.

¹⁹ These employment statistics refer to majority-owned U.S. affiliates of foreign companies that are U.S. firms with a combined ownership of all foreign parents exceeding 50 percent. See Istrate, June 20, 2011.

As foreign direct investment continues to grow—particularly in industries strong in science and technology—actions taken now to establish a state platform for global engagement will reinforce Michigan metros’ existing strengths in exports and FDI, both of which will contribute significantly to Michigan’s ability to prosper in the next economy.

Currently, Michigan is home to a patchwork of entities that seek to foster growth in FDI. The Right Place, Oakland County, Wayne County, and the Detroit Chamber of Commerce all make foreign direct investment a priority for their jurisdiction or region. But state attention to collecting information on FDI, to making FDI a priority, and to coordinating attraction efforts has been uneven. The state needs a clear, evidence-driven strategy to increase its share of FDI, and to attract foreign investments to fill gaps and strengthen Michigan’s existing clusters. (This would complement the state’s export strategy, described below.)

As a first step, Michigan should understand where it currently stands on FDI. The state’s existing efforts to inventory companies exporting, the goods and services exported, foreign markets engaged, and export levels of regional industry clusters could be expanded to include the geography and intensity of FDI.²⁰ This effort should go beyond an annual listing of international attraction and retention, and include sharp analysis of which counties and which sectors attract FDI and why, and which countries tend to send what kinds of investments to the state. Performance measurement that evaluates growth of FDI-related jobs and increases in tax revenue due to FDI will provide evidence of return on the state’s investment while also highlighting challenges to be addressed. Much of this information can be collected at little cost to the state by forging partnerships with state and regional economic development offices, university research offices, businesses, civic partners, and other stakeholders already engaged in export and FDI data collection and analysis. This information could then be included in the state dashboard, which would affirm the state’s prioritization of FDI attraction while also providing the means to track progress over time.

Michigan should also identify FDI support offered by federal programs and regional economic development entities. All of these organizations could be co-authors of a strategy to coordinate, support, and amplify these groups’ activities. While Michigan has already begun this process in the field of exports, it should engage in a similar effort for FDI promotion. A clear picture of the resources available to help Michigan companies boost export levels *and* secure FDI will facilitate more collaborative approaches that take full advantage of the expertise of all organizations involved.

This baseline data on FDI and existing attraction efforts can inform a statewide, region-driven plan to build on these strengths and target business attraction efforts intelligently.

Help small manufacturers and service businesses increase exports through robust export assistance, promotion, and financing.

Expanding exports can be an effective and critical component of metropolitan-area economic and job growth. Many Michigan manufacturers already possess significant strength in the domestic market; for some of these firms, exporting has the potential to open up new opportunities for trade and expansion. However, if companies are not “export ready,” no amount of export promotion will lead to success in the global marketplace. Successful entry into international markets requires a level of information and experience that domestic-focused companies typically lack. This is especially true for SMEs and service businesses, which often do not possess the

²⁰ For a strong example of a state FDI inventory report, see Ohio Department of Development, August 2011. Michigan’s Oakland County also maintains lists of area firms with foreign parent companies; see Oakland County N.d.

resources to seek out assistance and in many cases are not in a position to recognize what information and support they need to begin exporting. While the federal government has programs to support new-to-export companies through this transition, and some private sector organizations exist to help companies begin exporting, lack of coordination among service providers means that services are not delivered at optimal efficiency and, even more crucially, that some companies with significant export potential fall through the cracks.

Within Michigan, entities such as the Michigan Manufacturing Technology Center, which is affiliated with the Manufacturing Extension Partnership, have done their part to support exports through programs such as ExporTech, which provides instruction and support for small- and medium-sized manufacturers interested in expanding beyond the domestic market. ExporTech workshops guide company executives through various export strategies and best practices as well as the more practical mechanics of exporting. Metropolitan organizations throughout the state focus on expanding export markets for companies in their region and preparing local companies (particularly small- and medium-sized businesses) for the rigors of global trade. Automation Alley, a business accelerator in southeast Michigan, has conducted 13 trade missions over the last decade, resulting in over 700 jobs and more than \$150 million in new contracts. The Van Andel Global Trade Center provides critical research, customized services, and trade missions for companies in western Michigan. In Lansing, the International Trade Center of Mid-Michigan helps businesses get a foothold in the export market.

State-level export strategies in Michigan have in the past lagged behind leaders like Washington and Pennsylvania, states that have developed focused, specific, data-driven efforts to help companies export more (Istrate, Rothwell, and Katz 2010).²¹ Now, however, Michigan is making a concerted effort to be a true innovator, globalize the state economy, and differentiate and diversify its long-term economic picture with the MI-EXPORT program. Although MI-EXPORT is still in the early stages, it has already undertaken an inventory of existing strategies and players involved in the state's export markets, conducted a baseline survey of Michigan companies to determine their levels of exporting experience, and constructed a plan that identifies target countries and industry sectors, coordinates available resources, and forges partnerships with key regional actors in four regions (making it a model for the FDI strategy proposed above). In addition, Michigan has pledged to match the \$1.5 million in federal State Trade and Export Promotion (STEP) funding awarded to the state in 2011. With these funds, over half of which will go toward export services for small- and medium-sized firms, Michigan now has the financial resources it needs to execute a thoughtful, targeted export strategy (Michigan Economic Development Corporation 2011). With its Regional Export Networks, the state also has a powerful integrated delivery system to prepare Michigan's new-to-export and new-to-market companies for greater global engagement.

As Michigan begins to act on its MI-EXPORT plan, state leaders can build on their promising start and success with the STEP grant. First and foremost, Michigan leaders will need to ensure that the state and its metros are able to meet increased demand for export-related services, particularly given that federal capacity is likely to be limited for the foreseeable future. To help strengthen regional export service capacity, Michigan leaders might consider establishing a competitive grant program modeled after state of Washington's Community Economic Revitalization Board (CERB) Export Assistance Program (Washington State Community Economic Revitalization Board 2011). This program awards competitive grants to local governments (in partnership with other groups) that have innovative plans to show substantial

²¹ Michigan has behaved like most other states in this regard. Most aggressive export strategies are found in other nations, such as Korea, Japan, China and Germany. Few American states have seized the opportunities that exports present.

short- and long-term results in bolstering exports. Grantees are led by local governments, but these entities must work with a range of organizations that reflect a metropolitan and/or cluster perspective on economic development. Thus, the City of Bellevue, together with the City University of Seattle and the Trade Development Alliance of Greater Seattle, received over \$150,000 to develop and implement an Asia Target Markets Trade Promotion strategy that uses social media, search engine optimization, and partnerships with Asian media outlets to promote Washington exports in China, Korea, and Japan. Three million dollars in grants were awarded through a competitive process in autumn 2010, with all grantees expected to begin delivering services in early 2011 and reach project completion in two years (Katz and Istrate). A similar program in Michigan would provide planning and implementation grants to regional intermediaries interested in instituting export strategies that are tailored to the unique realities of their area and support regional economic development goals. The state could give preference to strategies aimed at small companies and service companies.

Once the Regional Export Networks are firmly in place, the state could provide additional support for these networks, based on their contributions to achieving the state's export goals. (The MI-EXPORT plan already proposes to provide some funds for an International Trade Development Manager for each region.) Pennsylvania's state export agency, the Center for Trade Development (CTD) offers one possible model for such an effort. CTD works with a variety of partner organizations, including Pennsylvania's Regional Export Network partners and other state agencies, to promote Pennsylvania exports. Using a rigorous performance measurement system, CTD assesses the activities of its network of partners and offices both at home and abroad. This system measures progress on five goals:

- Number of firms requesting and obtaining export counseling or services
- Number of companies referred from a regional office to a foreign office
- Number of measurable and significant actions taken to assist clients
- Number of companies reporting an export sale within a given fiscal year as a result of assistance provided
- Value of assisted export sales as reported by clients

Systemwide performance goals are distributed across CTD's network based on the percentage of total funding received by each partner. For example, if a regional partner receives 10 percent of CTD's budget for in-state activities, it is expected that the region will fulfill 10 percent of the systemwide goals. Monthly progress reports keep all network partners apprised of one another's performance and help them recognize where action is needed. The system has paid off in terms of return on state investment. In FY 2008–09, CTD achieved \$454.5 million in assisted export sales, with a \$60 return per dollar of state investment. In 2010, CTD assisted 1,350 companies, generating \$483 million in new export sales and supporting over 6,400 jobs (Katz and Istrate 2010).

Michigan has a unique trade relationship with Canada that it should continue to cultivate. Canada is and will remain the largest trading partner for the United States for the foreseeable future, not only because of the ease of doing business in Canada for U.S. firms (as facilitated through NAFTA) but also because Canada is a large and growing economy. Canada is also a good target market for businesses new to exporting. With the exception of the 2001 recession and the Great Recession, U.S. exports to and imports from Canada have grown each year over the past decade. Bilateral trade with Canada grew slightly as a share of total U.S. GDP during the mid-2000s, suggesting increasing economic integration between the two countries. Michigan's close geographic proximity to Canada paired with existing trade patterns suggest that the state will continue to play a significant role in the U.S.-Canadian trade economy. By continuing to attune

export strategies to the unique aspects of these important trade relationships, Michigan will be better positioned to capitalize on its global engagement efforts.

Finally, as Michigan builds out its export strategy, it will also need to consider how best to improve Michigan firms' access to export capital. SMEs that wish to begin exporting or enter new markets often face challenges in securing the necessary capital because smaller banks perceive such loans as higher risk, large commercial banks are uninterested in the limited returns on small loans, and most venture capital funds seek a larger stake in the company than firm owners are willing to cede. Although both the ExIm Bank and Small Business Administration offer financing for exports, few companies take advantage of their services. Furthermore, there appears to be a financing gap for SMEs seeking smaller amounts of capital. ExIm tends to focus on larger loans for very large companies, which are guaranteed through commercial banks; if banks decide not to engage, no financing is available.

MI-EXPORT has taken important steps toward addressing the critical financing gap faced by Michigan SMEs interested in exporting, including the creation of an \$80 million program to provide small-scale financing (up to \$100,000) to eligible exporting companies. State leaders could consider modeling this financing effort after the California Export Finance Office (CEFO), a state program that provided loan guarantees to financial institutions on behalf of small- and medium-sized companies seeking working capital for pre-shipment order fulfillment expenses, insurance for post-shipment accounts receivable, and combinations thereof.²²

Combined with continued collaboration with the ExIm Bank, SBA, and commercial banks, these financing initiatives help reduce barriers to capital acquisition for companies expanding their export capacity. Some entrepreneurs have also begun exploring creation of export capital firms to finance smaller-scale ventures. As these efforts develop, state leaders may want to consider strategies for integrating these emerging capital providers into the export capital landscape. While various federal and state loan, bond, and loan guarantee programs help, the more capital available for export-related expansion, the more companies can engage the global marketplace.²³

The strategies described above to increase exports, attract additional foreign companies, and support innovation in small- and medium-sized manufacturing businesses hold the promise of creating new jobs and of systemically driving up labor demand in Michigan. The following section details strategies for how the state can ensure that it has a strong labor supply to meet this growing and changing demand.

²² See California Community Economic Revitalization Team 2011. In 2003, California eliminated its Technology, Trade and Commerce agency, which housed both CEFO and the state's foreign trade offices. A state budget crisis and a scandal involving overstated claims of trade office effectiveness prompted the decision to terminate the agency. See also Kindy 2003. In recent months, there has been informal discussion of resurrecting CEFO, though no formal steps have been taken.

²³ See, for example, Suominen 2011.

GOAL 2: Michigan Supports Strong Regional Systems to Train Existing Workers and Welcome New Ones to Fuel Economic Growth

Michigan's major metropolitan areas are first and foremost labor markets, literally defined by the movement of workers across jurisdictional boundaries.²⁴ The existing and new companies, businesses, and entrepreneurs in Michigan require a pool of diverse, flexible, and well-trained workers, both native- and foreign-born.

Michigan's metros have high concentrations of workers with technical skills and college degrees (85 percent of Michiganders with a postsecondary degree live in a metropolitan area), particularly in the Science, Technology, Engineering, and Math (STEM) fields. Yet the state also has some troubling weaknesses in its workforce. The growth of the working-age population in 13 out of 14 metropolitan areas is slower than the national average, and the working-age population in cities in particular has low rates of educational attainment. As of October 2011, eight of Michigan's 14 metro areas had unemployment rates above the national average of 9 percent.²⁵

Additionally, Michigan's metropolitan areas have very few foreign-born residents, although those foreign-born residents show impressive educational attainment when compared to immigrants nationwide. Foreign-born residents in 12 of Michigan's 14 metros, including smaller metros such as Saginaw, Niles, Monroe, and Bay City, have rates of graduate or professional degree attainment higher than those of foreign-born residents nationwide. These highly educated immigrants are a major resource for Michigan as it seeks to grow its economy. Even as a small part of the population, immigrants can be drivers of innovation and economic growth, connecting domestic firms to export markets and opening opportunities for foreign investment.

Recommendations

Use existing workforce dollars to drive regional workforce strategies that match cluster strengths.

Because each metropolitan area represents a unique configuration of communities, industry sectors, companies, intermediary organizations, and educational institutions, they require tailored workforce development strategies that build on regional assets and work to overcome existing obstacles. A region-driven state workforce development plan would give Michigan's metros the flexibility to customize workforce development and job training programs to the particular needs of their economies and effectively implement the demand-driven talent and workforce vision recently articulated by Governor Snyder.²⁶

²⁴ The Office of Management and Budget defines a Metropolitan Statistical Area as "a Core Based Statistical Area associated with at least one urbanized area that has a population of at least 50,000. The Metropolitan Statistical Area comprises the central county or counties containing the core, plus adjacent outlying counties having a high degree of social and economic integration with the central county or counties as measured through commuting." See OMB, June 28, 2010.

²⁵ The Bureau of Labor Statistics releases seasonally adjusted national, state, and metropolitan level unemployment data at different times. This metropolitan area information is current through October 2011. Earlier statements of state and national unemployment rates in this report may be different because they are from November 2011 or December 2011.

²⁶ In his December 1, 2011, Special Message on "Developing and Connecting Michigan's Talent," Governor Snyder "asked the Workforce Development Agency, local Workforce Development Boards, and Michigan Works! to shift their efforts to a demand-driven employment strategy....reorganizing around our major industries, including manufacturing, energy, healthcare, information technology, and agriculture, to

At present, states and metropolitan areas rarely combine and leverage the diverse and often siloed job training funding streams—which range from adult education and Pell grants to Workforce Investment Act (WIA) funds—into comprehensive and effective employer-driven regional programs. The federal approach to workforce development, as dictated by WIA, further perpetuates the balkanization of workforce and job training efforts by requiring local Workforce Investment Boards (WIBs) to serve as the primary delivery mechanism for federally funded services. WIBs’ geographic boundaries seldom track with regional labor markets; rather, several WIBs typically exist within a particular region, each operating independently from the others. Lack of coordination across WIBs results in duplicative administrative costs and disjointed workforce development strategies that are ill-suited to the realities of the regional economy (City of Chicago and Cook County 2011).

In addition, WIA does little to address the current structural mismatch between employers’ workforce needs and the training available to potential employees (Hirsh and Johnson 2011). Studies by the Center for Law and Social Policy have revealed that in certain cases WIA performance measurement effectively discourages the intensive engagement and much-needed longer-term training for low-skill workers in favor of low-intensity employment services and rapid labor market attachment (Center for Law and Social Policy 2009).²⁷ In other instances, WIA resources and programs have proven not flexible enough to meet employer need with regard to on-the-job training subsidies and higher-level occupation talent matching.²⁸

Perhaps the central dysfunction of federally mandated WIA efforts is their failure to effectively meet existing and emergent employer skill and training needs. WIA has never succeeded in putting the employer at the helm of solutions encompassing the entire labor market that help employers, educators, and training service providers create targeted, coordinated workforce development programs for area job trainees. WIBs’ engagement with local employers varies from one community to the next; even in the best cases, WIBs have proven unable to create unified, metro-wide strategies that invite participation from a wide range of employers. Despite organizational attempts to rectify this problem through several generations of federal workforce policy that created employer-majority governing bodies—Private Industry Councils under the Job Training Partnership Act, and the current Workforce Investment Boards under WIA—the lack of effective employer engagement persists.

Recent reforms undertaken by Governor Snyder seek to address these two problems: a lack of regional alignment, and the gap between the training that job seekers receive and the skills employers need. The policy recommendation below complements these existing efforts.

Michigan should begin to align existing federal and state workforce development programs with regional and metropolitan economic development goals. Michigan regions have experience with aligning at the scale of the regional or metropolitan area. The federal WIRED (Workforce Innovation in Regional Economic Development) program sought to align regional workforce training and innovation. The Mid-Michigan Innovation Team and the West Michigan Workforce Innovation Lab were each awarded a total of \$15 million over a three-year period (\$5 million/year). Southeast Michigan was a second-generation WIRED designee, and received a \$500,000 grant. WIRED yielded mixed results in the state, but in most cases, even its good effects did not continue after the federal funding stopped.

better collaborate with businesses, our colleges and universities, and our public school system.” See Snyder, December 1, 2011,

²⁷ See also Ganzglass 2010.

²⁸ Interview with Mary Walshok, who is the principal investigator in a forthcoming U.S. Department of Labor study on the success of WIRED.

Drawing on the WIRED experiment and other endeavors on the ground, the governor, MEDC, and the governor's Talent Investment Board should institute lasting encouragement for regions to pursue innovative, metro-led approaches to workforce development. This effort would not require a bevy of new organizations (although consolidation of existing WIBs would be welcome and should be encouraged), but rather would require existing organizations to work differently, more collaboratively, and toward a common and measurable goal.

The Michigan Economic Development Corporation (MEDC) is currently in the process of redefining Michigan's economic regions, which will be the focus for organization and delivery of economic development services and support. As part of that undertaking, MEDC should task each of these economic regions with the development of a regional workforce and talent plan. To facilitate the creation of this plan, each region would be required to establish a strategic partnership that creates an employer-friendly point of contact and fosters collaboration among area WIBs, community colleges, employer organizations and representatives, governmental units, and other relevant civic, business, and philanthropic leaders. The Workforce Intelligence Network in Southeast Michigan provides one possible model.²⁹

The regional workforce development planning effort should be led by the region's primary economic development organization or the regional organization identified by MEDC, local members of the Governor's Talent Investment Board, and local strategic partners as the organization best positioned to convene and lead the initiative and, most important, to facilitate employer engagement. This entity would be identified as MEDC's lead Talent Partner for regional workforce and talent development. The lead Talent Partner should demonstrate:³⁰

- Proven ability to engage the employer community
- Ability to collaborate across functional and jurisdictional boundaries
- Ability to convene all key entities in the regional talent development system
- Commitment to develop clear, shared goals and metrics for performance
- Ability to leverage funding streams from federal, state, local, civic, and philanthropic sources

Each regional workforce development planning effort, headed up by the lead Talent Partner, would be charged with developing the following for the region:

- Analysis and diagnostics of regional labor market conditions, including current employer needs and job opportunities, key industry and business cluster forecasts, and projected impact of foreign trade and other developments on the regional economy
- Strategies for providing job training and programming, supporting identified business clusters and key industry sectors, and responding to the unique needs, challenges, and opportunities faced by employers and entrepreneurs in the region
- Clear goals, performance expectations, and outcome targets, which would be used to measure progress (via dashboard)
- Alignment and collaboration of regional partners (as outlined above)
- Alignment of existing federal, state, and local resources and plans in pursuit of identified regional workforce development goals

²⁹ For more on the recently proposed Michigan Workforce Intelligence Network, see New Economy Initiative for Southeast Michigan 2011.

³⁰ See Public Policy Associates, W. E. Upjohn Institute, Berkeley Policy Associates and University of California San Diego 2010. The authors highlight these elements as the critical workforce system characteristics and policy factors needed to ensure success.

MEDC would support regional planning and implementation by providing:

- All relevant data on employer/industry needs and trends
- Staff support and co-location
- Discretionary state WIA funds to support the analytical, organizational, and operational needs of the regional workforce collaboratives
- Application of any and all existing state strategies and funding for employer sector job training support and other programs through the regional workforce innovation effort

Working through MEDC, the governor could make changes to discretionary federal and state workforce development funding streams, requiring some of these resources to be incorporated into regional workforce plans in order to support and encourage greater collaboration and partnerships among WIBs, secondary schools, community colleges, institutions of higher education, business leaders, and other key partners. Funding sources that could support these regionally defined job training strategies organized around major regional industries including manufacturing, energy, healthcare, information technology and agriculture include state and federal adult education funds, federal Carl Perkins vocational funds, federal Temporary Assistance for Needy Families (TANF), Trade Adjustment Assistance (TAA), and other workforce/WIA funds.

The governor could also seek legislative authorization to allocate some portion of funding from other state-derived workforce-related funding streams to support regionally defined workforce innovation efforts, including state community college appropriations and state university appropriations as part of the soon-to-be-proposed public university performance funding formula.

To further advance regional collaboration, state leaders could require or provide incentives for WIB consolidation so that workforce development efforts better align with the contours of the regional labor market. Although this approach would require a significant investment of political capital and may necessitate state or federal waivers, the benefits of consolidation stand to be well worth the effort. Under current WIA guidelines, waivers to increase flexibility in service delivery cannot be used to change funding allocations to local areas. As such, WIBs that choose to consolidate could be allowed to keep any cost savings resulting from economies of scale and elimination of duplicative administrative costs; these surplus funds would then be used for programming and services over a multi-year transition period.

A handful of communities have already consolidated WIA funds and WIBs to better match the true contours of the regional labor market while also eliminating duplicative administrative functions and improving employer and job trainee experiences.³¹ Most recently, Chicago and Cook County announced a merger of City and County workforce development activities in favor of a regional, demand-driven approach to workforce development that will maximize return on resources by streamlining administrative functions and improving regional job seekers' access to services (Spielfogel 2011). Southeast Michigan, with its highly balkanized workforce development system that fails to adequately meet the needs of the broad regional employer and worker community, should be a priority for the state to facilitate voluntary regional workforce board consolidation. Given the budgetary and political challenges being faced right now by Detroit and Wayne County, a Chicago/Cook County type of merger of workforce services could contribute enormously to a more effective use of available resources, especially given federal and state budget cuts.

³¹ San Diego, Louisville, Seattle, and Miami, among others.

Seize the opportunity to demand changes in federal workforce laws.

Evaluators of the existing WIA system have recommended that WIA be transformed into a truly “strategic workforce development act,” one that offers states greater flexibility to integrate funding streams and adapt performance measures to best support the distinctive realities of their regional economies.³² With significant cuts to WIA likely in the near future, the federal government must change the WIA rules to get better results with fewer resources.

Governor Snyder has pledged to work with Michigan’s Congressional delegation to advocate vigorously for a reworking of federal WIA legislation. The “portfolio of outcomes” model he has proposed should include at least one outcome related to meeting regional employer sector needs, and better aligning strategy and programs to the particular workforce development opportunities of states’ regional and metro-level economies. Any WIA reauthorization should include increased flexibility in organizational structure so that states are able to tailor efforts to track with regional economic development strategies.

Help highly educated immigrants gain Michigan professional certifications.

Higher numbers of immigrant residents have been linked to increased exporting at the national level.³³ Immigrants within a metro region create a variety of international connections that help reduce barriers to trade and global commerce.³⁴ In addition, immigrant populations are associated with increased entrepreneurial activity and job creation, reduced levels of crime, rising property values, and growth in neighborhood retail sales (Tobocman 2010).

This dynamic plays out in Michigan. Nearly 16 percent of all new businesses created in Michigan from 1996 to 2007 were immigrant-founded—including one-third of all Michigan high-tech firms started during this period, the third-highest rate in the nation (Tobocman 2010). A December 2009 Fiscal Policy Institute study of immigrant impacts on jobs, workforce, wages, and output revealed that metro Detroit’s foreign-born population contributes to regional output at a rate 30 percent greater than their share of the regional population. Michigan immigrants are also young: 64.4 percent of the foreign-born are of working age, compared to 50.8 percent of the non-

³² See Public Policy Associates, Upjohn Institute, Berkeley Policy Associates, and University of California San Diego 2010. Authors recommend that “Local entities as part of multi-partner collaboratives . . . be given the resources to develop thorough and comprehensive talent development strategic plans to spearhead regional transformation.”

³³ Research on Sweden’s export growth from 2002 to 2007 (a five-year period that saw that nation’s exports double, much as President Obama hopes to see in the U.S.) suggests that for every 10 percent increase in the number of immigrants to Sweden from a specific country, Swedish exports to that country increased by 6 percent. Furthermore, the study found for every additional 12,000 immigrants, Swedish exports increased by approximately \$1 billion. See Landes 2009 and Government Offices of Sweden, September 17, 2009.

³⁴ See Gould 1994. David Gould chronicled the concurrent trends of increasing immigration and trade between the U.S. and Latin American and Asian countries, and decreasing trade and immigration between the U.S. and Europe, during the 1970s and 80s. Gould asserts that host nations’ exports directly benefit from the simple presence of immigrants. His research quantifies the added financial benefit per immigrant to U.S. exports. For each country of origin, the export growth multiplier varies greatly, based on the number of immigrants in the U.S. and the potential for trade with the home country from where they emigrated. See also Peri and Requena 2009. Peri and Requena’s examination of immigration in Spain concluded that doubling the number of immigrants from a particular nation translated into a 10 percent increase in exports to that nation. They also found that immigrants tend to settle with peers in the same province, concentrating the benefits of increased exports in those provinces; other areas of Spain failed to experience a similar increase in exports. These findings suggest that metro areas and states that successfully implement immigrant attraction and retention initiatives stand to see the greatest export growth.

immigrant population—a critical factor in a rapidly aging state that is losing working-age residents due to out-migration (Migration Policy Institute accessed 2011).

Given these positive effects, Michigan state leaders should consider incorporating efforts to attract and retain immigrants into their larger metropolitan economic development strategies. Many metropolitan areas are home to highly educated immigrant professionals who are unable to work in their areas of expertise due to onerous licensing and credentialing requirements, lack of familiarity with the American job search process, and limited professional connections. In the nation's 100 largest metros, 49 percent of high-skilled immigrants are overqualified for their jobs, in contrast to just 36.1 percent of high-skilled native-born residents.³⁵ Some researchers have gone so far as to describe underemployment of highly educated immigrants as “brain waste,” which in their estimation exacts sizable financial costs on the national economy (Batalova, Fix, and Creticos 2008, 5, 11).

Underutilization of immigrant professionals' education and work experience represents an untapped asset for Michigan's metropolitan economies. Highly educated immigrants employed at levels commensurate with their academic and employment histories add value to the economy just as highly educated native-born citizens do: by contributing their knowledge and experience to the business environment. In addition, immigrant professionals can provide insider knowledge of “the customs and business processes” of their countries of origin, opening up new opportunities for international exchange of ideas and goods (Creticos 2007). As the economic marketplace becomes increasingly global, those metropolitan areas that find ways to reduce immigrant “brain waste” in their economies will be best positioned to compete in domestic and foreign markets.

Immigrant professionals face a variety of challenges when seeking jobs in their areas of expertise. Lack of familiarity with the job search process can pose problems for those who do not know how to craft an American-style resume, compose an effective cover letter, or prepare for a job interview. Given that many companies use word-of-mouth and informal networks to disseminate information about open positions, limited professional contacts can also impede the job search. In addition, certain professions require state-issued licenses, which in many cases require immigrant and native-born applicants alike to navigate complicated and at times costly processes. Because individuals seeking state licenses typically must provide proof of educational and skills attainment, those who have been educated and employed abroad must first seek out interpretation and validation of diplomas and other credentials granted by foreign institutions. While a number of accredited organizations provide diploma and credential validation and interpretation services, immigrant professionals are not always aware of such service providers and may have difficulty discerning which service providers are most reputable (Creticos 2007).

These challenges can have a particularly negative effect on the strength of Michigan's advanced manufacturing sector. For example, highly educated immigrant professionals seeking work as professional engineers must possess a state-issued professional engineer license. To receive this license, individuals must first fulfill state-mandated education and work experience requirements before passing the Professional Engineering Examination, which is administered twice a year by the National Council of Examiners and Surveying. By requiring all applicants to have “at least four years of acceptable engineering work experience . . . verified by five persons, three of whom must be licensed professional engineers,” the state effectively places a higher burden on immigrant professionals with foreign work experience, who may face significant challenges in securing these verifications. Foreign-educated immigrant professional engineers seeking licenses

³⁵ See Hall, Singer, De Jong, and Roempke Graefe, 2011. “Overqualified” is defined as having educational attainment that is at least one standard deviation above the mean attainment level for a given occupation.

face the additional obstacle of having their academic credentials validated and accepted by the state (Michigan Department of Licensing and Regulatory Affairs).

Highly skilled immigrants seeking work in other areas of the advanced manufacturing sector could face equally troubling barriers to employment. Though most advanced manufacturing jobs do not require a state-issued license, credentials issued by professional organizations and other entities can play an important role in hiring decisions. By certifying a certain level of skill proficiency, these credentials act as a shorthand for employers looking to hire workers for skill-intensive positions. Without these credentials, job applicants might find themselves at a disadvantage in the labor market. For instance, immigrants with proficiency in metalworking who lack the appropriate National Institute for Metalworking Skills credentials may find their job search more difficult than those who have secured such certifications.³⁶ Given the growing shortage of skilled labor in the manufacturing sector, metropolitan areas should consider how they might increase levels of skills certification among otherwise qualified immigrant workers.

At the same time, disreputable for-profit training institutions can pose considerable threats to individuals seeking credentials for particular occupations. These companies make specious claims of guaranteed employment, encourage students to pursue irrelevant credentials, and in many cases press students to take on significant loan debt to pay for their services. Michigan state leaders can work to combat these predatory practices by strengthening consumer protection for persons pursuing job training and credentials. The Know Before You Enroll campaign recently launched by the NYC Mayor's Office of Adult Education educates the public about the pitfalls of excessive school-related debt, offers help in selecting reputable schools and training programs, and encourages individuals to report negative experiences with for-profit training providers to the Department of Consumer Affairs (City of New York City, Mayor's Office of Adult Education). Increased enforcement of existing consumer protection statutes could augment such a campaign in Michigan, to the benefit of both immigrant and native-born Michiganders.

There are a variety of actions that state leaders can take so that skilled immigrants' knowledge and expertise can help to build Michigan's metropolitan economies. State licensing entities can begin by providing profession-specific guides detailing how to go about securing particular professional licenses. Upwardly Global, a nonprofit organization working to reduce immigrant professionals' barriers to employment, has created a variety of state-specific licensed professions guides that can serve as a model for such an effort. These guides walk prospective applicants through the licensing process from start to finish, explaining eligibility, required exams, approximate time and cost involved in obtaining a license, other credentials related to that profession, and contact information for all entities involved at each stage of the licensing process. Similar licensing guides, produced either by the public sector or another interested party, would benefit immigrant and native-born professionals alike by making the licensing process more comprehensible and transparent (Upwardly Global).

For some immigrant professionals, pursuing work in a different but related occupation in their field of expertise can be the better option. For instance, immigrants with medical degrees from countries other than the United States may find it more productive to obtain certification as nurse practitioners instead of going through the lengthy process required for physician licensing. To that end, state leaders could encourage Michigan universities to explore establishing accelerated combined RN/nurse practitioner degree programs for foreign-educated physicians (FEPs). Florida International University's Combined BSN/MSN for FEPs could serve as a model for such a program (Florida International University 2011).

³⁶ The National Institute for Metalworking Skills (NIMS) establishes standards and provides skill certifications in a wide variety of operational areas.

State agencies and partners can also work to address known barriers confronted by immigrant professionals seeking employment in their fields. Information on reputable credential evaluation service providers can assist skilled immigrants looking to translate and validate foreign-issued diplomas and certifications. Given that strong job search skills can make a tremendous difference for immigrant professionals seeking positions in their fields, job search training programs tailored to the immigrant professional experience can help immigrant job seekers obtain the skills needed to successfully navigate their job hunts.³⁷ Some immigrant professional job seekers may also benefit from WIA-funded workforce development services. WIA eligibility guidelines state that both citizens and noncitizens authorized to work in the United States may receive WIA-funded services. Efforts to raise work-authorized noncitizens' awareness of their eligibility would encourage immigrant professionals to take advantage of these services. At the same time, state leaders should provide guidance to Michigan's WIA one-stop centers in order to ensure that eligible noncitizen job seekers are not turned away.

Outreach to area employers can raise awareness of the positive contributions that immigrant employees can make while also combating stereotypes and common misconceptions about hiring immigrant professionals (Creticos 2007). The governor has already made clear his willingness to use the bully pulpit of his office to educate the public about the benefits of a strong immigrant professional population; a continuation of such efforts, perhaps by convening leaders from the private sector, academia, and other relevant areas, could contribute to greater appreciation of the advantages of employing highly qualified immigrants as well as the obstacles facing immigrant professionals seeking work in Michigan.

³⁷ Upwardly Global's Job Seeker Training Program is one example of an effective job search skills course tailored to the needs of immigrant professionals. See Upwardly Global N.d.

GOAL 3: Michigan Makes Targeted Investments that Leverage Distinct Assets in Urban and Metropolitan Areas to Transform Regional Economies

The prior policy recommendations in this report focused on ways the state could help Michigan's metropolitan areas (and other communities as well) build on their shared strengths in the next economy. Those recommendations focused on economic advantages that most of Michigan's metropolitan areas have in common.

But the state can also support its metropolitan areas by building on their unique strengths and distinctive assets, factors that contribute to their one-of-a-kind offerings as places to live, or their special niches in the next economy. Throughout the nation, and indeed throughout the world, governments and partners in the private and nonprofit sectors are undertaking catalytic, transformative projects that draw on place-specific strengths. Building on these assets, whether economic or physical, can in some instances have a truly transformative effect not only on a particular metropolitan area, but on the state as a whole.

This targeted approach does not come naturally in most states, where funds for infrastructure and economic development tend to be spread evenly and thinly across the state. For example, while Michigan has created several programs to attract private sector engagement in community revitalization, these programs have generally been available to communities throughout the state, rather than tailored and targeted to the economic or physical opportunities present in specific large urban areas. For example, the Core Communities program, which began in 2000 as a \$50 million fund intended to “spur private development in [Michigan’s] urban communities and traditional centers of commerce” (Michigan Economic Development Corporation 2010), initially was limited to 88 core communities identified by the Michigan legislature (Lane 2000). But by 2010, 136 cities, townships, and villages across the state had received the designation. The scope of the program was also expanded from its original goals to benefit film production. The Cool Cities program grants were small and thinly spread. By 2006, 45 cities across the state had received a total of \$3 million to fund diverse projects such as commercial building renovations, water parks, farmers’ markets, and neighborhood cleanups (Detroit Free Press 2006). Even the Renaissance Zone program, which focused on just 11 areas at its inception in 1996, now encompasses 139 zones in 37 counties (Lane and Mercer 1996).

Michigan has shown a willingness to break from this pattern of unfocused spending. Governor Snyder’s recent transportation plan calls for “target[ing] new investments on the roads and bridges that the data shows will have the most beneficial impact on our economy” (State of Michigan 2011). The policy recommendations below are natural applications of that same spirit to state support for local economic development and locally driven place-making efforts.

The state should align its resources and leadership with a small number of city- or metro-led priority efforts that are: (1) supported by local public, private, civic, and philanthropic actors; (2) potentially able to transform not just the metropolitan area but the state as a whole; (3) tightly limited in number to avoid dilution of resources and dispersal of focus; and (4) chosen through a competitive process and designated as Projects of Urban and Metropolitan Significance.

The revitalization of the city of Detroit is central to Michigan’s economic health, and the state should make every possible effort to include Detroit in its Projects of Urban and Metropolitan Significance. As Governor Rick Snyder said in his gubernatorial victory speech, “It is fundamental that we restore our central cities ... and Michigan will only be a great state when its cities are on that path and, in particular, when Detroit is on the path to being a great city again” (Snyder 2010). Detroit is by far the largest metropolitan area in the state; even after decades of

population loss, the city remains the 22nd largest in America, with more residents than the cities of Boston, Seattle, or Washington, D.C. Michigan is unlikely to flourish if people outside “the D” view the city as a synonym for urban decline.

Projects of Urban and Metropolitan Significance should focus on two related goals: supporting urban or regional industry and innovation clusters, and advancing new urban innovation districts. These projects would receive special, focused attention from state officials. For example, such projects would benefit from the tight alignment of a wide range of resources in the service of their needs. The state already engages with important metropolitan projects in countless ways. Some are readily apparent, such as funds from the state’s new Michigan Business Development program and Michigan Community Revitalization Program, infrastructure financing, and financial and technical assistance from the Michigan State Housing Development Authority (MSHDA). But there are also less visible forms of state support that contribute to metropolitan economic development efforts, ranging from funds for public K–12 and postsecondary education to state-funded workforce development programs to financing arrangements made possible by the Office for Public Private Partnerships. A stronger appreciation of the many ways that the state government can support metro-led economic development endeavors will help state leaders recognize and take advantage of opportunities for coordination across various state agencies.

These projects would also benefit from a multi-year state commitment. The alignment described above would not be a one-time, one-meeting undertaking, but a sustained investment of time and resources into the success of these particular projects. For this reason, the projects should be few in number; the state cannot support this kind of engagement in several projects at once. The state would position itself as a facilitator and problem-solver, actively identifying and offering resources that can advance the goals of these projects. Where appropriate, and to further the spirit of the state being in the service of the projects, elements of them would receive fast-track permitting; for example, for a new building in an innovation zone or new lab critical to an industry cluster. Also where appropriate, and arising from the close collaboration between state officials and local leaders executing the projects, recipients of state funds tied to a project could be granted flexibility in actions in exchange for accountability for meeting specific, jointly agreed-upon project metrics.

Clusters and innovation districts share several elements. They involve public-private collaborations; they seek to build on existing opportunities and strengths; and they are relentlessly market-oriented and innovation-driven, whether the innovation comes in new kinds of collaborations, new kinds of companies, or new approaches to connecting economic opportunity and physical space. Clusters and innovation districts have the potential to supercharge the economies of Michigan’s metropolitan areas while making them exciting and vibrant places to live and work.

Recommendations

Support a small number of urban or metropolitan industry clusters with grants tailored to the specific needs of emerging, existing, or advanced clusters.

Support for local industry or innovation clusters can reignite innovation, entrepreneurship, and job creation in states and their metropolitan regions (Muro and Fikri 2011). Clusters build on existing assets—including export strength, innovation, and manufacturing capacity—to promote growth in cities and regions by enhancing the interactions through which firms share ideas, start new enterprises, and create jobs. A now ample body of economic research shows that localized knowledge flows and the inter-firm spillovers of information associated with industry clustering are critical to innovation (Audretsch and Feldman 2004). Further research indicates that clusters

boost start-up rates in their industries, and have a strong effect on both the employment levels and survival rates of these new firms (Delgado, Porter, and Stern 2010). Moreover, clustering has been shown to confer important productivity advantages on firms and industries (Rosenthal and Strange 2004). Brookings' recent research found that between 2003 and 2010, clean economy firms in clusters grew at a higher rate than isolated firms (Muro, Rothwell, and Saha 2011).

The best cluster strategies are designed to foster organic growth ("economic gardening"). Well-informed and well-designed cluster strategies seek to bolster the establishment of existing and new firms in a region and a state, which are responsible for 95 percent of employment gains in any given year. Michigan has already announced its intention to move beyond the conventional economic development practices of tax incentives and industry attraction to catalyze entrepreneurship. A smart cluster strategy is closely aligned with these objectives and with the existing strengths of metropolitan areas.

Some of the competitive portions of Michigan's 21st Century Jobs Fund focus on four clusters found in the state: life sciences; alternative energy; advanced automotive, manufacturing, and materials; and homeland security and defense. The scope of 21st Century Jobs Fund was recently broadened to include information technology, agricultural processing, and other innovative technologies that the fund's board chooses to support.³⁸ The policy proposal below is different, in that it does not target any particular industries.³⁹ Rather, it encourages the state to align its resources to support clusters that city and metropolitan leaders have identified as important and that could benefit from catalytic state grants. These may happen to come under the broad 21st Century Jobs Fund categories or they may not. The important thing is that these clusters have traction in their region and can make a difference to the regional and the state economy. In addition, this policy aims to build the infrastructure to grow and support clusters, rather than investing in individual companies.

In recent years, many of Michigan's leaders have already focused on developing business clusters as a key element of economic development strategies in their cities or regions, including Grand Rapids, Saginaw/Bay City, Holland, and Detroit.⁴⁰ These efforts can be built upon to maximize local assets and investments. Michigan should support urban or metropolitan-identified clusters with grants to existing cluster intermediaries or consortia of public and private entities that have a credible plan to use state funds to close existing gaps in their services or offerings. These grants should hinge on data and analysis to identify high-value clusters, inform initiatives, and track performance. The data will help target the state's modest resources to address discrete gaps in cluster performance.

³⁸ See State of Michigan, Office of the Governor. April 26, 2011 (accessed 12/15/11).

³⁹ Muro and Katz's review of the literature finds strong evidence that clusters matter in and of themselves, separate from the particular industries that they represent. See Muro and Katz 2010.

⁴⁰ For example, the Initiative for a Competitive Inner City has identified several clusters for the city of Detroit that are likely to provide jobs for current residents, including food and beverage production; transportation, distribution and logistics; metal fabrication; and education and training. These clusters also take advantage of Detroit's land assets and have the potential for growth.

Characteristics of Strong Cluster Initiatives and How to Identify Them

(Sölvell, Lindqvist, and Ketels, 2003)

Strong cluster initiatives improve the competitiveness of a cluster, boost growth of a cluster, or fulfill the initiative's self-described goals. Such initiatives typically have chosen their objectives wisely and focus on getting the process right.

Common objectives of cluster initiatives include export promotion; regional branding; network building; technical training; talent attraction; firm (domestic or foreign) attraction; spin-off promotion; and government lobbying.

On the process front, cluster initiatives initiated by the public sector, private sector, and joint public-private perform equally well, and the source of financing typically does not affect performance. **Cluster initiatives that must compete to win government money tend to perform better, and cluster initiatives boasting strategic support from governments attract more outside firms.** Limiting membership has a negative effect on performance.

Cluster initiatives must have the right resources to carry out their responsibilities as well. Successful cluster initiatives have their own offices, sufficient budget to conduct significant projects, and access to peer networks of other cluster initiatives in the same industry.

Effective cluster initiative leaders must be knowledgeable, able to cultivate strong networks of contacts, and should be respected members of the industry community.

An effective cluster initiative is constructed around a cluster's unique strengths. It explicitly formulates a vision, sets quantified targets, and acts with consensus.

Cluster initiatives will often fall short of their goals if they fail to establish a common framework, if they lack consensus, or if resources are insufficient. Cluster initiatives that do not include regional branding as part of their goals are most likely to fail. Initiatives built around weak clusters face a higher chance of failure. Cluster initiatives do not exist in a vacuum; their performance depends in part on issues outside of their direct leverage, such as state economic policy promoting competition and science and technology.

Policymakers need to map these virtues into criteria for identifying and assessing actors' capacity and proposals.

Michigan leaders should establish a program through MEDC or another entity that provides modest grants on a competitive basis to support a small number of cluster initiatives in the state's cities and metro areas and across established and emerging industries.⁴¹

Coalitions of local or metropolitan leaders would submit proposals for state grants. Applicants would provide "sketches" that contain a synopsis of the cluster, its thematic orientations (industries, technologies, sub-specializations, aspirations), a description of the relevant cluster actors and institutional structures, any national and international partnerships, a benchmarking exercise with a description of the cluster's market position, a SWOT-style analysis—all quantifiable and rooted in metrics—and an articulation of feasible yet aspirational middle- and long-term goals as well as early-stage strategies for achieving them.

⁴¹ This proposal is modeled on Germany's "Leading Edge Cluster Competition." For more information, see German Federal Ministry of Education and Research 2010.

Specifically, winning applicants should provide:

- Objective market analysis to document the natural presence of clusters, their existing global market positioning and export intensity, and a realistic sense of their national and global growth potential and projected export demand.
- Fine-grained information about local clusters' institutional or resource deficiencies to target and bound proposed interventions. This information is imperative for targeting strategies and setting goals.
- Performance measurement to evaluate the efficacy of cluster investments and hold strategies accountable on key indicators such as jobs created, firms established or grown, exports increased (especially in SMEs), investment attracted, and market share expanded. Such transparency lends the program credibility and garners buy-in across the political spectrum and from the private sector.⁴²
- A plan for sustainability beyond the grant period.

The state could also give priority to cluster grant applications that demonstrate how a stronger cluster could, through expansion of existing firms or attraction of others, put underused land assets or infrastructure to productive use.

Three different types of awards could be offered according to the maturity of the cluster actors and the development stage of the cluster itself. Small planning grants of less than \$100,000 would fund initial feasibility studies to evaluate the viability of any cluster initiative aimed at strengthening particular regional industry concentrations and bolstering coordination mechanisms. Moderate start-up and technical assistance grants would be made to new and early-stage cluster initiatives to sharpen and energize management, facility, and program operations. Significantly larger competitive program grants of \$500,000 or more would support well-defined, collaborative activities to strengthen clusters in areas like training, R&D, technology transfer and adoption, and marketing, among others, to overcome identified cluster gaps and documented constraints—and in doing so boost growth. A refocused 21st Century Jobs Fund could fund this recommendation.

Additionally, cluster strategies should focus as much on aligning existing state resources to support local industry cluster growth as on a special, state-led cluster program. Cluster efforts that remain divorced from other state programs achieve only limited results: clusters are at their most powerful as an organizing paradigm for linking, leveraging, and aligning existing as well as potential new offerings for maximum impact and efficiency. A lack of coordination diffuses resources across too many disconnected activities and geographies, leaves a host of potential synergies untapped, and ultimately dilutes the total impact of state investments.

Therefore, the state should also use clusters as a policy paradigm for informing, drawing in, and organizing multiple activities that support the clusters that win the competitive grants described above. Aligning existing cluster-relevant programs and initiatives horizontally would maximize the impact of these state investments at no additional cost. Concrete actions that Michigan can take to link, leverage, and align its existing offerings include:

- Prioritizing collaborative applications across departments that tackle cross-cutting cluster-relevant issues like workforce training or infrastructure when awarding competitive grants

⁴² The Maine Technology Institute, an industry-led, publicly funded, nonprofit organization that supports cluster activities in the state of Maine, is exemplary in its use of data and analytics to demonstrate its value and show a robust return on taxpayer investment. For more, see Muro and Fikri 2011, p. 5.

- Aligning department and program objectives and offerings across the administration to cluster needs (any policy that affects skills, tech transfer, venture capital, or land use, among many other issues, impacts cluster dynamics directly)
- Organizing incoming federal resources to help coordinate local cluster-building efforts

These steps promise not only to bolster innovation, entrepreneurship, and job creation but also to focus and streamline state economic development policy for maximum efficiency at a time of scarce resources.

Designate one to three new “urban innovation districts” that connect innovation-generating anchor institutions with infrastructure, housing, and amenities, and support them with a 21st Century Places Fund.

In addition to supporting locally identified industry and innovation clusters, state leaders could also ally with urban leaders in the development of urban innovation districts. This promising 21st-century approach works to align and build on a particular locale’s economic, physical, and community assets in order to stimulate innovation in and across sectors of increasing relevance in a rapidly globalizing economy. Moving beyond the industrial districts of the 19th century and the science and research parks of the 20th century, innovation districts place a far greater emphasis on the physical realm (infrastructure, urban design, and architecture) as well as the community environment (affordable housing, social activity, cultural institutions, and events) to create an atmosphere of innovation, collaboration, and entrepreneurialism that permeates a specific place. This distinctive climate encourages the creation of new firms and the development of new connections among businesses, research institutions, regional intermediaries, and other organizations located within the district’s bounds.

The Link Between Cities, Innovation, and Talent Attraction

Metropolitan areas are the key units in the global economy, and are the primary focus of this strategy, but core cities have a critical and unique role within metros. Central cities are the physical, cultural, economic, and historical focal points of metropolitan areas – a critical part of the overall metro strength and attractiveness. They act as anchors for metropolitan areas. Cities’ vibrant and dense development pattern enables easier movement of people and ideas, clusters commerce and cultural opportunities, attracts young knowledge workers, and spurs creativity and entrepreneurialism. As Brookings scholars Bruce Katz and Julie Wagner have noted, “the very physical characteristics that distinguish cities from other forms of human settlement—density, diversity of uses and functions, and distinctive design” are those that make urban areas so essential to the next economy (Katz and Wagner, 2008).

In Michigan, they are also a connection to history. The state’s urban centers are the homes of some of the state’s most cherished historic architecture and infrastructure. They are the site of key historic and cultural events, and the place where many present-day residents’ ancestors originally settled when they moved to Michigan.

Cities’ power comes from proximity. Changes in transportation technology, ease of movement, and telecommunications have not erased the benefits of agglomeration and density. Indeed some studies suggest that individual interaction is even more important amidst the rise of so many electronic alternatives (Cortright 2007). This proximity is a powerful driver for innovation. Stuart Rosenthal and William Strange have found that the intellectual spillovers that drive innovation and employment drop off dramatically as firms and people move more than a mile apart. At a distance of just over a mile, the power of intellectual ferment to create another new

firm or even another new job drops to one-tenth or less of what it is closer in. These effects are staggering, and demonstrate the key role that dense urban areas play in innovation and economic prosperity.

Other research has suggested that cities' density and diversity create environments in which entrepreneurs and small manufacturers can flourish.⁴³ For example, according to a recent study on urban manufacturing, "Not only is manufacturing an essential component of many urban economies, but cities in turn provide numerous benefits to the manufacturing businesses that choose to locate within them. In fact, the advantages associated with urban agglomeration are more relevant than ever to [small urban manufacturers] competing in regional and global marketplaces" for reasons that include synergies between networks of similar small manufacturers, access to dense infrastructure and logistics networks, and a dynamic customer base (Mistry and Byron 2010).

Finally, cities' density and distinctive features seem to be particularly attractive to highly skilled people, at least for several key years in their careers. As one study from CEOs for Cities puts it, "In particular, it appears that talented people value being near other talented people, that social and physical connectivity are key urban assets, and that community distinctiveness can play a role in attracting and retaining people" (Cortright 2007). In the last decade, the number of college-educated people younger than 35 living in the downtown/midtown area of Detroit grew by 59 percent, even as the city lost population overall (Conlin, 2011).

When individuals decide to move to a specific city, their choice is shaped at least in part by the distinctive attributes of that city. Each city represents a unique constellation of physical features, economic assets, and social and cultural amenities. The streets, buildings, bridges, and parks are imbued with the history of that space, and inspire a sense of pride and place that helps set that city apart from all others. Though largely abstract, this place-based identity often produces the loyalty and commitment needed to help drive revitalization efforts. As the primary repositories of metropolitan identity, Michigan's cities can use their rich heritage to their advantage, building on their singular qualities to open up new possibilities for the future.

Though innovation districts are similar to traditional mixed-use projects, they go one step further by making intentional efforts to create specific physical, economic, and community places that will inspire innovation, collaboration, and connection. Within the physical realm, a healthy mix of housing, commercial space, research facilities, and offices can be combined with incentives for increased density in order to bring people and companies into closer proximity, increasing the likelihood of new partnerships and collaborative efforts in the process. Specific place-based attributes such as area walkability, transit accessibility, IT infrastructure, architecture, and green space further enhance livability and serve as strong inducement for businesses to locate within the district. Within the economic realm, the emergence of innovation-driven industry clusters can be encouraged through specific cluster initiatives and incentives. In addition, incubator services, start-up competitions, procurement strategies, and other efforts can be employed to bolster entrepreneurial activity in the district. At the community level, affordable and attractive housing

⁴³See for example, Cortright 2007, p. 30: "Entrepreneurship is often viewed as a purely supply side process, that entrepreneurs do it all themselves. But entrepreneurs interact with customers [in cities].... We need to think of cities as environments or ecologies that give rise to new ideas. They are the places where innovative entrepreneurs interact with curious, open-minded consumers and, together, generate new economic activity."

options for all incomes, retail and service-focused businesses, and social and cultural activity work together to create an inviting environment for people to live, work, and play.

Although innovation districts are a relatively new concept, there are examples from which Michigan can learn. Spain's 22@Barcelona district used a detailed cluster analysis approach to lure an important cross-section of cluster magnets, created a strong physical plan that emphasized density, and maintained deep commitment to quality of place. Boston's Innovation District offers a very distinct approach to clusters, taking an industry-neutral approach but focusing on fast-growing, innovation-driven industries. The city's strategic use of funds to make catalytic investments in the district and its creative approach to planning and zoning in the district are interesting approaches to advancing broader economic objectives despite fiscal constraints.

22@Barcelona: Supporting clusters, entrepreneurship, and quality of place

The success of 22@Barcelona comes from three distinct but mutually reinforcing efforts: dedication to advancing innovation-driven clusters; linkages to entrepreneurial development; and the redesign of 494 acres of former industrial land on the city's waterfront into a new, compact, quality neighborhood that can serve as a site for this innovative and entrepreneurial activity.⁴⁴

Using careful data analysis, Barcelona, Spain, targeted five economic clusters that it hoped to attract to the 22@Barcelona district: media, medical technologies, ICT, energy, and design. The city then identified the anchor institutions and organizations necessary to create the gravitational pull for true cluster formation. These "magnets" include universities, institutions, companies, spaces that specific industries need to meet or reside, a technology center (which would be the driver behind the entire cluster strategy), incubators, and residences for students and others. Intensive efforts to lure these anchor institutions and other magnets paid off. For example, for the media cluster, 22@Barcelona has:

- Universities—Universitat Pompeu Fabra, Universitat de Barcelona, and Universitat Oberta de Catalunya
- Institutions such as Barcelona TV and RNE radio
- Companies such as Media Pro and Yahoo R&D
- Spaces like the Audio Visual Production Center
- A technology center—Barcelona Media-Innovation Center
- Incubators such as the Media-TRC Building
- Amenity-filled student residences such as the Melon District
- Organizations such as Barcelona Activa, a local development agency wholly owned by the City of Barcelona, which has spent more than 20 years developing a cutting-edge entrepreneurial development program.

Activa's relationship to 22@Barcelona is particularly advantageous as new entrepreneurial activities continue to be encouraged to locate there, especially when new start-ups fall within one of the five clusters. Activa offers dozens of educational courses, which are subsequently tailored for each person to match their existing skills and assets. Some modules are designed for specific economic clusters—such as coaching services for the "bio-entrepreneur," the creative media industry, and even for artisans for their handmade products. Barcelona Activa's 2010 statistics best illustrate its level of impact: 83 percent of all businesses formed survived after the fourth year; 70 percent of coached projects ultimately transformed into a company; and 1,700 companies

⁴⁴ The "22@" name refers to the zoning category that applies to the innovation district. In planning the district, the city changed the zoning from 22a (industrial) to 22@ (services).

and 3,200 jobs were created. Barcelona Activa and the 22@Barcelona district leadership meet regularly to find synergies between their activities and efforts.

The city also used a strong physical plan, rezoning, and increased density to make sure that the 22@ district provided a high-quality, walkable space that would entice a range of industries and families to locate there. The intentional connections between innovative institutions like universities and incubators and housing and other amenities are a key element of innovation districts.⁴⁵ The city paid significant attention (and funds) to making the neighborhood physically attractive and engaging. More than €180 million was also invested in modernizing infrastructure (new energy networks, telecommunications) to lure innovation-oriented companies and firms to the area. Many industrial buildings in the district were restored, giving the area a strong imprint of its historical past—something similar to the efforts to repurpose many of the buildings in Detroit’s Midtown and New Center.⁴⁶ Spaces for public gatherings, networking, and cultural events were threaded throughout the urban plan. 22@Barcelona now has an auditorium for cultural events, a national theater, public gardens, and over 100,000 square meters of green spaces. Finally, in an effort to replicate the mix of working and living spaces found in other Barcelona neighborhoods, the project plans to build 4,000 new subsidized housing units and improve the quality of over 4,000 existing homes. District residents have access to 22@ programs such as multimedia classrooms and specific Internet services to create links between residents and innovation-driven industries.

In less than a decade, 69 percent of the area has been transformed and almost 1,500 firms have been established. An impressive 45 percent of firms situated in 22@Barcelona were recently created, and 74 percent of the firms in the district are linked to one of the five target clusters. When asked what strategy was the most catalytic in their cluster formation, city leaders maintained that their intensive efforts to lure specific clusters mattered more than the €180 million in infrastructure investment. Attracting specific firms, universities, and R&D centers created the real gravitational pull needed to stimulate cluster formation. Clusters are now linked to ten universities, 12 R&D and technology centers, and specially designated spaces for SMEs. This effort to locate or create innovative anchors and cluster magnets in walkable places close to other anchors and similar institutions also has echoes in Michigan cities, like Detroit and Flint.

Boston’s Innovation District: Creating a climate for innovation

Boston offers an American example of an innovation district intended to advance the innovation-driven sectors increasingly valued in urban and metropolitan economies. The city aims to concentrate its many assets—strong universities, human capital, and a growing strength in the life sciences and tech clusters—and create a geographic platform for entrepreneurship and fast-growing, innovation-driven companies.

Compared to 22@Barcelona, Boston applies a more organic approach to cluster formation. At 22@Barcelona, local officials dedicated considerable time in first analyzing, and then defining, the specific economic clusters to pursue. Boston, on the other hand, designed its effort to be “cluster neutral,” explained Mitch Weiss, the mayor’s chief of staff, arguing that it is wiser to create the right environment for fast-growing industries and let them aggregate naturally. Samantha Hammar of the Boston Redevelopment Authority explained that they are purposefully

⁴⁵ The incentives that Wayne State University, Detroit Medical Center, and Henry Ford Health Systems provide to employees to live in Midtown, supported also by MSHDA, have helped spark a huge surge in the rental market in that neighborhood. Efforts under way to create a master plan for vacant parcels owned by Henry Ford Health Systems and Wayne State will also connect innovative anchor institutions to creative land use and residential development strategies.

⁴⁶ For example, the former Chevy Creative Services Building now houses the TechOne accelerator.

using a flexible approach, as the innovation district is about “pioneering and re-evolving.” While some companies have overlapping, if not complementary, interests, the Redevelopment Authority is finding cases where one field is branching into new, innovative directions, given the companies’ relationships with firms in other sectors. For example, a clean energy company is working with a microbrewery on developing new energy technologies for the microbrewery.

In contrast with the Spanish example, where governments shouldered most of the financing for infrastructure, analytical planning studies, and time-intensive rezoning to support economic progress, Boston instead funneled what it considered to be a strategic use of resources to create the right conditions to lure innovative workers. The city’s role included:

- developing a vision and leading communication efforts;
- planning and zoning (although limited and more on a case-by-case basis compared to other models);
- creating social infrastructure through incubators and social networking sites;
- offering financial support and incentives for new development projects (when necessary).

For example, the city has sometimes offered space rent-free or below market value to draw firms and company accelerators to the area. The city secured a vacant, class A office space free of charge for a number of years to entice MassChallenge, an entrepreneurial accelerator program, to locate in the Innovation District. GreenTown Labs is another example of an innovation-driven enterprise that was offered a very reasonable rate for space along the waterfront.

It could be argued that the City of Boston needed less direct investment because Boston’s innovation district started from a relatively strong base of activities and enterprises. Prior to its innovation district designation, the area was already home to 33,000 jobs, generating \$10 billion toward the city’s gross product. Creative companies were already moving to the area, and more than 50 retail shops, restaurants, and boutiques offered a strong base of services for a live-work neighborhood. Furthermore, Boston’s innovation district benefited from strong transit accessibility with the Massachusetts Bay Transportation Authority’s Red Line and the recent Silver Line addition, so additional investments in this type of infrastructure were not necessary.

Since January 2010, the Innovation District has gained 55 new businesses and 2,000 new jobs. New companies fall within the clusters of life sciences and biotech, green/clean tech, architecture and digital design, communications and new media, financial, legal, and a broad category of technology development, which includes manufacturing.

Based on these models of innovation districts, Michigan should make targeted investments in one to three urban innovation districts, which it would identify through a competitive process (described below). The districts would be funded in the short term through alignment of existing resources and in the long term through a new 21st Century Places Fund. As the Barcelona and Boston examples show, to have a truly transformative effect both on the urban core and rippling out to the metro, region, and state as a whole, an innovation district needs significant alignment of resources and investments in businesses, housing, commercial and talent attraction, quality-of-place amenities, and business infrastructure. Much of the overall investment for innovation districts comes from the private sector, but the state and city leaders must also focus and prioritize resources to make targeted investments if an innovation district is to be successful. Foundations and nonprofits also play a critical role in investing resources and aligning programs in the service of innovation districts.

In the near term, the state could focus on identifying innovation districts through a competitive process. Districts should first and foremost have the physical attributes that support innovation,

specifically concentrations of anchor institutions or assets, accessibility by many forms of transportation, and easily defined boundaries. The places in Michigan that meet these criteria will almost inevitably be core cities. The following are the type of criteria that could be used when judging potential districts:

- Presence of anchor institutions or other assets that are unique in the state or the region: Innovation districts should engage and even be created around anchor institutions in order to foster the necessary cross-fertilization between learning, research, and economic innovation. Furthermore, colleges, universities, and research institutions should be integrated to help ensure that district firms have ready access to a highly skilled workforce. These institutions can also help cultivate stronger connections across between the worlds of research and business by hosting events that encourage networking and collaborative partnerships. Innovation districts could also be built around unique assets such as ports or transportation hubs that have the potential to be the places where 21st-century infrastructure solutions (e.g. low-carbon transportation, multi-modal transportation, new logistics and delivery systems) are created and tested.
- Physical space: To maximize effectiveness, it is crucial that the innovation district is a clearly demarcated and contiguous space. Sprawling districts are difficult and costly to transform, and will be significantly less appealing to businesses and residents seeking compact and connected communities. Innovation districts with the greatest potential for growth will avail themselves of the strengths found in the area building stock, streets, sidewalks, and open spaces, and will identify the most catalytic changes to specific corridors, corners, and adjacent areas that could produce even greater benefit. These elements will help create a sense of place that makes the district particularly attractive to potential residents and businesses alike.
- Transportation: For an innovation district to work, it must be easily accessible by multiple modes of transportation. As such, district leaders should have a plan to leverage existing and planned infrastructure to the greatest extent possible to create plentiful and well-connected transit options.
- Potential for economic growth: Innovation districts meriting state support will demonstrate potential for significant return on investment for both the region and the state. Investments in these districts will have spillover effects for the city and region. Clearly defined performance metrics will assist state leaders in determining project progress and could include economic impact measures such as tax revenue growth, job creation, critical infrastructure development, strengthening of the real estate market, or population growth. In addition, a successful district will build on the strengths of its existing industry clusters.
- Innovative financing and use of resources: Viable projects will have local public, private, and philanthropic resources already committed or invested. In addition, strong proposals will combine available resources with innovative financing strategies such as public-private partnerships.
- New forms of leadership: Because innovation district growth depends primarily on efforts undertaken at the local level, local leaders' support for the concept and development of the innovation district is crucial. These leaders include not only elected officials but also social and business networks such as business and neighborhood associations, business development and/or business accelerator organizations, and university and/or research organizations. Philanthropy will also likely play a critical role in an innovation district. Given the vast number of stakeholders in these projects—philanthropic organizations, nonprofits, private companies, state and local governments, universities—there will need to be coordination and management by new institutions or entities, or by existing organizations that incorporate stakeholders from the public and private sectors across the region.

- **Community growth potential:** Innovation districts should be good places to live and work alike. District proponents should explore how best to strengthen the quality of existing housing while also seeking out opportunities to build new, high-quality housing for a range of incomes. These efforts will help elevate the value of both housing and commercial markets. Districts should also look for ways to promote culture and leisure activities that draw a wide variety of people to the area and create the social mixing that underpins the innovation district atmosphere.

Once innovation districts are selected, the state should bundle and align its existing financial, technical, and regulatory resources that focus on site-specific development efforts and broader economic development and infrastructure needs. This will take a focused, intentional effort on the part of the executive branch, led by the governor and his team, and clearly identified as a priority for state agencies. The alignment called for requires that state departments be just as accountable as local actors for achieving the goals of the innovation district, reconciling and harmonizing the rules of individual programs within various departments of state government. The Departments of Transportation, Licensing and Regulatory Affairs, Treasury, Environmental Quality, Natural Resources, MEDC, and MSHDA are all likely to play a role, whether overt or subtle, in the different physical projects or economy-building activities in an innovation district. These agencies should also be part of the team supporting the district, and their investments, regulations, advice, and other contributions should be aligned with the broader project aims and deployed in its service.

The state already has a handful of programs that individually have overlapping goals and features of innovation districts but on either a smaller or more narrowly focused scale. Some particularly applicable programs include:

- Business Development Program
- Commercial Redevelopment and Rehabilitation Acts
- Community Revitalization Program
- Corridor Improvement Authority
- Downtown Development Authorities
- Michigan Land Bank Fast Track Authority
- Michigan Main Street
- Neighborhood Enterprise Zones
- Neighborhood Improvement Authorities
- Renaissance Zones
- Smart Zones
- State Infrastructure Bank
- Transportation Enhancement Program and Economic Development Fund

The Appendix provides additional details on these and other potentially applicable programs. These programs have had some success in the last five to ten years in creating quality places, industry clusters, and economic development zones, but as noted above, they have been spread thinly across the state, and have not focused on significant economic, cultural, and infrastructure investment in areas with distinct geographies.

In the immediate term, until more robust funding options are in place, these existing programs could be layered and applied to innovation districts. For example, SmartZones offer a jumping-off point for the establishment of innovation districts. They provide the tools to bring together

businesses' interests, state and local government investment and expertise, and research capabilities to drive some of the core business activity in a district. Furthermore, the program could be expanded to support the businesses, cultural amenities, infrastructure, and housing that are necessary for a vibrant innovation district. In the TechTown SmartZone, for example, the partners have developed a 12-block surrounding master plan that incorporates Wayne State University, incubators, research and laboratory facilities, office space, housing, retail, and cultural amenities. TechTown hosts networking events as well as social and cultural events in the hopes of fostering a cohesive SmartZone community. The Pinnacle Aeropark and Muskegon SmartZones, although not as far along as TechTown, are both based on specific geographies, and both follow mixed-use development plans with high-tech anchor institutions at their cores. MSHDA programs such as Michigan Main Street could be layered with SmartZones or other innovation district programs to further support those efforts. The Office for Public-Private Partnerships and State Infrastructure Bank (SIB) are also in optimal positions to provide technical assistance and help innovation districts implement creative financing solutions.

In addition, the state's new Michigan Community Revitalization Program could provide some of the critical resources and focused attention for innovation districts. The program was established within the 21st Century Jobs Fund and replaces several of the state's primary economic development and community rehabilitation programs such as the brownfields and historic tax credits, which were recently abolished.

The type of alignment described here is already happening in some ways in some of Michigan's metros. In Midtown Detroit, for example, the state has already been aligning resources to accelerate development of the area. The innovation district designation could help state leaders prioritize their efforts and set clear benchmarks for success.

In the longer term, the state will need to partner with metro and city leaders to actively target and pursue new resources to further accelerate and facilitate the build-out of the innovation districts, particularly for land assembly and critical business infrastructure. Land assembly, for example, to allow for buy-and-hold strategies, will be critical to making innovation districts work.⁴⁷ Until the real estate market in many Michigan cities is stronger, many land redevelopment deals will need some form of subsidy. Currently the market is limiting cities' and developers' ability to finance land assembly activities. The state could use some limited resources in the mid to long term to help bridge the gap for land assembly and development.

To help accelerate these efforts and meet some of the implementation needs over the longer term, the state should consider the development of a 21st Century Places Fund, perhaps through a state bond initiative.⁴⁸ Just as 21st Century Jobs Fund was developed to close market gaps in innovation, venture capital, and commercialization, a 21st Century Places Fund would allow cities to use the fund to close market gaps in real estate within or perhaps adjacent to their innovation districts, purchase key redevelopment parcels that may not be eligible for Land Bank Fast Track Authority activity, and facilitate necessary land consolidation for the district. The fund could also be used for pre-development costs or redevelopment costs that are not supported by current tools.

⁴⁷ Michigan's land banks lack the initial funds to maintain properties or ready them for disposition.

⁴⁸ Ohio's very successful Third Frontier program was initially funded in part through a \$500 million, 7-year bond initiative passed in 2005. Ohio voters renewed Third Frontier in March 2010, supporting another \$700 billion in bonds to be issued over the next four years.

Building on the Basics

As was acknowledged at the beginning of this strategy, safe streets, attractive amenities, and a good business climate are absolutely necessary for urban areas to flourish, but they are not sufficient. In the same vein, broad-level state actions to strengthen metro areas' economies in a global, networked, rapidly changing economy will only be successful if they build on cities' efforts to "fix the basics," including:

- Achieving financial solvency and then sustaining local fiscal strength
- Gaining efficiencies and improving the quality of service delivery
- Cooperating with regional partners on business attraction and retention efforts so that all communities enjoy the benefits of regional economic growth
- Ensuring that the pre-K to 12 education system is high quality and is training young people in the skills they will need for the next economy

Each piece is necessary but not by itself sufficient. If, for example, the state and local governments only use Emergency Financial Manager Act tools, without focusing on jobs, people, and place-making, they may stop the bleeding but not ever achieve full health and prosperity. If cities ignore the fundamentals, then their jobs, people, and place efforts are hampered, and they will always be putting out a fire elsewhere.

Several recent studies, including Public Sector Consultants (PSC) and Citizens Research Council (CRC) of Michigan's *Improving Delivery of Local Government Services* (PSC and CRC 2009) and Anderson Economic Group's *The Levers We Have: Benchmarking Key Business Cost Factors that Michigan's State and Local Governments Can Influence* (Anderson Economic Group 2011a), commissioned as part of this metropolitan strategy, have highlighted the need to fix basic service and business climate issues in our metros, and identified the importance of increasing efficiencies and finding ways to streamline government services to maintain or improve services with fewer dollars.

While this strategy sought to focus on a smaller set of priority recommendations that will propel metro area growth and economic prosperity throughout the state, it builds on and connects to ongoing efforts by local and state policy leaders to address the needs for basic financial, public services, and education reform.

Some efforts that particularly connect to and underpin the recommendations in this strategy include:

- Overhaul of the Michigan business tax structure in May 2011, which makes Michigan more competitive with other states.
- Passage of Public Act 72 (Emergency Financial Management Act), which allows state government "to intervene in units of local government that experience financial emergencies" and privatize services, reduce wages, and change health care contributions for public employees.
- Amendment of Public Act 312 (binding arbitration), which preserves collective bargaining rights for public safety workers and gives local governments the authority to negotiate labor agreements based on ability to pay. The amendments address significant cost and funding issues for public safety by local municipalities.
- Passage of Public Acts 133–140, prohibiting minimum staffing requirements by charter or ordinance, thereby providing opportunity for greater service delivery sharing.

- Passage of Public Act 152, which requires public employers to either put a hard cap on health care costs or have an 80/20 cost sharing arrangement.
- Amendments to Public Act 51 that have added Complete Streets planning, requiring municipalities and transportation facilities to coordinate their long-term capital planning so as not to duplicate efforts and/or neglect improvements to access for all road users (including bicyclists and pedestrians).
- Education reforms already enacted by the governor, state legislature, and state board of education including adoption of the national College and Career Readiness learning standards; changes to the Michigan Merit and MEAP assessment of proficiency to match college and career learning standards; creation of a state Education Achievement Authority to ensure failing schools are effectively turned around or replaced with effective choices; teacher tenure reform to ensure high-quality teaching linked to student achievement; and consolidation of early childhood development programs into the Michigan Office of Great Start–Early Childhood Education.
- Education reforms proposed by the governor but *still to be enacted* include linking funding to student performance; adopting a school accreditation system that provides an honest assessment of where schools stand; providing better support and rewards for master teachers; enhancing early college-credit taking; and integrating high school and postsecondary preparation for careers through “any-time, any-place, any-way, any-pace” learning models as proposed by the governor.
- Governor Snyder’s advocacy, in his special message on “Reinventing Michigan’s Infrastructure,” of a modern transportation system that moves people and goods efficiently, reliably, and safely—a multimodal system serving the movements of a new generation of Michiganders that is more active, urban-based, and tech savvy; water and sewer systems that support and protect Michigan’s rich environment; and integration of the broadband telecommunications network, connecting every business and household to the Internet.

Reform efforts are also under way in communities throughout Michigan, led by local elected officials, business groups, and nonprofits, and supported by statewide entities like the Michigan First Suburbs Alliance, Michigan Townships Association, and the Michigan Municipal League (MML). MML, for example, has identified eight essential assets that make communities vibrant places in the 21st century, and are assisting local governments in building these assets through its 21st Century Communities Initiative.

Business Leaders for Michigan’s updated Michigan Turnaround Plan also outlines a holistic approach to fixing the basics as a means of accelerating economic growth. The plan identifies many of the principles and policies necessary to ensure sound governance, including sound fiscal management and ethics standards, effective public safety, results-oriented redevelopment strategies, cost-effective and reliable basic services, and support for regional solutions (Business Leaders for Michigan 2012).

Conclusion

This is a propitious moment for Michigan. Cities and metropolitan areas throughout the state are diligently building on their strengths, taking the steps necessary to lead the transition to the next economy. The effects of these efforts are already providing cause for optimism. Detroit and Grand Rapids are currently two of the 20 strongest-performing metro areas in the nation, due in large part to steady growth in manufacturing jobs. Newspapers describe Detroit as a magnet for energetic, entrepreneurial young people who believe that “being a part of Detroit’s resurgence is incredibly fun” (Conlin, 2011). Grand Rapids was recently named second in RelocateAmerica’s top ten list of best places to live in the United States. “It’s got the best of everything in a smaller large city,” explained RelocateAmerica’s president (Wall Street Journal, 2011).

The state’s smaller metros also have reason to celebrate. In Holland, growing prowess in battery technology continues to attract national attention. Flint’s Mott Community College was recently named one of ten finalists for the Aspen Institute’s first annual Aspen Prize for Community College Excellence. In Kalamazoo, yet another new crop of high school graduates has headed off to college.

As Michigan’s metros press on toward economic recovery, state leaders have a unique opportunity to support the pragmatic efforts of local and regional leaders in the private, public, philanthropic, and academic sectors. The preceding pages outline specific actions that the state can take to set a platform for economic growth in Michigan’s cities and metropolitan areas. By adopting and implementing a coordinated strategy that is grounded in local realities, attentive to regional opportunities, and intent on fostering collaboration and cooperation, Michigan can help its metros and cities build on their assets to the benefit of all Michiganders.

By strengthening the link between innovation and manufacturing, state leaders can foster continued growth in manufacturing and innovation capacity, boosting regional exports and attracting global investment in the process. Because the preponderance of Michigan’s manufacturing firms are located in its metropolitan areas, efforts to bolster this sector will be of direct benefit to Michiganders living in these regions. Fostering innovation among small manufacturers, attracting foreign direct investment to fill gaps in the manufacturing supply chain, and increasing assistance for Michigan companies looking to enter or expand their engagement with the global marketplace will strengthen the economies of Michigan’s metros, creating more and better-paying jobs in promising and prosperous industries.

To meet this increased demand for labor, state leaders will need to cultivate a workforce that is up to the task. Even as state leaders advocate for important changes to federal workforce laws, they can use existing workforce dollars to drive regional workforce development strategies that meet local industry needs. At the same time, state leaders can take steps to ensure that urban and metropolitan economies receive the full benefit of immigrant professionals’ experience and expertise. Taken together, these workforce strategies will help ensure that companies are able to find the workers they need to thrive in the next economy.

As state leaders embark on these broad, platform-setting strategies, they should also remain attentive to the unique qualities that set Michigan cities and metros apart from one another. Significant, targeted investment in select industry clusters and innovation districts offers a way to leverage distinct local assets and scarce state resources for maximum effect. Although necessarily few in number, these awards will bolster those places with the greatest potential in the next economy. Alignment of existing state programs and services in support of award recipients will

further these goals by reducing administrative barriers and encouraging greater coordination among state agencies.

Last, state leaders should continue their efforts to “fix the basics” of service provision, financial management, business retention, and elementary and secondary education. Such efforts will inevitably strengthen cities and metros by expanding their capacity to manage themselves efficiently and effectively in the years ahead.

This strategy sets forth a bold vision for Michigan’s cities and metros—and for the state as a whole. Fortified by the strengths of its urban and metropolitan areas and galvanized by a growing sense of possibility, Michigan can take decisive steps today to boost competitiveness and secure prosperity for generations to come.

References

- Accelerate Michigan. N.d. *Individually We Are Strong, But Together We Can Transform Our State*. [Online, accessed 8/26/11] Available: <http://www.acceleratemichigan.com/about>.
- Alexander, Dave. June 17, 2011. Fortu PowerCell plans fall construction of its advanced battery plant in Muskegon Township. *mlive.com*. [Online, accessed 10/4/11] Available: http://www.mlive.com/business/west-michigan/index.ssf/2011/06/ready_to_edit_fortu_powercell.html.
- . March 10, 2010. Hiring, construction of Fortu PowerCell battery plant a year away. *mlive.com*. [Online, accessed 10/4/11] Available: http://www.mlive.com/news/muskegon/index.ssf/2010/03/hiring_construction_of_fortu_p.html.
- Anderson Economic Group (AEG). 2011a. *The Levers We Have: Benchmarking Key Business Cost Factors that Michigan's State and Local Governments Can Influence*, prepared for the Brookings Institution. East Lansing, Mich.: AEG.
- . 2011b. *Automation Alley's Technology Industry Report 2011 Edition. Growing the Detroit Region's Technology Economy: A Regional Comparison Study as We Emerge from the Recession*. Troy, Mich.: AEG. [Online, accessed 1/2/12] Available: http://www.andersoneconomicgroup.com/Portals/0/upload/Tech%20Report%20Book_printerres.pdf.
- Anderson, Thomas, and William J. Zeile. November 2009. *Operations of U.S. Affiliates of Foreign Companies*. Washington, D.C.: Bureau of Economic Analysis.
- Atkinson, Robert, and Howard Wial. April 2008. *Boosting Productivity, Innovation, and Growth Through a National Innovation Foundation*. Washington, D.C.: The Brookings Institution. [Online, accessed 10/3/11] Available: http://www.brookings.edu/~media/Files/rc/reports/2008/04_federal_role_atkinson_wial/NIF%20Report.pdf.
- Audretsch, David, and Maryann Feldman. 2004. Knowledge Spillovers and the Geography of Innovation. In J. Vernon Henderson and Jacques-Francois Thisse, eds., *Handbook of Regional and Urban Economics*, vol. 4: 2120–2167. Amsterdam: Elsevier.
- Batalova, Jeanne, Michael Fix, and Peter A. Creticos. 2008. *Uneven Progress: The Employment Pathways of Skilled Immigrants in the United States*. Washington, DC: Migration Policy Institute,. [Online, accessed 1/6/12] Available: <http://www.migrationpolicy.org/pubs/BrainWasteOct08.pdf>.
- Berube, Alan, and Carey Nadeau. 2011. *Metropolitan Areas and the Next Economy: A 50-state Analysis*, Framing Report. Washington, D.C.: The Brookings Institution.
- Bivens, Josh. August 2003. *Updated Employment Multipliers for the U.S. Economy* (working paper No. 268). Washington, D.C.: Economic Policy Institute. [Online, accessed 1/2/12] Available: http://www.epi.org/page/-/old/workingpapers/epi_wp_268.pdf.
- Bradley, Jennifer, Richard Shearer, and Amanda Parsons. Forthcoming. *Great Lakes Monitor*. Washington, D.C.: The Brookings Institution.
- Bradley, Jennifer, Emilia Istrate, and Jonathan Rothwell. 2010. *Exports in the Great Lakes*. Washington D.C.: The Brookings Institution.
- Brookings Institution. 2010. *State of Metropolitan America*. Washington, D.C.: The Brookings Institution. [Online, accessed 1/6/12] Available: www.brookings.edu/~media/Files/Programs/Metro/state_of_metro_america/metro_america_report.pdf

- . September 2011. *MetroMonitor* complete data set. Washington, D.C.: The Brookings Institution.
- Brookings Institution and LSE Cities, London School of Economics (with Deutsche Bank Research. 2010. *Global Metro Monitor: The Path to Economic Recovery*. [Online, accessed 1/27/12] Available: <http://globalmetrosummit.net/media/GlobalMetroMonitor.pdf>.
- Bureau of Labor Statistics (BLS), U.S. Department of Labor. December 20, 2011. *Regional and State Employment and Unemployment Summary*. [Online, accessed 1/2/12] Available: <http://www.bls.gov/news.release/laus.nr0.htm>.
- Business Leaders for Michigan. N.d. *2012 Michigan Turnaround Plan: Laying the Foundation to Build a New Michigan*. [Online, accessed 1/24/12] Available: http://www.michiganturnaroundplan.com/files/2012%20Michigan%20Turnaround%20Plan_NM%20booklet.pdf.
- California Community Economic Revitalization Team. *Export Finance Services*. [Online, accessed 12/12/11] Available: <http://ceres.ca.gov/cert/grants/tcexp.html>.
- Center for Law and Social Policy. July 24, 2009. *WIA Reauthorization: Recommendations for Reauthorization of the Workforce Investment Act Adult Program*. [Online, accessed 1/6/12] Available: http://www.clasp.org/admin/site/publications/files/WIA_Recs-for-Adult-Program-final.pdf.
- Citizens Research Council of Michigan (CRC). June 2007. *Survey of Economic Development Programs in Michigan*, 2nd ed., Report 347. Livonia, Mich.: CRC. [Online, accessed 9/30/11] Available: <http://www.crcmich.org/PUBLICAT/2000s/2007/rpt347.pdf>.
- City of Chicago and Cook County, Joint Committee on City-County Collaboration. June 2011. [Online, accessed 1/6/12] Available: <http://www.cityofchicago.org/content/dam/city/depts/mayor/Press%20Room/Press%20Releases/2011/June/CityCountyCollaborationJune2011.pdf>.
- City of New York City, Mayor's Office of Adult Education. *Know Before You Enroll*. [Online, accessed 12/14/11] Available: http://www.nyc.gov/html/adulted/html/know/know_before_you_enroll.shtml.
- Conlin, Jennifer. July 3, 2011. Detroit Pushes Back with Young Muscles. *The New York Times*. [Online, accessed 9/30/11] Available: <http://www.nytimes.com/2011/07/03/fashion/the-young-and-entrepreneurial-move-to-downtown-detroit-pushing-its-economic-recovery.html?scp=1&sq=%22bureau%20of%20urban%20living%22&st=cse>.
- Cortright, Joseph. 2007. *City Advantage*. Chicago, Ill.: CEOs for Cities. [Online, accessed 1/6/12] Available: <http://www.ceosforcities.org/files/CityAdvantage.pdf>.
- Council of Economic Advisers. 2011. *U.S. Inbound Foreign Direct Investment*. Washington, D.C.: Executive Office of the President. [Online, accessed 1/6/12] Available: http://www.whitehouse.gov/sites/default/files/microsites/cea_fdi_report.pdf.
- Creticos, Peter A., et al. December 2007. Employing Foreign-Educated Immigrants: A Report to the Joyce Foundation. [Online, accessed 1/6/12] Available: http://www.robparal.com/downloads/Employing_Internationally_Educated_Final.pdf.
- Delgado, Mercedes, Michael Porter, and Scott Stern. 2010. Clusters and Entrepreneurship. *Journal of Economic Geography* 10 (2010): 495–451.
- Detroit Region Aerotropolis Development Corporation (DRADC). 2008. Aerotropolis website. [Online, accessed 10/6/11] Available: <http://www.detroitregionaerotropolis.com>.

- Detroit Works Project. December 2010. *Policy Audit Topic: Urban and Regional Economy*. Boston: Initiative for a Competitive Inner City. [Online, accessed 1/2/12] Available: <http://www.scribd.com/fullscreen/52005776>).
- Duderstadt, James J., Mark Muro, and Sarah Rahman. June 2010. *Hubs of Transformation: Leveraging the Great Lakes Research Complex for Energy Innovation*, Brookings Policy Brief 173. Washington, D.C.: The Brookings Institution.
- Edison Centers. 2009. Edison Centers website. [Online, accessed 10/6/11] Available: <http://edisoncenters.org/>.
- Edison Materials Technology Center. EMTEC website. [Online, accessed 12/19/11] Available: <http://www.emtec.org/about.php>.
- Edison Welding Institute. EWI website. [Online, accessed 12/19/11] Available: <http://www.ewi.org>.
- Ezell, Stephen J., and Robert D. Atkinson. 2011. *The Case for a National Manufacturing Strategy*. Washington, D.C.: The Information Technology & Innovation Foundation. [Online, accessed 1/2/12] Available: <http://www.itif.org/files/2011-national-manufacturing-strategy.pdf>.
- Florida International University. *Accelerated Combined RN/MSN Program for Foreign-Educated Physicians*. [Online, accessed 12/14/11] Available: <http://fep.fiu.edu/>.
- Ganzglass, Evelyn. February 2010. *Workforce Investment Act: Recommendations on Performance Accountability in the Workforce Education and Training System*. [Online, accessed 1/6/12] Available: http://www.clasp.org/admin/site/publications/files/Workforce_Investment_Act_Recommendations_for_Shared_Accountability_System.pdf.
- German Federal Ministry of Education and Research. 2010. *Ideas. Innovation. Prosperity. High Tech Strategy 2020 for Germany and The Leading Edge Clusters Competition*. [Online, accessed 1/6/12] Available: <http://www.bmbf.de/en/10726.php>.
- Gould, David. 1994. Immigrant Links to the Home Country: Empirical Implications for U.S. Bilateral Trade Flows. *The Review of Economics and Statistics* 76(2): 302–316.
- Government Offices of Sweden. September 17, 2009. *New project to make use of the experience of people born abroad*. [Online, accessed 10/10/11] Available: <http://www.sweden.gov.se/sb/d/11427/nocache/true/a/131775/dictionary/true>.
- Gray, Kathleen. June 8, 2006. DeVos Puts Heat on Cool Cities, Granholm. *Detroit Free Press*. [Online accessed 1/26/12] Available: <http://www.wzzm13.com/news/story.aspx?storyid=55812>.
- Gryczan, Matthew. February 13, 2011. Powered by batteries: Holland area vies to be national hub for lithium-ion manufacturing. *Crain's Detroit Business*. [Online, accessed 10/4/11] Available: <http://www.crainsdetroit.com/article/20110213/FREE/302139998/powered-by-batteries-holland-area-vies-to-be-national-hub-for-lithium-ion-manufacturing#>.
- Hall, Matthew, Audrey Singer, Gordon F. De Jong, and Deborah Roempke Graefe. June 2011. *The Geography of Immigrant Skills: Educational Profiles of Metropolitan Areas*. Washington, D.C.: The Brookings Institution.
- Helper, Susan, and Howard Wial. 2011. *Accelerating Advanced Manufacturing with New Research Centers*. Washington, D.C.: The Brookings Institution. [Online, accessed 1/2/12] Available: http://www.brookings.edu/~media/Files/rc/papers/2011/0208_states_manufacturing_wial/0208_states_manufacturing_wial.pdf.

- Hinze, Steve, and Karen Baker. January 2005. *Minnesota's Fiscal Disparities Programs*. Minneapolis, Minn: Minnesota House Research Department. [Online, accessed 10/4/11] Available: <http://www.house.leg.state.mn.us/hrd/pubs/fiscaldis.pdf>.
- Hirsh, Michael and Fawn Johnson. July 28, 2011. Desperately Seeking Skills: How an Unqualified Workforce Is Prolonging America's Economic Misery. *National Journal*. [Online, accessed 1/6/12] Available: <http://www.nationaljournal.com/magazine/workers-without-right-education-skills-floundering-in-weak-economy-20110728>.
- Hockfield, Susan. August 29, 2011. Manufacturing a Recovery. *New York Times*. [Online, accessed 10/4/11] Available: <http://www.nytimes.com/2011/08/30/opinion/manufacturing-a-recovery.html>.
- Immelt, Jeffrey. June 26, 2009. Remarks to the Detroit Economic Club. [Online, accessed 10/5/11] Available: <http://www.econclub.org/Multimedia/Transcripts/An%20American%20Renewal%206-26%20final.pdf>.
- Istrate, Emilia. Forthcoming. *Export Nation II*. Washington, D.C.: The Brookings Institution.
- . June 20, 2011. Can Foreign Investment Revive U.S. Manufacturing? *The New Republic*. [Online, accessed 10/4/11] Available: <http://www.tnr.com/blog/the-avenue/90287/can-foreign-investment-revive-us-manufacturing>.
- . April 21, 2011. Is 2016 the Year China's Economy Surpasses the United States? *The New Republic* (April 21, 2011). [Online, accessed 10/4/11] Available: <http://www.tnr.com/blog/the-avenue/87155/2016-the-year-chinas-economy-surpasses-the-us>.
- Istrate, Emilia, and Robert Puentes. Forthcoming. *Public Private Partnership (PPP) Units—The Missing Institutional Link in PPPs*. Washington, D.C.: The Brookings Institution.
- Istrate, Emilia, Jonathan Rothwell, and Bruce Katz. 2010. *Export Nation: How U.S. Metros Lead National Export Growth and Boost Competitiveness*. Washington, D.C.: The Brookings Institution.
- Lane, Amy. June 12, 2000. New Development Fund Would Target Urban Areas. *Crain's Detroit Business*. [Online, accessed 1/27/12] Available: <http://www.crainsdetroit.com/article/20000612/SUB/6120880>.
- Lane, Amy, and Tenisha Mercer. December 23, 1996. National Ad Campaign Designed to Market 11 Renaissance Zones. *Crain's Detroit Business*. [Online, accessed 1/27/12] Available: <http://www.crainsdetroit.com/article/19961223/SUB/612230874>.
- Katz, Bruce, Jennifer Bradley, and Amy Liu. November 2010. *Delivering the Next Economy: The States Step Up*. Washington, D.C.: The Brookings Institution.
- Katz, Bruce, and Emilia Istrate. January 2011. *Boosting Exports, Delivering Jobs and Economic Growth*. Washington, D.C.: The Brookings Institution. [Online, accessed 10/4/11] Available: http://www.brookings.edu/~media/Files/rc/papers/2011/0126_exports_katz_istrate/0126_exports_katz_istrate.pdf.
- Katz, Bruce and Julie Wagner. June 2008. *Transformative Investments: Remaking American Cities for a New Century*. Washington, D.C.: The Brookings Institution. [Online, accessed 1/6/12] Available: http://www.brookings.edu/articles/2008/06_cities_katz.aspx.
- Kindy, Kimberly. July 29, 2003. California Trade Offices Face Cuts. *The Orange County Register*.

- Landes, David. September 17, 2009. Immigration Increases Foreign Trade Study. *The Local*. [Online accessed 10/4/11] Available: <http://www.thelocal.se/22146/20090917/>.
- Liveris, Andrew. 2011. *Make It In America: The Case for Re-Inventing the Economy*. Hoboken, N.J.: John Wiley and Sons Inc.
- Michigan Department of Licensing and Regulatory Affairs. *License Requirements*. [Online, accessed 1/6/12] Available: http://www.michigan.gov/lara/0,4601,7-154-35299_35414_35472-114638--,00.html, accessed 12/7/11.
- Michigan Department of Transportation (MDOT). N.d. *Michigan State Rail Plan*. [Online, accessed 10/4/11] Available: <http://www.michigan.gov/mirailplan>.
- Michigan Economic Development Corporation (MEDC). 2010. *Core Communities*. [Online, accessed 9/30/11] Available: http://www.michiganadvantage.org/cm/files/Fact-Sheets/Core_communities.pdf.
- . September 9, 2010. *A Foundation for the New Michigan Economy: 21st Century Jobs Fund Report*. Lansing, Mich.: MEDC. [Online, accessed 1/6/12] Available: www.michiganadvantage.org/cm/files/reports/21cjf_report93r-f3.pdf.
- . *MI-EXPORT STEP Grant Proposal*, submitted to the U.S. Small Business Administration, 2011.
- Michigan League for Human Services (MLHS). 2007. *Fixing the Leaky Pipeline, Why Adult Education and Skills Training Matters for Michigan's Future*. Lansing, Mich.: MLHS. [Online, accessed 9/30/11] Available: <http://www.milhs.org/wp-content/uploads/2010/07/PR/AdultEdFINALMay08.pdf>.
- Michigan Manufacturing Technology Center (MMTC). 2011. *ExporTech: Jumpstart Your International Growth*. [Online, accessed 8/11/11] Available: <http://www.mmtc.org/exportech>.
- Michigan Municipal League (MML). N.d. *Center for 21st Century Communities, About 21c3*. [Online, accessed 10/10/11] Available: <http://www.mml.org/resources/21c3/about.html>.
- Michigan State Housing Development Authority (MSHDA). N.d. *2009-2010 Michigan Main Street Annual Report*. Lansing, Mich.: MSHDA. [Online, accessed 10/4/11] Available: <http://www.michiganmainstreetcenter.com/LinkClick.aspx?fileticket=DnY9RKtzQWM%3d&tabid=67>.
- Migration Policy Institute. *MPI Data Hub Migration: Facts, Stats and Maps*. [Online, accessed 11/1/11] Available: www.migrationinformation.org/datahub/state3.cfm?ID=MI.
- Mistry, Nisha, and Joan Byron. April 2011. *The Federal Role in Supporting Urban Manufacturing*. Washington, DC: What Works Collaborative. [Online, accessed 1/6/12] Available: http://www.brookings.edu/~media/Files/rc/papers/2011/04_urban_manufacturing_mistry_byron/04_urban_manufacturing_mistry_byron.pdf.
- Muller, Joann. June 29, 2011. Detroit's Fix-It Men: In Their Own Words. *Forbes.com*. [Online, accessed 9/30/11] Available: <http://www.forbes.com/sites/joannmuller/2011/06/29/detroits-fix-it-men-in-their-own-words/>.
- Muro, Mark, and Kenan Fikri. 2011. *Job Creation on a Budget: How Regional Industry Clusters Can Add Jobs, Bolster Entrepreneurship, and Spark Innovation*. Washington, D.C.: The Brookings Institution. [Online, accessed 1/2/12] Available: http://www.brookings.edu/~media/Files/rc/papers/2011/0119_clusters_muro/0119_clusters_muro.pdf.

- Muro, Mark, and Bruce Katz. September 2010. *The New 'Cluster Moment': How Regional Innovation Clusters Can Foster the Next Economy*. Washington, D.C.: The Brookings Institution. [Online, accessed 1/2/12] Available: <http://www.wedc.wa.gov/Download%20files/2010.09-ClusterMoment-Brookings.pdf>.
- Muro, Mark, Jonathan Rothwell, and Devashree Saha with Battelle Partnership Technology Practice. 2011. *Sizing the Clean Economy: A National and Regional Jobs Assessment*. Washington, D.C.: The Brookings Institution.
- Muro, Mark, et al. 2008. *MetroPolicy: Shaping a New Federal Partnership for a Metropolitan Nation*, Framing Report. Washington, D.C.: The Brookings Institution.
- New Economy Initiative for Southeast Michigan. November 15, 2011. *Workforce Intelligence Network Responds to Southeast Michigan's Real-Time Workforce Needs*. [Online, accessed 1/6/12] Available: <http://neweconomyinitiative.cfsem.org/media-center/press-release/workforce-intelligence-network-responds-to-southeast-michigan-s-real-time>.
- Oakland County. N.d. *Global Oakland* website. Foreign Owned Firms in Oakland County. [Online, accessed 1/6/12] Available: http://www.oakgov.com/peds/info_pub/foreign_firms.html.
- Office of Management and Budget (OMB). June 28, 2010. 2010 Standards for Delineating Metropolitan and Micropolitan Statistical Areas; Notice. *Federal Register* 75, no. 123: 37252. .
- Ohio Department of Development. August 18, 2011. Report to the Ohio General Assembly pursuant to ORC Section 187.05. [Online, accessed 1/2/12] Available: http://www.development.ohio.gov/Documents/DSA_Report.pdf.
- . August 2011. *International Corporate Investment in Ohio Operations*. [Online, accessed 1/2/12] Available: <http://www.development.ohio.gov/research/documents/Finalreport2011.pdf>.
- . 2009. *Third Frontier 2009 Annual Report*. [Online, accessed 8/25/11] Available: http://development.ohio.gov/ohiothirdfrontier/Documents/RecentPublications/Third_Frontier_Annual_Report2009.pdf.
- . N.d. *Ohio Third Frontier*. [Online, accessed 8/25/11] Available: www.development.ohio.gov/ohiothirdfrontier.
- Organization for International Investment. 2009. *Insourcing: It Works For Us*. Washington, D.C.: Organization for International Investment. [Online, accessed 1/6/12.] Available: http://www.ofii.org/docs/Insourcing_It_Works_for_US.pdf.
- Partnership for a New American Economy. September 14, 2011. *Statement for the Record, U.S. House of Representatives Committee on the Judiciary Subcommittee on Immigration Policy and Enforcement, Hearing on "The Investor Visa Program: Key to Creating American Jobs."* [Online, accessed 10/4/11] Available: http://renewoureconomy.org/2011_09_14.
- . 2010. *About Us*. [Online, accessed 10/4/11] Available: <http://www.renewoureconomy.org/about>.
- Payne, David and Fenwick Yu. June 2011. *Foreign Direct Investment in the United States*. Washington, D.C.: U.S. Department of Commerce, Economics and Statistics Administration. [Online, accessed 1/6/12] Available: <http://www.esa.doc.gov/sites/default/files/reports/documents/fdiesaisssuebriefno2061411final.pdf>

- Peri, Giovanni, and Francisco Requena. November 2009. *The Trade Creation Effect of Immigrants: Evidence from the Remarkable Case of Spain*. NBER Working Paper # 15625. Cambridge, Mass.: National Bureau of Economic Research.
- Pisano, Gary P., and Willy C. Shih. 2009. Restoring American Competitiveness. *Harvard Business Review* (July-August 2009): 114–125.
- Public Policy Associates, W. E. Upjohn Institute, Berkeley Policy Associates, and University of California San Diego. March 31, 2010. *Strategic Workforce Development as a Catalyst for Economic Growth: Lessons and Insights for the Field and Implications for the Future of WIA*. [Online, accessed 12/15/11] Available: <http://www.publicpolicy.com/upload/pdfs/Publications/Strategic%20Workforce%20Development.pdf>.
- Public Sector Consultants (PSC) and Citizens Research Council (CRC). 2009. *Improving Delivery of Local Government Services*, prepared for the Business Leaders of Michigan. Lansing, Mich.: PSC.
- Romer, Paul M. 1993. Implementing a National Technology Strategy with Self-Organizing Industry Boards, in Martin Neil Baily, Peter C. Reiss, and Clifford Winston, eds., *Brookings Papers on Economic Activity, Microeconomics 1993*: 2. Washington, D.C.: The Brookings Institution.
- Rosenthal, Stuart, and William Strange. 2004. Evidence on the Nature and Sources of Agglomeration Economies, in *Handbook of Regional and Urban Economics*, Vol. 4, J. Vernon Henderson and Jacques-Francois Thisse, eds. Amsterdam: Elsevier.
- Singer, Audrey. N.d. Internal Memorandum, Immigration and Economic Development. Washington, D.C.: The Brookings Institution.
- Slaughter, Matthew J. October 2011. *The Foreign Investment Challenge for the United States*. Washington, D.C.: Organization for International Investment. [Online, accessed 1/6/12] Available: http://www.ofii.org/docs/The_Foreign_Investment_Challenge_for_the_United_States_October_2011.pdf.
- Snyder, Rick. December 1, 2011. A Special Message from Governor Rick Snyder: Developing and Connecting Michigan's Talent. [Online, accessed 1/6/12] Available: http://www.michigan.gov/documents/snyder/SpecialMessageonTalent_369995_7.pdf.
- . November 2, 2010. Gubernatorial election victory speech. Detroit, Michigan. [Online accessed 1/26/12] Available at: <http://www.youtube.com/watch?v=SrQ9V9j3etI>.
- Sölvell, Örjan, Göran Lindqvist, and Christian Ketels. 2003. *The Cluster Initiative Greenbook*. Stockholm: Ivory Tower AB. [Online, accessed 1/6/12] Available: <http://www.cluster-research.org/dldocs/GreenbookSep03.pdf>.
- Spielfogel, David. November 26, 2011. *Overview of Chicago-Cook County Workforce Development Merger*. E-mail communication.
- SRI International. September 2009. *Making an Impact: Assessing the Benefits of Ohio's Investment in Technology-Based Economic Development Programs*. [Online, accessed 8/25/11] Available: http://development.ohio.gov/ohiothirdfrontier/Documents/RecentPublications/OH_Impact_Rep_SRI_FINAL.pdf.
- . *Benchmarks for the Next Michigan: 2010 Update*. 2010. Menlo Park, Cal.: SRI International. [Online, accessed 1/6/12] Available: <http://www.themedc.org/cm/Files/Reports/MI-Benchmarking-Report-2010-Update-Part-2-of-3.pdf>.

- State of Michigan, Office of the Governor. April 26, 2011. *Snyder signs legislation to expand 21st Century Jobs Fund*. [Online, accessed 10/10/11. Available: <http://www.michigan.gov/snyder/0,1607,7-277-57577-255192--,00.html>.
- . October 26, 2011. *Reinventing Michigan's Infrastructure: Better Roads Drive Better Jobs*. [Online, accessed 1/6/12] Available: http://www.michigan.gov/documents/snyder/102611InfrastructureMessage_367113_7.pdf.
- . N.d. *Emergency Managers*. [Online, accessed 10/10/11] Available: http://www.michigan.gov/snyder/0,4668,7-277-57738_57679_57726-261635--,00.html.
- Suominen, Kati. October 2011. *U.S. Growth Capital: America's Runway to the World*, prospectus summary.
- Tassey, Gregory. 2009. *Rationales and Mechanisms for Revitalizing U.S. Manufacturing R&D Strategies*. Gaithersburg, Md.: National Institute of Standards and Technology.
- Tobocman, Steve. 2010. *Global Detroit*. Detroit: New Economic Initiative for Southeast Michigan. [Online, accessed 8/31/11] Available: http://neweconomyinitiative.cfsem.org/sites/neweconomyinitiative.cfsem.org/files/global_detroit_full_report_with_appendices.pdf.
- . 2010. *State of Metropolitan America*. Washington, D.C.: The Brookings Institution, Metropolitan Policy Program. [Online, accessed 10/4/11] Available: http://www.brookings.edu/~media/Files/Programs/Metro/state_of_metro_america/metro_america_report.pdf.
- and LSE Cities, London School of Economics and Political Science (LSE). 2010. *Global Metro Monitor: The Path to Economic Recovery*. Washington, D.C.: The Brookings Institution and London, London School of Economics and Political Science. [Online, accessed 1/2/12] Available: http://www.brookings.edu/~media/Files/rc/reports/2010/1130_global_metro_monitor/1130_global_metro_monitor.pdf.
- Transformation Advisors. February 22, 2011. *Our Journey to a Sustainable Future: Preliminary Review, Evaluation, and Report Recommendations of the Transformation Advisors*. [Online, accessed 12/15/11] Available: http://www.grcity.us/city-manager/Documents/14332_transformationad.
- Turnbull, Jonathan. September 21, 2010. Webinar Presentation to National Association for Business Economics. [Online, accessed 8/25/11] Available: <http://www.nabe.com/rt/reg/documents/Lazard.pdf>.
- Upwardly Global. N.d. *Guides for Licensed Professionals*. [Online, accessed 12/7/11] Available: <http://www.upwardlyglobal.org/job-seekers/american-licensed-professions>.
- U.S. Citizenship and Immigration Services. May 18, 2010. *EB-5 Immigrant Investor*. [Online, accessed 9/30/11] Available: <http://www.uscis.gov/portal/site/uscis/menuitem.eb1d4c2a3e5b9ac89243c6a7543f6d1a/?vgnextoid=facb83453d4a3210VgnVCM100000b92ca60aRCRD&vgnnextchannel=facb83453d4a3210VgnVCM100000b92ca60aRCRD>.
- Vey, Jennifer. 2007. *Restoring Prosperity*. Washington, D.C.: The Brookings Institution. [Online, accessed 1/2/12] Available: http://www.brookings.edu/~media/Files/rc/reports/2007/05_metroplitanpolicy_vey/20070520_oic.pdf.
- Vey, Jennifer S., John C. Austin, and Jennifer Bradley. September 27, 2010. *The Next Economy: Economic Recovery and Transformation in the Great Lakes Region*. Washington, D.C.: The Brookings Institution. [Online, accessed 10/6/11] Available: http://www.brookings.edu/~media/Files/rc/papers/2010/0927_great_lakes/0927_great_lakes.pdf.

- Wall Street Journal (WSJ). August 3, 2011. The 10 Best Places to Live in the U.S. *Wall Street Journal Marketwatch*. [Online, accessed 9/30/11] Available: <http://www.marketwatch.com/story/the-10-best-places-to-live-in-the-us-2011-08-02>.
- Washington State Community Economic Revitalization Board. May 2011. *Export Assistance Program: Progress Report*. [Online, accessed 1/6/12] Available: http://waexports.com/images/uploads/Export_Assistance_Program_Progress_Report.pdf.
- Welcoming America. N.d. Welcoming America home page. [Online, accessed 8/27/11.] Available: <http://www.welcomingamerica.org>.
- White House, Office of the Press Secretary. June 24, 2011. *President Obama Launches Advanced Manufacturing Partnership*. [Online, accessed 8/28/11] Available: <http://www.whitehouse.gov/the-press-office/2011/06/24/president-obama-launches-advanced-manufacturing-partnership>.
- Zandi, Mark, Chief Economist, Moody's Analytics. June 22, 2011. *Testimony before the Joint Economic Committee*. [Online, accessed 10/4/11] Available: http://jec.senate.gov/public/index.cfm?a=Files.Serve&File_id=e922d094-bf87-47f2-9f5d-834adcf16f7f.
- Zirelli, Ursula. July 20, 2011. Plasan Carbon Composites carbon fiber plant to create 202 jobs and cutting-edge workforce in west Michigan. *mlive.com*. [Online, accessed 10/4/11] Available: http://www.mlive.com/business/west-michigan/index.ssf/2011/07/plasan_carbon_composites_carbo.html.

Appendix:

State of Michigan Programs with Potential Application to Urban Innovation Districts

| Program | Agency | Key features | Current funding |
|--|------------------------------|---|---|
| Michigan Community Revitalization Program and Business Development Program (<i>replaces historic and brownfields tax credits and MEGA</i>) | Michigan Strategic Fund/MEDC | Provides community revitalization incentives, in the form of grants and loans, for eligible investments in Michigan (e.g., site improvements, building construction and rehabilitation, machinery or equipment costs), and business development/ attraction activities. | \$100 million |
| Neighborhood Enterprise Zones (NEZ) | MEDC (locally approved) | Provides a tax incentive for the development and rehabilitation of residential housing in communities where it may not otherwise occur. Developments with an NEZ certificate pay a Neighborhood Enterprise Zone tax, which is calculated based on variety of factors. | Varies by community. |
| Renaissance Zones | MEDC | State and local tax abatement in specific geographies as well as specific industries (renewable energy, agriculture processing, forest product processing). | Varies depending on number of zones. Recent changes eliminate MI personal and corporate tax exemptions. |
| SmartZones | MEDC | Distinct geographic zones/clusters that support the development, incubation, and transfer of technology. | Varies. Largely funded through local TIF districts. |
| Downtown Development Authorities | MEDC | Provides a variety of funding mechanisms, including tax increment financing, millages, and special assessments, for public improvements in downtown districts. | Varies by community. |
| Corridor Improvement Authority | MEDC | Funds improvements in commercial corridors outside of downtowns. | Varies by community. |
| Commercial Redevelopment Act | MEDC | Property abatement for replacement, restoration, or new construction of commercial property. | Varies by community. |
| Commercial Rehabilitation Act | MEDC | Abatement of property tax on new investments for rehabilitation of commercial properties. | Varies by community. |
| Michigan Main Street | MSHDA | Supports downtowns and traditional commercial neighborhood districts by promoting and facilitating implementation of the Main Street Four-Point Approach [®] in communities across the state. | Technical assistance only. |
| Housing Resource Fund | MSHDA | Provides funding and technical assistance for nonprofits and local communities to address affordable housing and community revitalization needs. Supports projects designed to change the housing market of existing neighborhoods to make them more livable for current residents and more attractive to new residents, and/or to provide affordable housing for low and moderate income households. | \$14 million (federal funds) |

| Program | Agency | Key features | Current funding |
|---|---|---|--|
| Rental Development | MSHDA | Provides low-interest loans and federal tax credits for construction or rehabilitation of affordable rental development. | \$70 million (loans) \$20 million (tax credits) |
| Property Improvement Loans | MSHDA | Offers low-interest rate loans to landlords and homeowners to make improvements to their properties. | \$1.3 million in available loans |
| Historic Preservation | MSHDA | Works with communities and developers to identify, evaluate and reinvest in historic buildings. | Technical assistance only |
| Technical Assistance Grants | MSHDA | Provides assistance to nonprofits and local governments for planning, and resource, housing, and financial development efforts. | \$14 million (grants) |
| Obsolete Property Rehabilitation | Department of Treasury (locally approved) | Exemptions of ad valorem property taxes for rehabilitation of commercial and commercial housing properties in a rehabilitation district. | Varies. Dependent on district. Tax exemptions for 1–12 years, and potential reduction of half of the school operating and state education taxes. |
| Michigan Land Bank Fast Track Authority | Department of Treasury | The Authority works with local governments and the private sector to create opportunities for economic growth within the manufacturing, industrial, commercial, retail, housing, and public use arenas. The Authority can own, accept, acquire, and hold property through gift, transfer, or other methods. It can also manage, sell, exchange, lease, option, renovate, develop, and demolish properties within its inventory, and has the power to expedite quiet title and foreclosure action. | \$19 million(federal funds targeted toward specific census tracts) |
| Neighborhood Improvement Authority (NIA) | Department of Treasury (locally approved) | TIF available to approved NIAs for improvements of public facilities (e.g., housing, streets, pedestrian malls, beautification efforts). | Varies by authority, dependent on tax increment or other local financing. |
| Transportation Enhancement Program | Department of Transportation | Transportation Enhancement Program funds projects such as non-motorized paths, streetscapes, and historic preservation of transportation facilities that enhance Michigan's intermodal transportation system. | \$20–\$25 million |
| Transportation Economic Development Fund (TEDF) | Department of Transportation | The TEDF assists in funding highway, road, and street projects necessary to support economic growth. | \$32 million |
| State Infrastructure Bank | Department of Transportation | Revolving loan fund for transportation projects that complements traditional funding techniques and helps meet urgent project-financing demands and stretch federal and state dollars. | |
| Business Improvement District/Principal Shopping District (BID/PSD) | MEDC (locally approved) | A BID/PSD allows a municipality to collect revenues, levy special assessments and issue bonds in order to address the maintenance, operation and security of that district. | Varies by community. |