Beyond Smart Growth

An Economic Development Strategy for 21st Century Maryland

National Center for Smart Growth
Research and Education
University of Maryland

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Acknowledgments

This report suggests a path for the State of Maryland’s role in smart growth and economic development. The National Center for Smart Growth Research and Education (NCSG, the Center) at the University of Maryland is solely responsible for its content.

NCSG is a non-partisan center for research and leadership training on growth and related land use and development issues in Maryland, in metropolitan regions around the nation, and in Asia and Europe. It was founded in 2000 as a cooperative venture of the College of Agriculture and Natural Resources and three University of Maryland schools: Architecture, Planning and Preservation; Public Policy; and Engineering.

The mission of the Center is to bring the diverse resources of the University of Maryland and a network of national experts to bear on issues related to land use and the environment, transportation and public health, housing and community development, and international urban development. The Center accomplishes this through independent, objective, interdisciplinary research, and outreach and education.

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Chapter 1: Purpose of This Report

Maryland is a prosperous state. It ranks high in many measures of quality of life and has a reputation for having good government and progressive public policies. Maryland’s prosperity and progressivity have enabled it to pursue some of the strongest land use, environmental, and social policies in the nation.

But the state is not immune from larger national and international trends that can shape its conditions and fortunes. Income inequality is growing. Energy prices have fallen recently, but are expected to rise again in the near and distant future. Global warming will bring new challenges to how we currently live and work.

The state also faces immediate and more local challenges. Although the national economy appears on the rebound, Maryland’s economy is recovering much more slowly. The state government faces an estimated $750 million dollar structural deficit; yet the demand for state-funded education, transportation, and other public services continues to rise.¹

The state is also in the midst of a change in leadership. After eight years of leadership by Governor Martin O’Malley, Governor Larry Hogan was sworn into office in January 2015. Governor Hogan ran on a platform of tax reduction, fiscal restraint, and economic development. His recently released budget includes cuts in aid to local governments, cuts in the budgets of state agencies, and reductions in payments to doctors who participate in Medicaid.²

The General Assembly has also taken a renewed interest in economic development. In March 2014, the President of the Senate and the Speaker of the House formed the Maryland Economic Development Commission to “investigate in further depth certain tax issues affecting economic development and business climate in our State.”³

The principal finding of its recently released interim report was that “Maryland has not nearly reached its potential in growing business and creating jobs.”⁴ To address this problem, the Commission offered 32 specific recommendations.

The purpose of this report is not to critique the policies, programs, or budgets of state agencies—or to affirm or dispute the recommendations of the Economic Development and Business Climate Commission. Rather, this report intends to join the debate on economic development in Maryland by offering a broad-based, quality of life perspective.

Traditionally, economic development is defined as the retention, recruitment, and birth of new industries, firms, and jobs. This project takes a broader triple bottom line (TBL) perspective that defines economic development in three dimensions: the economy, the natural environment, and the community. A TBL perspective on economic development was the premise for this project.

It describes how economic prosperity depends in part on the attainment of other goals, such as equity and environmental quality. The recommended approach to economic development builds on existing policy strengths and extensive data analysis to offer an integrated approach for achieving both smart growth and economic prosperity.

1.2 Background

The National Center for Smart Growth (Center) prepared this report. Since its establishment in 2000, the Center has conducted research and provided technical assistance on all aspects of urban and regional development associated with the term “smart growth.”⁵
From the beginning, the Center’s mission extended beyond the advancement of fundamental knowledge to include research and policy analysis directly pertinent to the State of Maryland. For this reason, the Center Director serves by statute on the state’s Smart Growth Subcabinet and Sustainable Growth Commission. The Center has:

- Conducted research on the efficacy of priority funding areas (PFAs).
- Analyzed the impacts of adequate public facilities ordinances.
- Produced a smart growth indicator report.
- Built the Maryland State Transportation Model.
- Used the transportation and other models to analyze the efficacy of the state’s transportation, climate, housing, and state development plan (PlanMaryland).

In October 2011, with funding from the Surdna and Abel Foundations, the Center launched a project focused on Sustainable and Equitable Economic Development (SEED). The project included five partners:

- Central Maryland Transportation Alliance
- Baltimore Regional Initiative Developing Genuine Equality (BRIDGE)
- Job Opportunities Task Force
- 1000 Friends of Maryland
- Maryland Department of Planning

The objectives of the SEED project included the following:

- Conduct extensive analyses of economic, social, and environmental trends, focusing specifically on gaps in existing programs and emerging economic development opportunities statewide.
- Empower a coalition of civic and non-profit organizations to engage communities through outreach and advocacy.
- Ensure coordination among SEED partners while strengthening linkages and networks with other local, state, and national organizations.
- Assist the Maryland Department of Planning (MDP, other state agencies, and local governments in developing sustainable and equitable economic development plans and policies.
- Prepare and disseminate A Guidebook for Local Governments on Sustainable and Equitable Economic Development.
- Produce, adopt, and promote a sustainable and equitable economic development element for PlanMaryland, the state development plan.

To date, much has been accomplished. In October 2012, the Center released a report entitled Challenges and Opportunities for Economic Prosperity in the 21st Century with an appendix that contains extensive data on economic and demographic trends in the state, regions of the state, and the nation. In January 2015, the Maryland Department of Planning released Placing Jobs, an online guide to economic development planning at the local level. In December 2014, the Center released two studies that identified 23 job centers in the state and demonstrated the economic and transportation advantages of a polycentric economic development strategy. In March 2015, the Center released Maryland’s Poor, Unemployed, Overburdened but not Forgotten.
Chapter 1: Purpose of This Report

This report is the final product of the SEED project and builds on all previous work. It was originally intended to serve as an economic development primer for PlanMaryland, the future of which is not clear. Whatever the future of PlanMaryland, this report is intended to provide insights and offer suggestions on how to build on Maryland’s existing smart growth framework, yet adopt a stronger focus on economic development.

1.3 Methods

To offer a TBL perspective, this report provides information on economic, environmental, and equity conditions in the State of Maryland for the past, present, and foreseeable future. Since the focus of this report is on economic development, it contains a larger share of economic performance measures.

This report draws heavily from previous research conducted by the Center and publicly available data from federal and state government agencies. Researchers did not conduct any primary data collection for this report.

Unless otherwise stated, all dollar values are reported in 2015 dollars. The report uses the Bureau of Labor Statistics (BLS) Consumer Price Index for all Urban Wage Earners (CPI-U) to convert nominal dollars to 2015 dollars.

1.4 Organization of the report

The chapter titles explain the report’s organization:

- **Chapter 2, What Are We After? A Broad View of Economic Development.** What is economic development? Is economic development important? What can state and local governments hope to achieve with economic development policies? What is the proper scope and role for their involvement?

- **Chapter 3, Demographics.** Information about past, current, and projected population and demographic trends.

- **Chapter 4, Economic Productivity, Employment, and Wages.** Historical, current, and projected trends in Maryland’s economy.

- **Chapter 5, Factors of Production.** Information about the things that matter to businesses.

- **Chapter 6, Industrial Structure.** Historical, current, and projected data on the industries that comprise Maryland’s economy.

- **Chapter 7, Environment and Equity.** How Maryland performs on the environmental and social bottom lines.

- **Chapter 8, What Should We Do Next? Implications for a State Economic Development Strategy.** State policy implications drawn from the data and analysis presented in chapters three through seven.
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2.1 What is economic development?

The International Economic Development Council defines economic development as, “a program, group of policies, or activity that seeks to improve the economic well-being and quality of life for a community, by creating and/or retaining jobs that facilitate growth and provide a stable tax base.”

One can interpret this definition of economic development narrowly or broadly; the professional literature of economic development has examples of both perspectives.

The narrower view focuses on the economic prosperity component of quality of life. This view emphasizes job creation and, in turn, income generation as the primary path to economic prosperity and development. A justification for this narrow focus is that other agencies and departments in the public sector specialize in delivering goods and services to meet other objectives that citizens care about. In that context, it would not be the primary job of economic development professionals to improve education, health care, public safety, transportation, parks, and other things that contribute to quality of life—other agencies and departments have that mission.

Economic development practitioners focused on this narrower view use economic growth indicators to measure outcomes. In the economic development practice, they measure economic growth as increases in jobs and output (e.g., Gross Product: Domestic, State, or Regional), which includes consumption, government spending, investment, and net exports.

The broader view pays more attention to the part of the IEDC definition that addresses quality of life. In that view, development means improving well-being not only through economic activity, but also through improvements to the wider social and natural environment that strengthen the economy. This broad view recognizes that (1) economic prosperity is one of several high-level goals of a state and its inhabitants, and (2) many things addressed by other goals influence economic performance. The broad view places economic development in the context of the overall well-being or quality of life of the people it tries to benefit.

Jobs and output are important indicators of economic development in the broad context, but they are not the only indicators of economic and social well-being. Economic growth may be a necessary condition for economic development, but it alone is not sufficient. Practitioners that embrace the broad view consider how economic growth affects people:

- Are they getting more educated, productive, and able to advance to and succeed at higher-paying jobs?
- Are incomes increasing not just on average, but for various groups that are at or close to poverty levels?
- Are environmental quality and social services maintained or improved, and thus contributing (independent of income) to a better quality of life?

This broader view is consistent with recent discussion of a TBL framework for evaluating and communicating the efficacy of public policy. In addition to economic value and profit (the original “bottom line” for businesses), a TBL evaluation of economic development considers social and environment value. It does so because these three dimensions are interrelated; an action in one dimension has impacts on the other two dimensions.
Thus, although economic development policies must focus on the economic bottom line by definition, they are likely to achieve the most success for the communities they serve when they address all three bottom lines. The improvement of all three bottom lines is an unambiguous win for public policy: more jobs, a better natural and built environment, better private and public services, and more jobs and wages for people that need them most.

2.2 What issues should state and local governments address to promote economic development?

Economic development professionals typically work for government or non-profit organizations at the state, regional, and municipal levels on practical efforts to retain, expand, or attract businesses and the private-sector jobs they generate. Job creation or retention is the primary metric used to measure their success.

That description of what they do covers both the broader and narrower definitions of economic development: they aim to improve well-being and quality of life by creating and retaining jobs. The logic of the connection, in summary, runs like this:

- A household’s economic well-being is defined by its economic resources. Wealth is a measure of a household’s ability to have and acquire goods and services that contribute to its well-being. Income is how a household builds wealth.
- Most income for the majority of households comes in the form of compensation for services provided (i.e., in the form of wages or salaries from jobs).
- Businesses provide the majority of jobs. More business activity correlates with more jobs, and with more payments of wages and salaries.

This chain of logic illustrates that economic development policy and action should aim to (1) retain and grow new and existing businesses; (2) attract new businesses; and (3) otherwise create opportunities for more job growth, advancement, and income. It should focus on those businesses with strong multiplier effects and higher-paying jobs.

If one accepts that job creation is fundamental to economic development, and that private businesses are responsible for the bulk of job creation, then the government’s role in economic development is clear: help businesses be profitable so that they survive (retain jobs) or grow (create jobs). A business can improve profit, or the difference between revenues and costs, by increasing revenues (the “demand” side of the equation) or reducing costs (the “supply” side of the equation).

Businesses address the demand side through marketing to final and intermediate customers (e.g., advertising, networking, social media). They address the supply side by reducing the cost of the inputs that they need to produce or increasing the value of the goods and services they sell. Economists refer to these inputs as factors of production. Primary factors of production are:

- Land and built space. Most businesses require a physical space (e.g., office, warehouse, factory, storefront).
- Local infrastructure and local services. For a business and its building to function properly, they need access to appropriate infrastructure and services. At a minimum, key infrastructure required for most business includes electricity, water, transportation, and telecommunication connections. Quality infrastructure and amenities also help to attract and retain a talented labor pool.
- Labor and entrepreneurship. Businesses need employees who are available, trained, and productive. A specialized subset of labor is entrepreneurs, as owners or managers.
• **Access to suppliers and consumers.** Where land and buildings are located matters at both the interregional and intraregional level. Some businesses need to be close to natural resources to reduce the cost of hauling raw material inputs. Others have strong needs for certain types of intermediate products (e.g., steel, oil, specialized product components) or for a variety of services (e.g., financial, legal). For yet others, the location of markets and final customers factors heavily into location decisions.

2.3 What kinds of actions can state and local governments take to promote economic development?

If the government’s role in economic development is to help businesses be profitable, that leaves many choices for possible actions. For every aspect of the demand and supply sides of business activity, one can find evidence of government influence. But not all policies are equally effective or efficient, and many raise questions about fairness.

The advice here: *government should focus its economic development efforts on those areas that are important to businesses, and where government has an acknowledged role and clear advantages over market-based approaches.* Governments can:

- Ensure an adequate supply of **developable land and built space.** Governments can support access to land and buildings with efficient planning, entitlement, zoning, brownfield redevelopment, land assembly, land cost write-down, and building improvements. Government has a critical role to play in ensuring that this key factor of production is of high quality and delivered in a *business-friendly climate.*

- Invest in **local infrastructure and services** to support industrial, commercial, and residential development. Though the private sector usually provides these services on site (e.g., it pays for the pipes, wires, and roads that connect a development to a larger infrastructure network), it usually does not build or maintain the off-site network and facilities. Business cannot grow and add jobs without infrastructure and services; they recognize government’s role in providing them and expect to pay reasonable fees as part of the cost of doing business. Providing necessary and expected infrastructure efficiently and fairly may be the most significant thing that government can do to support economic development.

- Support the development of an **educated and skilled labor force.** Labor is often the most expensive input into the production process. Businesses will locate where they can find the best labor value: a pool of appropriately trained workers. Government can help retain and attract businesses by providing high quality public education (K – 12, college and university) and training, and coordinating public and private education and training efforts to ensure a robust and responsiveness system. Governments may also seek to attract an educated and skilled labor force through *placemaking*—that is, building high quality, safe, and healthy urban living environments. Such investment in the public realm can make a region more attractive to households and reduce the difficulties and costs to businesses of attracting and retaining labor.

Businesses are increasingly learning that diversity in the workforce can benefit the bottom line. Government can play a unique role in promoting *access to opportunity* for diverse groups in education, training, contracts, and jobs.
• **Improve access to suppliers, workers, and consumers.** Providing land and infrastructure (above) is one way to accomplish this objective, but there are others. States and regions, for example, often try to identify and recruit target industries or clusters. The implicit assumption is that there are what economists call “agglomeration” or “concentration” economies, and that getting more complementary industries (clusters) closer to each other can make operations more efficient and attract yet more complementary businesses. Cluster identification requires an extensive analysis of the state economy. Another reason for conducting a cluster analysis is to help decide how to spend limited funding for economic development: to what kind of businesses, with what characteristics, should state and local governments offer incentives?

Governments can also help with effective branding and marketing. Marketing efforts can create demand for existing businesses. Governments may also design marketing materials that provide information about regional economic attributes (land, labor sectors, clusters, and the businesses climate) to attract new businesses.

The list could be expanded, but the significance of the impact, the presumed necessity of government involvement, and the directness of the connection to economic development would all diminish. In fact, most of what state and local governments do has some effect—though sometimes indirect—on economic development.

### 2.4 What actions are appropriate for different levels of government?

Sections 2.2 and 2.3 make the case that there are reasons that state and local governments may want to promote economic development, and that there are many such policies to choose from. But are some policies more appropriate for one level of government than another?

The answer, of course, is yes. The reasons we have both state and local governments is because issues that governments must address manifest at multiple scales. The challenge of economic development is manifest at both the state and local scale.

Local aspects of economic development—such as zoning, subdivision regulations, and building codes—are best addressed by local governments, although there is a role the state must play in setting the parameters for policies at the local level. The same is true for other policy domains: local streets are best designed, built, and maintained by local governments while state highways and interstate freeways are best managed by the state and federal governments. Similar examples can be offered for every domain.

The role of the state in economic development is thus to provide an overall policy framework for local governments; to plan, build, and maintain major state and regional infrastructure; and to create a tax and regulatory environment that makes the state an attractive place to invest, create new jobs, and locate new and existing businesses.
Chapter 3: Demographics

Economic development at any time and place depends fundamentally on the size and productivity of the population. The merits of population growth can be debated. Population growth fuels economic output, but places additional stress on the natural environment. Still, population growth is an important indicator of economic performance. While population growth is not universally a favorable trend, there are few places with a healthy economy where the population isn’t stable or growing.

3.1 Population
Maryland has a population of nearly 6.0 million and, with 615 people per square mile, is the sixth most densely populated state. Its population has grown steadily over time, but at a lower rate than western states like Texas and California.

The rate of population growth in the U.S. is expected to decline over the next two decades. Growth in Maryland will follow suit. It will grow slower than Texas or California, but at about the same rate as its mid-Atlantic neighbors.

Figure 3.1 Annual Population for Maryland and Comparison States, 1980 to 2040

Note: Dashed lines are projections.

Source: 1980-2010 population, U.S. Census; Maryland projection, Maryland Department of Planning; D.C. projection, Metropolitan Washington Council of Government; DE projection, Delaware Population Consortium; VA projection, Weldon Cooper Center for Public Service; New Jersey projection, New Jersey State Department of Labor and Workforce Development; Texas projection, Texas State Data Center; California projection, California Department of Finance.
There has been a fundamental shift in population trends at a regional level. Until 2010, urban-to-suburban migration fueled steady population growth in the Baltimore and D.C. suburbs and a concomitant population decline in Baltimore City. But this trend may be changing, as housing becomes more affordable and immigrants move to urban areas. The rate of suburban growth declined from 2010 to 2015, while Baltimore City experienced population growth for the first time in decades in 2010.

Projections by the MDP indicate that recent trends will continue. Although the Baltimore and D.C. suburbs will continue to hold the largest share of the state’s population, the population of Baltimore City will continue to grow. Although it is relatively less populous, MDP projects Southern Maryland will exhibit the highest growth rates.

Figure 3.2 Annual Population for Maryland Regions, 1970 to 2040

Note: Dashed lines are projections.

3.2 Demographics

Maryland is one of the most racially diverse states in the nation. In the last decade, minority populations have grown rapidly, while the non-Hispanic white population has declined. From 2000 to 2010, the Hispanic population more than doubled, the Asian population increased 51.0 percent, and the black population grew by 14.3 percent. If not for the growth of minorities, the state would have lost population. The importance of this cannot be overstated.

Figure 3.3 Change in Population by Race and Ethnicity for Maryland Regions, 2000 to 2010

Source: U.S. Census Bureau.
Today, minorities comprise nearly half of the state’s population. This ranks Maryland sixth in the country in minority population share, behind Hawaii (77.3 percent), California (59.9 percent), New Mexico (59.5 percent), Texas (54.7 percent), and Nevada (45.9 percent). In the mid-Atlantic, only Washington D.C. has a larger minority population share.

Figure 3.4 Population by Race and Ethnicity for Maryland and Comparison States, 2013

Source: U.S. Census Bureau, American Community Survey, 2009-2013 5-year estimates.
Diversity is increasingly concentrated in the southern and central regions of the state. From 2000 to 2010, the minority population grew and the white population declined in the Baltimore region, D.C. suburbs, and Southern Maryland. Western Maryland and the Upper and Lower eastern shores have continued to be predominantly white.

Figure 3.5 Population by Race and Ethnicity for Maryland Regions, 2013

Source: U.S. Census Bureau, American Community Survey, 2009-2013 5-year estimates.
Maryland is already diverse, and will continue to diversify. In 2013, just under 50 percent of the state’s population identified as a minority. By 2040, this share will grow to 60 percent. Projections indicate that the relative distribution of minority groups among Maryland regions will not change substantively.

Figure 3.6 Projected Population by Race and Ethnicity for Maryland and its Regions, 2040

Source: Woods and Poole Economics, Inc.
Chapter 4: Economic Productivity, Employment, and Wages

While the Maryland economy suffered during the recent Great Recession, it has grown at a more consistent rate over the long term. In part because of its proximity to D.C., Maryland experienced lower unemployment rates, higher incomes, and less cyclical volatility than most other states.

4.1 Economic productivity

The performance of the Maryland economy is strongly correlated with the performance of the national economy: generally, Maryland’s economy grows when the national economy grows. But, it tends to exhibit less cyclical volatility than the U.S. economy.

There are some exceptions. In the early 2000s (2001, 2002, and 2004) and during the recession (2008 and 2009), Maryland’s economy grew markedly faster than the national economy. In 2012 and 2013, the rate of growth plummeted. State level GDP data for 2014 were not available at the time of publication.

Figure 4.1 Annual Percentage Growth in Real GDP for Maryland and the U.S., 1998 to 2013

In 2013, Maryland’s economy grew only 0.01 percent, ranking it 49th in the nation. Declines in government, utilities, manufacturing, and wholesale trade offset increases in health care, agriculture, and information sectors. Government cutbacks had a similar effect on Maryland’s neighbors, D.C. and Virginia, which grew -0.5 and 0.1 percent from 2012 to 2013, respectively.

Despite Maryland’s weak performance over the past two years, it has exhibited strong performance over the last 15 years. Cumulative growth in Maryland’s GDP per capita exceeds the national average by over six percent. It also exceeds cumulative growth among comparison states.

Figure 4.2 Cumulative Percent Growth in Real per Capita GDP for Maryland, Comparison States, and the U.S., 1998 to 2013

Source: U.S. Bureau of Economic Analysis.
4.2 Unemployment and Employment

Over the last 30 years, the unemployment rate in Maryland has generally followed the unemployment rate in the U.S. and its mid-Atlantic neighbors. Through peaks and troughs, however, the unemployment rate in Maryland has been lower than the U.S., but higher than Virginia. In Maryland, as elsewhere, unemployment declined sharply after 2010.

Figure 4.3 Annual Unemployment Rates for Maryland, Comparison States, and the U.S., 1976-2014

Unemployment rates in Maryland vary extensively by county. Unemployment is highest in the Lower Eastern Shore, Western Maryland, and Baltimore City. It is lowest in Southern Maryland and the Baltimore and Washington suburbs.

**Figure 4.4 Unemployment Rates for Maryland Counties, 2014**

Source: Office of Workforce Information and Performance, Maryland Department of Labor, Licensing, and Regulation, Local Area Unemployment Statistics.
Although the unemployment rate has declined since the end of the recession, that does not mean that a greater share of Maryland residents are going back to work. In fact, the percentage of the civilian noninstitutional population 16 years of age and over that has a job (measured by the employment-population ratio [EPOP]) has decreased since the late 1990s.

In the short-term, the EPOP is susceptible to changes in the business cycle. Over the long-term, the EPOP shifts with demographic changes; the aging of the population has and will continue to cause a decline in EPOPs. Maryland has a relatively high EPOP compared to the U.S., meaning a greater share of its population is employed. But, like the U.S. as a whole, Maryland’s EPOP has not recovered since the recession.

Figure 4.5 Annual Employment to Population Ratio for Maryland, Comparison States, and the U.S., 1976 to 2014

4.3 Employment Location

The share of employment in Maryland’s regions has changed dramatically over the last 40 years. In general, the economies of the Baltimore suburbs, D.C. suburbs, Upper Eastern Shore, and Southern Maryland have grown steadily, with rates of job growth that exceeded ten percent over the past decade. Job growth in Western Maryland and the Lower Eastern Shore, however, lags the rest of the state. The City of Baltimore has seen job losses in three of the last four decades. As a consequence, from 1969 to 2010, Baltimore City’s share of the state’s employment fell from one-third to just over ten percent.

Figure 4.6 Share of Total State Employment for Maryland Regions, 1970 to 2040

Source: U.S. Bureau of Economic Analysis and the Maryland Department of Planning.
Employment is concentrated in the Baltimore-Washington corridor, primarily along highway and transit corridors. The I-95 corridor is predominant, though significant and fast-growing employment centers are located along the I-270 corridor. Recent research by the Center reveals that over 40 percent of the state’s jobs are located in 23 job centers that constitute only one percent of the state’s land area. Compared with firms in the rest of the state, firms in these centers tend to be larger, more resilient, more productive, and pay higher wages. All 23 job centers are located along Maryland’s state and interstate highway network.

Figure 4.7 Employment Location and Maryland’s Highway System, 2011

Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics.
Thirteen of the state’s 23 job centers are connected by Maryland’s rail transit system. Research by the Center indicates that firms in the professional and administrative services industries tend to locate near transit station areas while firms in the construction industry tend to locate near bus stations.

Figure 4.8 Employment Location and the Transit System, 2011

Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics.
4.4 Income

Personal income is the income received by all persons from all sources: from wages, home or business ownership, financial asset ownership, and transfer receipts from government and businesses. It includes income from domestic sources as well as from the rest of the world. It is the income that is available to persons for consumption expenditures, taxes, interest payments, transfer payments to governments and the rest of the world, or for saving.

On a household basis, Maryland has the second highest median income in the nation. The gap between median incomes in Maryland and the nation as a whole has not changed much over the last three decades.

Figure 4.9 Annual Median Household Income for Maryland, Comparison States, and the U.S., 1984 to 2013

Median household income varies extensively by county. Counties in Southern Maryland, the Baltimore suburbs, and the D.C. suburbs have the highest median incomes. Counties in the Upper Eastern Shore, Lower Eastern Shore, and Western Maryland all have relatively low median incomes. Somerset County on the Lower Eastern Shore and Allegany County in Western Maryland have the lowest median household incomes, while Baltimore City’s median is the lowest among the central Maryland jurisdictions.

This disparity reflects population trends: regions with high incomes tend to experience high rates of population growth, while the regions with low incomes experienced little to no growth.

Projections from the MDP indicate that income inequality among Maryland’s regions will continue to grow. Incomes in the Baltimore-Washington corridor will remain above the state average, while incomes in Western Maryland and the Upper and Lower Eastern Shores will remain below average.

Figure 4.10 Median Household Income for Maryland Counties, 2013

Chapter 5: Factors of Production

To produce outputs, economies need inputs. Economists call land, labor, infrastructure, housing, and the business climate factors of production. Economic development practitioners can retain and attract jobs by making factors of production more abundant, accessible, and inexpensive. Chapters 3 and 4 provided information about broad indicators of economic activity. This section looks at the inputs that make economic activity possible.

5.1 Labor
Maryland residents are some of the most highly educated in the nation. Among residents 25 years of age or older:

- 38.8 percent of the population has a bachelor’s degree or higher, placing Maryland third among the states.
- 16.7 percent have graduate or professional degrees, ranking second among the states.

Figure 5.1 Educational Attainment of the Population 25 Years or Older in Maryland and Comparison States, 2013

Source: U.S. Census Bureau, American Community Survey, 2009-2013 5-year Estimates.
Maryland’s education system prepares residents to enter the workforce, obtain quality jobs, and retain or advance beyond those jobs. The Kauffman Foundation ranked Maryland’s workforce education second in the nation. The U.S. Chamber of Commerce ranks the state’s talent pipeline third in the nation. Access to a trained workforce reduces the cost of labor to businesses, and is an asset that economic development organizations can market.

Although the Maryland population is, on average, well-educated and prosperous, educational attainment varies widely among demographic groups. Non-Hispanic whites and Asians are the best educated. The black population exhibits secondary school outcomes comparable to whites, but has lower post-secondary attainment rates. The Hispanic and Latino population has markedly lower levels of attainment in both secondary and post-secondary education.

Figure 5.2 Educational Attainment of the Population 25 Years or Older by Race/Ethnicity in Maryland, 2013

Source: U.S. Census Bureau, American Community Survey, 2009-2013 5-year Estimates.
5.2 Land

Most businesses need buildings to accommodate their workforce, equipment, supplies, and inventory, and those buildings need land. The MDP maintains an inventory of buildable lands for residential use, but not for commercial and industrial uses.

In its most recent annual report, the MDP estimates that the state’s PFAs have the capacity for 511,042 new housing units, which exceeds the projected need for 391,700 new households by 2035.xiii

This estimate does not, however, include the impacts of the recent “Septic Bill,” the use of residential land for commercial and institutional uses, or most opportunities for infill and development. Research by the Center suggests that commercial and institutional uses in some counties can consume as much at 30 percent of development capacity on residential land.

Figure 5.3 Housing Unit Projections and Capacity in Maryland PFAs, 2015 to 2035

Source: Maryland Department of Planning.
Despite the state’s longstanding efforts to contain urban growth and preserve natural resource lands, Center estimates suggest that farm and forestlands will continue to decline at historic rates. Unless the state adopts stronger conservation tools, the Center projects the state will lose 140,000 acres of farmland and 225,000 acres of forestland between 2007 and 2030.\textsuperscript{xiii}

Figure 5.4 Past and Projected Farm and Forest Land in Maryland, 1974 to 2030

Source: U.S. Forest Service; U.S. Farm Census; Chesapeake Bay Land Change Model.
5.3 Infrastructure

Infrastructure is the physical capital (usually, public facilities) that supports the creation, maintenance, and development of community activities. Without infrastructure, land is not capable of accommodating business operations. Infrastructure includes:

- Transportation
- Water
- Wastewater
- Stormwater
- Solid waste
- Energy
- Telecommunications

The American Society of Civil Engineers (ASCE) publishes a report card for America’s infrastructure every four years. It assigns familiar letter grades to different aspects of America’s infrastructure based on eight criteria: “capacity, condition, operations and maintenance, future need, funding, public safety, resilience, and innovation.” The ASCE rated the country D+ overall in 2013, reporting that America needed $3.6 trillion in infrastructure investments by 2020. The ASCE gave Maryland a C+, just above average, but Maryland earned higher than average ratings on water and wastewater infrastructure.

Transportation

A robust transportation network is integral to Maryland’s economic success. The state is located in close proximity to the Atlantic Ocean, the Chesapeake Bay, the nation’s capitol, and major east coast distribution routes.

Its ASCE ratings for transportation are: roads, C-; bridges, B-; and transit, C-.

- **The Port of Baltimore**, which connects to six interstate highways (including the East Coast’s major thoroughfare), the I-95 system, and two Class I rail lines.

- **Baltimore/Washington International Thurgood Marshall Airport (BWI)**. In 2013, the airport launched a three-year, $125 million construction and expansion project to modernize a concourse and expand international flights, which will further increase passenger traffic at the airport.

- **A robust highway system** that provides Maryland businesses an overnight connection to one-third of the nation’s industrial base and population. Although most of Maryland’s roads and bridges are in acceptable ride quality condition, the maintenance of existing facilities and construction of new facilities have not kept pace with demand; the D.C. and Baltimore metro areas are the first and fifth most congested in the nation. In 2013, Maryland passed the first gas tax increase in twenty years, which has the potential to add $4.4 billion in new funding for transportation projects over a six-year period.

- **Public transit networks** that connect commuters and visitors to major job and distribution centers with safety and efficiency.

- **A rail network** that transports freight and passengers efficiently within and outside of the state.
Not only will the number of drivers increase as the population grows, so too will the number of miles they drive (measured in vehicle miles travelled [VMT]). Recent Center forecasts suggest that VMT will continue to rise in both per capita and absolute terms. Added congestion will cause the number of vehicle hours travelled (VHT) to increase at a larger rate.

Figure 5.5 Past and Projected Vehicle Miles Traveled and Vehicle Hours Traveled in Maryland Relative to 2007 Levels, 1980 to 2030

Source: Maryland State Transportation Model.
Although Maryland has an extensive, multi-modal transportation system, congestion will increase as the population and number of trips grow. According to Center estimates, annual vehicle hours of delay in Maryland will increase 80 percent from 2007 to 2030 and vehicles hours of delay per driver will increase from 12 to 18 minutes per day. Congestion will rise most rapidly in the Washington suburbs and along the Baltimore beltway.

**Figure 5.6 Traffic Volume and Congested Links in the Baltimore-Washington Corridor, 2007 to 2030**

Source: Maryland State Transportation Model.
As congestion rises, the demand for transit will also continue to rise. According to Center estimates, the demand for transit ridership will double by 2030. But, due to capacity constraints, the transit share of trips from 2007 to 2030 will increase by less than one percent, from 4.8 to 5.5 percent.

Transit demand estimates assume the Red Line in Baltimore and the Purple Line in Suburban Washington are built by 2030, but the estimates do not include constraints on ridership imposed by the capacity of Metro, which is already severely constrained during peak travel times. Actual ridership in 2030, therefore, is expected to remain below 5.5 percent, unless there are major investments in transit capacity.
Chapter 5: Factors of Production

Water
According to the ASCE, water-related infrastructure consists of the following components:

- Dams (ASCE grade C)
- Stormwater (ASCE grade D)
- Drinking water (ASCE grade C-)
- Wastewater (ASCE grade C)

In none of the categories of water-related infrastructure did Maryland rate higher than C. The report concluded with two recommendations for action. The first was to increase funding for the inspection and repairs of dams. The second was to create funding for the creation and maintenance of storm water management projects in order to meet its current water quality goals. This has since been addressed with the controversial “rain tax.”

A 2007 report by the Environmental Protection Agency (EPA) indicates that the condition of Maryland’s drinking water infrastructure will continue to decline. In 1995, the EPA estimated a 20-year investment need of $1.8 billion (2007 dollars). By 2007, this number had grown to $5.4 billion (2007 dollars). Most of this need falls within the transmission and distribution category.

According to the Maryland Department of the Environment, the state’s wastewater treatment facilities have the capacity to accommodate projected growth through 2025.

Energy
Forty percent of the energy Maryland consumes is in the form of electricity. It produces about two-thirds of this electricity locally. The state has 44 generating facilities that have capacities greater than 2 megawatts, and 16 companies provide electricity to users on the electric grid.

Most in-state electricity production comes from coal and nuclear. However, energy production from coal has been in decline since 2006, while natural gas and renewables have been on the rise.

Maryland’s unusually high reliance on imported electricity and nuclear energy means its cost of electricity is one of the highest in the nation. At an average retail price of 13.5 cents per kilowatt-hour for residential electricity, the cost is the highest in the South Atlantic region.

But, the cost of electricity is likely to decline. The supply of natural gas is growing, while its production cost is decreasing. Consequently, natural gas comprises an increasingly large share of electricity generation in the state. Together, these factors are likely to drive down the retail price of energy in the future. A reduction in retail energy prices will reduce commercial and industrial costs and provide savings for residential consumers.

Figure 5.8 Electricity Generation by Source in Maryland, 1990 to 2013

Source: Energy Information Administration.
5.4 Housing
An adequate stock of reasonably priced housing is important to attracting a quality workforce. Although there is sufficient capacity for new housing in the state (see 5.2 Land), regions with a high jobs to housing ratio—in particular the D.C. suburbs and the Baltimore Region—lack housing for those that work there. This leads to longer commute times and greater vehicle miles traveled.

Figure 5.9 Jobs-Housing Balance in Maryland Regions, 2000 to 2008

Source: U.S. Census Bureau, Population Division.
New housing construction declined in proportion with employment during the recession, with single-family housing experiencing a more severe fall. Construction for both has been on the rise since 2009, but remains far below the 2005 peak.

**Figure 5.10 Housing Units Authorized for Construction in Maryland, 2000 to 2013**

Source: Maryland Department of Planning.
Historically, over the long run, housing price trends mirrored wage trends. Until the early 2000s, housing prices for the U.S. as a whole, Maryland, and its neighboring states increased at steady, comparable rates. In the early 2000s—around the time that income inequality started to grow—housing price growth in Maryland and its neighboring states (where income inequality is also high) diverged from the national average. In all regions, housing prices fell during the recession, but have started to recover. Jurisdictions whose top 10 percent of wage earners have higher wages (D.C. and NJ) have experienced more rapid housing price growth.

Figure 5.11 Housing Price Index for Maryland, Comparison States, and the U.S., 1975 to 2013

Source: Federal Housing Finance Agency.
As home prices increased, housing affordability (measured as the ratio of median home price to median household income) decreased. That means that housing prices, at least during the housing bubble, increased at a faster pace than wages. Although housing is more affordable than it was right before the housing bubble burst, it is less affordable than it was in the early 2000s.

A comparison of median home prices by county to the state median income indicates that homes in the Baltimore suburbs, Washington suburbs, Southern Maryland, Garrett County in Western Maryland, and Queen Anne’s and Talbot counties of the Upper Eastern Shore are the least affordable.

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Table note: Blue shading indicates relatively affordable location/year combinations. Red shading indicates relatively unaffordable location/year combinations.

Source: Maryland Association of Realtors; U.S. Census Bureau, Small Area Income and Poverty Estimates (SAIPE).
A comparison of median home prices to median incomes by county yields different results. Essentially, it shows that people tend to live in places they can afford. Garrett and Worcester counties appear very unaffordable, however, that is likely due to the prevalence of recreational and second home purchases in those counties.

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Table note: Blue shading indicates relatively affordable location/year combinations. Red shading indicates relatively unaffordable location/year combinations.

Source: Maryland Association of Realtors; U.S. Census Bureau, SAIPE.
5.5 Business climate

The business climate refers to the environment in which businesses operate, and includes the cost of doing business (labor, energy, taxes), the regulatory environment (includes availability of incentives), and the taxation structure. What businesses want is the best value for their inputs into the production process. For a government to facilitate a positive business climate, it does not necessarily need to eliminate taxes or regulations; it should ensure that taxes fund the goods and services businesses need and expect from governments, and that regulations are purposeful and clear.

A number of organizations rank state business climates. They include: Forbes (Best States for Business and Careers), the Tax Foundation (State Business Tax Climate), the Beacon Hill Institute (State Competitiveness Report), and the U.S. Chamber of Commerce (Enterprising States Report). These are only a sampling of indices. They are not comparable, as they emphasize different aspects of the business environment. But, taken together, they paint a picture of how Maryland compares to other states.

More about how Maryland ranked in each index:

- Forbes ranks Maryland low for business costs (41st) and regulatory environment (36th), but high for labor supply (5th) and economic climate (16th).

- The Tax Foundation bases its index solely on the tax structure. Maryland ranks relatively high only in the sales tax (8th) and corporate tax (16th) categories.

- The Beacon Hill Institute ranks Maryland high on infrastructure (9th) and human resources (2nd). It scores the state low on security (48th), tech (40th), openness (33rd), environmental policy (33rd), and government and fiscal policy (31st).

- The U.S. Chamber of Commerce considers small business lending and the cost of living in addition to traditional measures of the business climate. The highest rank Maryland receives is 27th for its legal environment. It ranks in the bottom 25 percent of states on all other measures. The Chamber has separate indices for talent pipeline and innovation and entrepreneurship. Maryland scores high in both indices: 3rd and 1st, respectively.

Maryland scores consistently high marks for its labor supply and consistently low marks for its tax and regulatory structures. Virginia, which exceeds Maryland’s performance on most economic indicators, has a consistently higher-ranked business climate. Policies to streamline Maryland’s corporate regulatory and tax structures may improve its competitiveness with Virginia.

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<th>MD</th>
<th>DE</th>
<th>NJ</th>
<th>VA</th>
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Although widely known for its reliance on government, the industrial mix of the state is reasonably diverse and differs little from the nation as a whole. It has similar industry concentrations as its neighboring states.

Figure 6.1 Share of Employment by Industry in Maryland, Comparison States, and the U.S., 2013

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<tr>
<td>Accommodation &amp; food</td>
<td>7%</td>
<td>7.5%</td>
<td>6.6%</td>
<td>6.3%</td>
<td>6.9%</td>
<td>7.2%</td>
</tr>
<tr>
<td>Other services</td>
<td>5%</td>
<td>9.3%</td>
<td>6.0%</td>
<td>5.5%</td>
<td>6.0%</td>
<td>5.8%</td>
</tr>
<tr>
<td>Government</td>
<td>14%</td>
<td>29.7%</td>
<td>16.4%</td>
<td>12.2%</td>
<td>17.7%</td>
<td>13.2%</td>
</tr>
<tr>
<td>Federal, civilian</td>
<td>1%</td>
<td>23.8%</td>
<td>5.0%</td>
<td>1.0%</td>
<td>3.9%</td>
<td>1.6%</td>
</tr>
<tr>
<td>State government</td>
<td>6%</td>
<td>0.0%</td>
<td>2.9%</td>
<td>2.9%</td>
<td>3.3%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Local government</td>
<td>5%</td>
<td>4.2%</td>
<td>7.0%</td>
<td>7.8%</td>
<td>7.6%</td>
<td>7.6%</td>
</tr>
</tbody>
</table>

Notes: (D) - data for this category was not disclosed.
Red shading indicates higher industry shares.
Source: U.S. Bureau of Economic Analysis.
Each of Maryland’s regions has a unique industrial mix; still, most regions have their largest share of employment in government. The suburban regions of the state tend to have higher employment shares in health care and professional services, while the rural regions have higher employment shares in retail trade and manufacturing. More the one-fifth of jobs in the City of Baltimore are in health care.

![Figure 6.2 Share of Employment by Industry for Maryland Regions, 2013](image)

<table>
<thead>
<tr>
<th>Industry</th>
<th>MD Total</th>
<th>City</th>
<th>Suburbs</th>
<th>D.C. Suburbs</th>
<th>MD Western</th>
<th>Upper Shore</th>
<th>Lower Shore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total employment</td>
<td>3,474,596</td>
<td>395,935</td>
<td>1,311,908</td>
<td>1,232,361</td>
<td>158,780</td>
<td>139,902</td>
<td>119,206</td>
</tr>
<tr>
<td>Forestry &amp; fishing</td>
<td>0.2%</td>
<td>(D)</td>
<td>0.1%</td>
<td>(D)</td>
<td>0.2%</td>
<td>0.4%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Mining</td>
<td>0.1%</td>
<td>0.0%</td>
<td>0.1%</td>
<td>(D)</td>
<td>0.3%</td>
<td>0.1%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Utilities</td>
<td>0.3%</td>
<td>0.7%</td>
<td>0.1%</td>
<td>(D)</td>
<td>0.2%</td>
<td>0.2%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Construction</td>
<td>6.1%</td>
<td>3.0%</td>
<td>6.2%</td>
<td>6.8%</td>
<td>7.2%</td>
<td>5.3%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>3.3%</td>
<td>3.2%</td>
<td>3.2%</td>
<td>2.1%</td>
<td>1.5%</td>
<td>7.4%</td>
<td>7.3%</td>
</tr>
<tr>
<td>Wholesale trade</td>
<td>2.7%</td>
<td>2.7%</td>
<td>3.6%</td>
<td>2.2%</td>
<td>0.4%</td>
<td>2.3%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Retail trade</td>
<td>9.9%</td>
<td>5.0%</td>
<td>10.7%</td>
<td>9.3%</td>
<td>12.7%</td>
<td>11.8%</td>
<td>12.0%</td>
</tr>
<tr>
<td>Transportation &amp; warehousing</td>
<td>2.8%</td>
<td>3.7%</td>
<td>1.4%</td>
<td>2.0%</td>
<td>2.6%</td>
<td>4.3%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Information</td>
<td>1.5%</td>
<td>1.2%</td>
<td>1.3%</td>
<td>2.1%</td>
<td>0.9%</td>
<td>1.3%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Finance &amp; insurance</td>
<td>4.8%</td>
<td>4.1%</td>
<td>5.4%</td>
<td>4.8%</td>
<td>2.5%</td>
<td>6.6%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Real estate</td>
<td>4.8%</td>
<td>2.7%</td>
<td>4.8%</td>
<td>5.4%</td>
<td>5.6%</td>
<td>3.3%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Professional</td>
<td>9.8%</td>
<td>6.5%</td>
<td>10.3%</td>
<td>11.8%</td>
<td>9.4%</td>
<td>2.6%</td>
<td>5.6%</td>
</tr>
<tr>
<td>Management</td>
<td>0.8%</td>
<td>(D)</td>
<td>0.8%</td>
<td>0.9%</td>
<td>0.3%</td>
<td>0.5%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Administrative</td>
<td>6.3%</td>
<td>7.1%</td>
<td>6.3%</td>
<td>6.7%</td>
<td>4.4%</td>
<td>4.3%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Educational services</td>
<td>2.7%</td>
<td>7.8%</td>
<td>2.0%</td>
<td>2.3%</td>
<td>1.4%</td>
<td>0.9%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Health care &amp; social assistance</td>
<td>12.0%</td>
<td>21.0%</td>
<td>11.0%</td>
<td>10.3%</td>
<td>9.9%</td>
<td>12.6%</td>
<td>9.3%</td>
</tr>
<tr>
<td>Arts &amp; entertainment</td>
<td>2.5%</td>
<td>2.0%</td>
<td>2.6%</td>
<td>2.4%</td>
<td>2.1%</td>
<td>2.0%</td>
<td>3.3%</td>
</tr>
<tr>
<td>Accommodation &amp; food</td>
<td>6.6%</td>
<td>6.1%</td>
<td>6.4%</td>
<td>6.1%</td>
<td>7.5%</td>
<td>7.8%</td>
<td>7.8%</td>
</tr>
<tr>
<td>Other services</td>
<td>6.0%</td>
<td>5.3%</td>
<td>5.5%</td>
<td>6.8%</td>
<td>6.6%</td>
<td>5.2%</td>
<td>4.9%</td>
</tr>
<tr>
<td>Government</td>
<td>16.4%</td>
<td>17.4%</td>
<td>15.0%</td>
<td>17.3%</td>
<td>19.7%</td>
<td>13.1%</td>
<td>11.8%</td>
</tr>
<tr>
<td>Federal, civilian</td>
<td>5.0%</td>
<td>2.4%</td>
<td>5.4%</td>
<td>6.3%</td>
<td>7.2%</td>
<td>0.9%</td>
<td>1.8%</td>
</tr>
<tr>
<td>State government</td>
<td>2.9%</td>
<td>8.1%</td>
<td>2.2%</td>
<td>2.0%</td>
<td>1.0%</td>
<td>4.3%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Local government</td>
<td>7.0%</td>
<td>6.4%</td>
<td>6.2%</td>
<td>7.5%</td>
<td>9.1%</td>
<td>7.4%</td>
<td>6.4%</td>
</tr>
</tbody>
</table>

Notes: (D) - data for this category was not disclosed.
Red shading indicates higher industry shares.
Source: U.S. Bureau of Economic Analysis.
Thirty-one percent of businesses that employ Maryland workers are minority-owned, which exceeds most other states. But, this rate is low relative to the percentage of racial and ethnic minorities in the state. If the diversity of firm ownership reflected the diversity of the state, the percentage of minority-owned firms would be closer to 43 percent. Minority-owned firms are concentrated in the professional services, health care and administrative sectors.

Figure 6.3 Number of Establishments Owned by Minorities by Industry

- Other services (except public administration)
- Professional, scientific, and technical services
- Health care and social assistance
- Administrative and support and waste management and
- Retail trade
- Transportation and warehousing
- Construction
- Real estate and rental and leasing
- Arts, entertainment, and recreation
- Accommodation and food services
- Educational services
- Finance and insurance
- Wholesale trade
- Information
- Manufacturing
- Utilities
- Agriculture, forestry, fishing and hunting
This report identifies key sectors based on several metrics: share of total employment, location quotient (LQ), xxxiv percentage employment growth since 2001, and absolute employment growth since 2001. Industries that rank in the top five on each metric are highlighted in yellow. Using this simple analytical technique, four industries stand out: government; professional, scientific, and technical services; health care and social services; and accommodation and food services. At the two-digit level, these are easily identified as Maryland’s most important industries.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forestry &amp; fishing</td>
<td>6,458</td>
<td>6,220</td>
<td>0.18%</td>
<td>0.36</td>
<td>-238</td>
<td>-3.7%</td>
</tr>
<tr>
<td>Mining</td>
<td>2,993</td>
<td>4,971</td>
<td>0.14%</td>
<td>0.16</td>
<td>1,978</td>
<td>66.1%</td>
</tr>
<tr>
<td>Utilities</td>
<td>11,143</td>
<td>10,623</td>
<td>0.31%</td>
<td>0.96</td>
<td>-520</td>
<td>-4.7%</td>
</tr>
<tr>
<td>Construction</td>
<td>214,427</td>
<td>231,070</td>
<td>6.10%</td>
<td>1.13</td>
<td>3,377</td>
<td>1.6%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>174,331</td>
<td>116,000</td>
<td>3.35%</td>
<td>0.47</td>
<td>-58,331</td>
<td>-33.5%</td>
</tr>
<tr>
<td>Wholesale trade</td>
<td>101,374</td>
<td>95,262</td>
<td>2.75%</td>
<td>0.78</td>
<td>-6,312</td>
<td>-6.2%</td>
</tr>
<tr>
<td>Retail trade</td>
<td>349,622</td>
<td>342,329</td>
<td>9.96%</td>
<td>0.97</td>
<td>-7,293</td>
<td>-2.1%</td>
</tr>
<tr>
<td>Transportation &amp; warehousing</td>
<td>91,470</td>
<td>97,776</td>
<td>2.83%</td>
<td>0.90</td>
<td>6,306</td>
<td>6.9%</td>
</tr>
<tr>
<td>Information</td>
<td>69,758</td>
<td>52,893</td>
<td>1.53%</td>
<td>0.84</td>
<td>-16,865</td>
<td>24.7%</td>
</tr>
<tr>
<td>Finance &amp; insurance</td>
<td>139,654</td>
<td>167,861</td>
<td>4.85%</td>
<td>0.88</td>
<td>28,007</td>
<td>20.1%</td>
</tr>
<tr>
<td>Real estate and Rental Leasing</td>
<td>116,723</td>
<td>166,173</td>
<td>4.81%</td>
<td>1.08</td>
<td>49,450</td>
<td>42.4%</td>
</tr>
<tr>
<td>Professional, scientific, technical services</td>
<td>281,267</td>
<td>339,028</td>
<td>9.80%</td>
<td>1.41</td>
<td>57,761</td>
<td>20.5%</td>
</tr>
<tr>
<td>Management of Companies</td>
<td>11,264</td>
<td>28,029</td>
<td>0.81%</td>
<td>0.64</td>
<td>16,765</td>
<td>148.8%</td>
</tr>
<tr>
<td>Administrative, support, waste management</td>
<td>189,685</td>
<td>217,470</td>
<td>6.29%</td>
<td>1.01</td>
<td>27,785</td>
<td>14.6%</td>
</tr>
<tr>
<td>Educational services</td>
<td>68,711</td>
<td>93,146</td>
<td>2.69%</td>
<td>1.18</td>
<td>24,435</td>
<td>35.6%</td>
</tr>
<tr>
<td>Health care &amp; social assistance</td>
<td>317,613</td>
<td>417,644</td>
<td>12.08%</td>
<td>1.08</td>
<td>100,032</td>
<td>31.5%</td>
</tr>
<tr>
<td>Arts, entertainment, recreation</td>
<td>61,899</td>
<td>85,624</td>
<td>2.48%</td>
<td>1.08</td>
<td>23,725</td>
<td>38.4%</td>
</tr>
<tr>
<td>Accommodation &amp; food services</td>
<td>187,917</td>
<td>229,057</td>
<td>6.62%</td>
<td>0.97</td>
<td>41,140</td>
<td>21.9%</td>
</tr>
<tr>
<td>Other*</td>
<td>178,447</td>
<td>208,592</td>
<td>6.03%</td>
<td>1.02</td>
<td>30,145</td>
<td>16.9%</td>
</tr>
<tr>
<td>Government</td>
<td>539,140</td>
<td>368,458</td>
<td>16.44%</td>
<td>1.23</td>
<td>49,358</td>
<td>9.5%</td>
</tr>
<tr>
<td>Total</td>
<td>3,093,890</td>
<td>3,458,016</td>
<td>100.00%</td>
<td>1.03</td>
<td>364,126</td>
<td>11.8%</td>
</tr>
</tbody>
</table>

Note: Other employment includes other services, public administration, and not classified.
Highlighted cells indicate where industry share for state exceeds the national average.
Source: U.S. Bureau of Economic Analysis.
The greatest concentration of jobs in every two-digit industry is in the Baltimore Washington corridor. Jobs in the public administration and government sectors are concentrated in Washington, D.C., along the I-270 corridor, downtown Baltimore, and along Reisterstown Road.

Although it is a fast growing industry, and one in which Maryland has a larger share than the nation as a whole, jobs in the management of companies sector in the Baltimore-Washington region are concentrated in Northern Virginia.

Figure 6.5 Employment in Public Administration and Government In and Near Maryland, 2011

Figure 6.6 Employment in Management of Companies In and Near Maryland, 2011

Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics.
Jobs in the education sector are concentrated where there are large universities, such as Northern Virginia, Washington, D.C., College Park, Baltimore, and Shady Grove.

Jobs in Maryland’s professional services sector are concentrated in the I-270 corridor and, to a lesser extent, in Baltimore and Columbia. A much larger concentration of these jobs is located in northern Virginia.

Figure 6.7 Employment in Education Services In and Near Maryland, 2011

Figure 6.8 Employment in Professional, Scientific, and Technical Services In and Near Maryland, 2011

Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics.
Jobs in the health care sector are concentrated in Baltimore and Washington, with some spill over in northern Virginia and along the I-270 and MD40 corridors.

Jobs in the accommodation and food service sector are concentrated in the central cities of Baltimore and Washington.

Figure 6.9 Employment in Health Care and Social Assistance In and Near Maryland, 2011

Figure 6.10 Employment in Accommodation and Food Services In and Near, Maryland, 2011

Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics.
Professional and technical services and health care and social assistance are likely to still be top industries by 2040. Construction, management of companies, administrative and waste services, and education services are likely to have grown. Government and accommodation and food services are expected to decline in relative importance.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm employment</td>
<td>15,800</td>
<td>14,100</td>
<td>0.3%</td>
<td>-1,700</td>
<td>-10.8%</td>
</tr>
<tr>
<td>Forestry, fishing, related activities, and other</td>
<td>6,200</td>
<td>6,000</td>
<td>0.1%</td>
<td>-200</td>
<td>-3.2%</td>
</tr>
<tr>
<td>Mining</td>
<td>5,000</td>
<td>4,400</td>
<td>0.1%</td>
<td>-600</td>
<td>-12.0%</td>
</tr>
<tr>
<td>Utilities</td>
<td>10,400</td>
<td>11,100</td>
<td>0.3%</td>
<td>700</td>
<td>6.7%</td>
</tr>
<tr>
<td>Construction</td>
<td>222,600</td>
<td>290,200</td>
<td>7.0%</td>
<td>67,600</td>
<td>30.4%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>110,700</td>
<td>93,900</td>
<td>2.3%</td>
<td>-16,800</td>
<td>-15.2%</td>
</tr>
<tr>
<td>Wholesale trade</td>
<td>96,000</td>
<td>106,000</td>
<td>2.5%</td>
<td>10,000</td>
<td>10.4%</td>
</tr>
<tr>
<td>Retail trade</td>
<td>347,800</td>
<td>372,700</td>
<td>9.0%</td>
<td>24,900</td>
<td>7.2%</td>
</tr>
<tr>
<td>Transportation and warehousing</td>
<td>100,700</td>
<td>116,200</td>
<td>2.8%</td>
<td>15,500</td>
<td>15.4%</td>
</tr>
<tr>
<td>Information</td>
<td>52,100</td>
<td>52,300</td>
<td>1.3%</td>
<td>200</td>
<td>0.4%</td>
</tr>
<tr>
<td>Finance and insurance</td>
<td>174,400</td>
<td>196,000</td>
<td>4.7%</td>
<td>21,600</td>
<td>12.4%</td>
</tr>
<tr>
<td>Real estate and rental and leasing</td>
<td>172,000</td>
<td>188,000</td>
<td>4.3%</td>
<td>16,000</td>
<td>9.3%</td>
</tr>
<tr>
<td>Professional and technical services</td>
<td>352,000</td>
<td>435,700</td>
<td>10.5%</td>
<td>83,700</td>
<td>23.8%</td>
</tr>
<tr>
<td>Management of companies and enterprises</td>
<td>30,800</td>
<td>49,100</td>
<td>1.2%</td>
<td>18,300</td>
<td>59.4%</td>
</tr>
<tr>
<td>Administrative and waste services</td>
<td>225,500</td>
<td>296,400</td>
<td>7.1%</td>
<td>69,900</td>
<td>30.9%</td>
</tr>
<tr>
<td>Educational services</td>
<td>97,700</td>
<td>144,000</td>
<td>3.5%</td>
<td>46,300</td>
<td>47.4%</td>
</tr>
<tr>
<td>Health care and social assistance</td>
<td>428,400</td>
<td>550,900</td>
<td>13.2%</td>
<td>122,500</td>
<td>28.6%</td>
</tr>
<tr>
<td>Arts, entertainment, and recreation</td>
<td>90,000</td>
<td>123,000</td>
<td>3.0%</td>
<td>33,000</td>
<td>36.7%</td>
</tr>
<tr>
<td>Accommodation and food services</td>
<td>237,100</td>
<td>290,900</td>
<td>7.0%</td>
<td>53,800</td>
<td>22.7%</td>
</tr>
<tr>
<td>Other services, except public administration</td>
<td>211,600</td>
<td>262,800</td>
<td>6.3%</td>
<td>51,200</td>
<td>24.2%</td>
</tr>
<tr>
<td>Government and government enterprises 3/</td>
<td>564,400</td>
<td>557,300</td>
<td>13.4%</td>
<td>-7,100</td>
<td>-1.3%</td>
</tr>
<tr>
<td>Total Employment</td>
<td>3,552,200</td>
<td>4,161,000</td>
<td>100.0%</td>
<td>608,800</td>
<td>17.1%</td>
</tr>
</tbody>
</table>

Figure 6.11 Projected Employment Trends in Maryland, 2015 to 2040

Source: Maryland Department of Planning.
Chapter 7: Environment and Equity

The previous chapters illustrate that, in traditional measures of economic development, Maryland’s economy performs reasonably well. The state has a stable economic base, is resilient to economic downturns, and generates high incomes for its residents.

A triple bottom line approach to economic development also requires an assessment of equity and environmental performance. Although a detailed analysis of environmental and equity conditions in Maryland is beyond the scope of this report, we offer some measures of environmental quality from the Genuine Progress Indicator (GPI) and additional measures of equity from other sources.

7.1 Genuine Progress Indicator

The GPI was developed by economists to provide information useful to a triple bottom line approach to economic development. The GPI incorporates environmental and social factors into an economic accounting framework.

The Maryland GPI, maintained by the Maryland Department of Natural Resources, incorporates a range of economic, environmental, and social metrics. Although this particular indicator (and similar indices) is not a pure measure of the economy, it provides information about conditions in the natural and social environments that complements information about economic conditions.

Figure 7.1 Genuine Progress Indicator Components for Maryland, 1960 to 2013

Source: Maryland Department of Natural Resources.
In aggregate, Maryland’s GPI has grown steadily over time, but at a slower rate than gross state product (GSP). A simple inference is that measures of environmental and social well-being are not increasing as quickly as measures of economic growth.

**Figure 7.2 Genuine Progress Indicator for Maryland, 1960 to 2013**

Source: Maryland Department of Natural Resources.
Social indicators within the GPI have stayed relatively flat from 1960 to 2012 and environmental indicators have declined. The cost of climate change is the key source of the decline in the environmental component of the GPI. Through regulation, Maryland has made progress on most other indicators. Water quality, air quality, habitat protection, and the consumption of renewables have all shown improvement over the last two decades. Areas for further improvement include particulate matter (via air quality regulation) and forest cover (via land use and urban growth management).

Figure 7.3 Genuine Progress Indicator Components for Maryland, 1960 to 2013

Source: Maryland Department of Natural Resources.
7.2 Wage and income distribution

Although Maryland residents earn high incomes on average, income inequality has increased markedly over the last decade. Wages account for the largest share of income for most households, and real (inflation-adjusted) wages have stagnated or declined for the majority of Maryland workers. The median worker (at the 50th percentile) earned the same real wage in 2012 that she did in 2001, and only 10 percent more than she earned in 1979. The lowest ten percent of wage earners are actually earning less now (in real terms) than they did in 1979, despite substantial gains in the real GDP per capita (Figure 4.2 Cumulative Percent Growth in Real per Capita GDP for Maryland, Comparison States, and the U.S., 1998 to 2013).

Since the mid-1990s, real wages between the top 10 percent of wage earners (the 90th percentile) and everyone else have diverged. Following the most recent recession, the wages of top earners (at the 90th percentile) have exceeded their pre-recession levels. Real wages for most households, however, continued to decline.

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Figure 7.4 Cumulative Percent Real Wage Growth for Selected Percentiles for Maryland Workers, 1979 to 2012

Asians and whites have the highest incomes; blacks and Latinos have the lowest. Asians and whites also have the higher college graduation rates, which may be one explanation for their higher incomes.

Figure 7.5 Median Household Income by Race and Ethnicity for Maryland Residents, 2013

7.3 Unemployment

In the nation, the state, and every region of the state, the unemployment rate is higher for Hispanics than for whites, and higher for blacks than Hispanics. Although the rural regions of the state have few blacks and almost no Hispanics, the unemployment rates for minorities in these regions are exceptionally high.

Figure 7.6 Unemployment Rates by Race and Ethnicity for Maryland Regions and the U.S., 2013

7.4 Poverty
Although the statewide poverty rate is relatively low, poverty rates among certain groups are consistently high. In Maryland, poverty rates are highest for those who are unemployed; live in female-headed households; or are disabled, black, Hispanic, or young.

**Figure 7.7 Poverty Rate for Subpopulations in Maryland, 2011 to 2013**

- Unemployed***: 25.8%
- Bachelor’s degree or higher**: 3.2%
- High school graduate (or equivalent)**: 10.9%
- Disabled***: 17.6%
- Female-headed Family Household: 20.0%
- Veteran*: 4.7%
- Hispanic or Latino: 14.0%
- Black or African American: 15.5%
- Elderly: 7.7%
- Youth: 13.7%

Note: * Population 18 and older  
** Population 25 and older  
*** Population 16 and older  
The spatial distribution of the population living in poverty in Maryland is highly uneven. More than three-fourths of Maryland’s poor live in Baltimore City, Baltimore County, Montgomery County, and Prince George’s counties. Twenty-four percent of Baltimore City residents are in poverty. Seventy-three percent of those in poverty in Baltimore City are black.

7.1 Access to Opportunity

A large body of research suggests that access to opportunity is the key to breaking the cycle of poverty for low-income families. Center researchers have accumulated data on educational quality, access to jobs, incomes and economic opportunity, housing, public health and more and combined them into a statewide opportunity map.

The map portrays access to opportunity in quintiles with the darkest colors depicting the highest level of opportunity. By overlaying information about where minority residents live it is possible to identify what percentage of black and Hispanic households live in high and low opportunity areas. The results reveal that a large proportion of blacks live in low opportunity areas, primarily in Baltimore and Prince George counties. Hispanics, because they are concentrated in Montgomery County, tend to live in high opportunity areas.
Chapter 8: What Should We Do Next? Implications for a Statewide Economic Development Strategy

This report presents information about the growth and structure of Maryland’s economy. The information is not comprehensive, and includes limited information on equity and less on the environment. We believe there is sufficient information, however, to draw conclusions and offer recommendations.

8.1 Capitalize on enduring strengths

Maryland ranks among the best in the nation in many typical measures of economic performance and social well-being, such as income, education, productivity, stability, and more. What’s more, Maryland’s high rankings have persisted for decades and stem from advantages that are not likely to change anytime soon. These include:

- Location on the eastern seaboard and good connectivity to national and international markets by car, truck, train, ship, and airplane.
- Close proximity to the nation’s capital, a substantial federal presence, and an ideal location for firms that do business with the federal government.
- Strong education and health care institutions that provide jobs and support the best-educated workforce in the nation.
- A development pattern enables firms to capture agglomeration economies and is well suited for public transportation.

While Maryland’s economy and its prospects for long-term growth remain among the best in the nation, there is always room for improvement.

Grow or maintain federal government employment

There is good reason to believe that Maryland’s future economy will look much like it does today. The continuing federal presence will sustain a fertile environment for firms that do business with the federal government, especially those in professional services. While growth of the federal government may slow or end, a significant federal government footprint in Maryland will likely continue. For this reason, the Maryland Economic Development and Business Climate Commission recommended that the state fund new programs and a position in the governor’s office specifically to attract and support federal agencies that operate in the state. We concur with these recommendations.

Increasing demand for health care and education will also drive public sector growth. The aging of the population will increase demand for health care services. And, despite the aging of the baby boomers, their offspring will assure that the demand for education at the primary, secondary, and tertiary levels will continue to grow. Almost every forecast for the nation, and certainly for Maryland, includes growth in these industries.

Growth in health care and education are likely to benefit both the economy and the community. These sectors have high shares of minority-owned businesses, and they provide jobs that are high paying and cyclically resilient. So, growth in these industries is likely to improve equity. For this reason, the first order of business for any economic development strategy for Maryland is to assure that the state sustains its strength in these key industries.
Use transportation investments to support economic development

The state can foster economic development by making transportation investments that connect job centers. The state has policies that require the Department of Transportation to invest in PFAs. But the state can further promote economic development by targeting transportation investments—especially transit investments—toward those areas best suited for economic growth.

Transportation investments that connect workers to job centers, and that connect job centers to other job centers, not only facilitate economic development but also stimulate transit ridership. A large body of research reveals that the best way to encourage transit ridership is to locate jobs near transit stations.\textsuperscript{xxxviii}

Transportation related public policy will further strengthen growth in key industries, including education, health care, and government-related professional services. Jobs in these sectors tend to cluster near transit and are highly responsive to public policy. That is, jobs in education, professional services, and health care, and, of course, government itself, are dependent on government expenditures, and any stipulations with which they come.

Embrace diversity

Maryland is among the most diverse and most rapidly diversifying states in the nation. While such diversity brings new opportunities for economic development, the inevitable growth of minority populations means that educational outcomes must improve for the state’s Hispanic and black populations.

The state government has made strides on workforce development policies that address the needs of target industries. During the Ehrlich Administration, the Department of Labor Licensing and Regulation reestablished the Governor’s Workforce Investment Board and charged it with preparing residents for jobs in Maryland’s leading industries.

The EARN program, launched by the O’Malley administration, accomplished this by forming training programs for and with specific industries.

But an effective workforce strategy requires attention to the unique needs of segments of the labor force—that is, a strategy designed specifically to raise the human capital of Maryland’s increasingly diverse populations. Without programs targeted at these needs, the state will lose the educational advantage it has maintained for decades, and will fail to capture the opportunities that diversification can bring.

8.2 Address persistent weaknesses

While capitalizing on its strengths, the state must also recognize its persistent weaknesses and take action to make sure they are overcome.

Improve the tax and regulatory environment

Maryland scores consistently low on its tax and regulatory environment in many business climate indices. Virginia has a consistently higher-ranked business climate and ranks higher than Maryland in many economic indicators. These two facts do not prove causation, but the impact of Maryland’s business climate on its regional competitiveness is surely worth exploring.

The Maryland Economic Development and Business Climate Commission recommended a number of “customer service” improvements, third party reviews of new regulations, and further evaluation of the state’s tax structure. We defer to the commission for further elaboration of these recommendations.

We note, however, that taxes and regulations serve important purposes and affect more than the state’s business climate. Before adopting any major change in tax or regulatory policy, the state must consider its effects. Areas of impact include: business in general, economic clusters, regional economies, transportation facilities, and local communities.
Support diverse and emerging industries

Given persistent budget shortfalls at all levels of government, growth in government and spin-off jobs in professional services may slow or continue to vacillate over the political cycle. The current downturn in federal government activity has already slowed Maryland’s economic growth and increased competition with neighboring Virginia. This suggests that the state should explore opportunities for diversification. Determining what industries are most deserving of government support and what forms such support should take will require further analysis. Industrial favorites should not be chosen lightly. What’s more, consideration for any such public support must include whether the industry will provide ladders of opportunity and create jobs in places where they are needed most.

Address regional economic disparities

Although the state’s economy has performed comparatively well for several decades, the performance of regional economies has varied. While the economies of suburban Baltimore, suburban Washington, and Southern Maryland have grown steadily, the economies of Western Maryland, the Eastern Shore, and Baltimore City have struggled. What’s more, the variation among regions in demographics, resource endowments, and industrial composition suggests that uniform economic development policies will not serve all regions well. A strong case can thus be made for crafting economic development strategies for each region of the state.

Developing such strategies should involve multiple state agencies, local governments, and business and community organizations. The Baltimore Opportunity Collaborative, with its 12 coalition members and integrated approach to economic growth, workforce development, and access to opportunity, provides a useful model for replication by other regions.

Remove barriers to affordable housing in high opportunity areas

Maryland has among the highest housing prices in the nation. High housing prices, especially near job centers, make it difficult for businesses to attract and retain employees and force employees to commute long distances to work. Regulatory barriers in high opportunity areas also deprive low-income residents of access to high quality schools and the social networks that enable social mobility—thus perpetuating a cycle of inequality. Removing barriers to affordable housing in high opportunity areas furthers the goals of both economic development and social equity.

Several government agencies and commissions have made important progress on housing affordability. In Reinvest Maryland, the Sustainable Growth Commission identified regulatory barriers to infill and redevelopment and offered strategies for promoting equitable development. The housing plan recently released by the Baltimore Opportunity Collaborative includes new ideas on how to promote affordability in high opportunity areas. As in other sectors, regulatory barriers in the housing sector will be more difficult to reduce than identify, but this is an area where substantial work is already underway.

Use prices to help manage road capacity

According to the Census Bureau, Maryland has the longest commute times in the nation. Time spent in traffic is not just inconvenient, but it represents a significant cost of doing business. To remain competitive both regionally and globally, Maryland must address its growing congestion problem.

The most cost-effective solution for addressing congestion over the long run lies in greater use of tolls and congestion fees. Tolls and congestion fees encourage residents to drive less on congested roads, drive less at congested times, and drive less period. A growing body of research shows that tolls and other forms of congestion pricing are better able to lower traffic congestion than either compact growth or transit-oriented development.
More research is needed to determine how and where tolls, fees, and other forms of incentives are most appropriate, as well as how to mitigate their regressive impacts. But this may be a propitious time to explore a more market-based approach to transportation policy.

Assess the state’s economic infrastructure

Infrastructure is the key to economic growth. No matter how favorable the tax and regulatory climate, businesses cannot prosper without adequate roads and public transportation, sewer and water, quality public schools, police and fire protection, communication networks, and more. Currently, there is a dearth of data and information on the condition of the state’s infrastructure.

The Maryland Sustainable Growth Commission created a work group to monitor the use of adequate public facilities ordinances. Its work suggests that local governments use these tools to slow or stop growth where certain types of infrastructure are deemed inadequate. The workgroup agenda does not include a comprehensive assessment of whether the state has adequate public facilities or what actions the state should take to assure that inadequate public facilities are not a constraint to growth. But if the state wants to promote economic development, that should be an important next step.

Track the consumption of ecosystem services

Few would dispute that natural resources enhance quality of life and provide valuable ecosystem services. Economic growth without the loss of ecosystem services is possible, but often more costly. Thus, like every other state, Maryland must find a balance between economic growth and resource conservation.

The Genuine Progress Indicator is one tool that allows the comparison of economic and environmental outcomes. Like any other index, the Genuine Progress Indicator is an aggregate of multiple indicators. Because it is very difficult to express environmental quality and social equity in monetary terms the underlying indicators are perhaps more valuable than the aggregate index. Regardless, the Genuine Progress Indicator is currently the best method of keeping track of the triple bottom line.

Update the state’s land use planning tools

The state’s role in land use planning in Maryland has changed over time. In 1997, the state adopted the Smart Growth and Neighborhood Conservation Acts that established Priority Funding and Rural Legacy Areas as places to target state spending on urban growth and resource conservation, respectively. The number of planning designations or funding targets has grown significantly, but, PFAs remain the central organizing feature of the state’s approach to land use. Most PFAs were adopted in 1998, and have changed little over time. Although state and local governments have developed tools to monitor residential development capacity, they have not developed tools to monitor land needed for commercial, industrial, and institutional uses or residential capacity on infill and redevelopment sites. For these reasons, new tools should be developed and applied to assure PFAs have sufficient land for jobs as well as for households.

Integrate economic development with smart growth

Economic development is best pursued via an integrated strategy and a coordinated effort. For these reasons, the Economic Development and Business Climate Commission recommends coordinating the state’s economic development efforts under a Secretary of Commerce. We support that recommendation. But the premise of this report is that economic development depends not only on the success of the agencies focused specifically on economic development, but also on the success of other agencies that impact the state’s triple bottom line. The institution that best represents those agencies in state government is the Smart Growth Subcabinet, the body also charged with oversight of PlanMaryland. Exploring how PlanMaryland can serve as a tool for economic development should be an important agenda item for that body.
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Endnotes


\[iv\] Ibid.


\[ix\] This chapter draws heavily from material Terry Moore and Alexandra Reese produced for the *Sustainable Economic Development Toolkit*, a project funded by the Urban Sustainability Director’s Network.


\[xi\] Government (the public sector) also creates jobs. Estimates of the number of government jobs varies by data sources, assumptions (e.g., does one count the Armed Forces), and methods, but for the purposes of this report we only need a rough estimate. In the U.S., estimates of government employment as a percent of total employment range from about 7% to 20%. Whatever the true number, if it is roughly in that range, then (1) the private sector has about 5 to 10 times more jobs than the government sector, and (2) governments at any level typically do not make the argument that creating more government jobs is a good economic development policy.

\[xii\] Increases in productivity can reduce jobs even as income grows: sophisticated equipment may be substituted for less-skilled labor, but the skilled labor that remains receives higher compensation.

\[xiii\] And fairness can feed back to efficiency: e.g., congestions tolls can reduce congestion by encouraging people to drive during off peak hours, but they also raise concerns about equity.


\[xv\] U.S. Census Bureau, “Table DP-1,” 2010 Census; and U.S. Census Bureau, “Table DP-1,” 2000 Census.

\[xvi\] U.S. Census Bureau, “Table B03002,” American Community Survey 2009-2013 5-year estimate.

\[xvii\] Ibid.


\[xx\] Maryland Department of Business and Economic Development, 2015, Workforce,
available at http://business.maryland.gov/about/workforce


xxviii Ibid.


xxxiv An industry LQ is the ratio of an industry’s share of regional employment to its share of national employment.

xxxv In rough terms, GDP is a measure of all economic activity, while GPI is the net beneficial activity after accounting for and subtracting from the GDP’s environmental and social costs.


xxxvii Department of Legislative Services, Office of Policy Analysis, 2014.

xxxviii In an efficient transit system, buses and trains are full at all times and when traveling both directions. This suggests that the state should encourage growth in central locations, like downtown Baltimore, but also in job centers located throughout the state. NCSG, “Maryland Scenario Project,” http://www.smartgrowth.umd.edu/marylandszenarioproject.html.


http://www.opportunitycollaborative.org/housing-plan/

