



CONNECTING THE DOTS

Accelerating Economic Growth
in Montgomery County, MD

An Action Plan from the MCEDC Economic Advisory Panel
October 2021

MCEDC ECONOMIC ADVISORY PANEL

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MCEDC CHAIR & CEO MESSAGE

Five years ago, in July 2016, the Montgomery County Economic Development Corporation (MCEDC) began its privatized transition from a government agency with the recognition that successful economic development needs greater private sector input. This new paradigm of a public-private partnership structure was created to solicit industry and community stakeholder input in support of MCEDC's critical functions of helping businesses locate, start, and grow in Montgomery County.

To help shape consensus priorities as a spur to a critical post-pandemic recovery, MCEDC convened a blue-ribbon advisory panel of top executives from the County. This panel convenes at a time when local officials are increasingly turning to MCEDC to take the lead in Montgomery County's pandemic economic recovery efforts.

We are grateful to all 20 members of this Economic Advisory Panel for their commitment to Montgomery County's future and their willingness to serve. We especially want to thank Co-Chairs Norm Augustine and Dr. DeRionne Pollard, two revered and inspirational local visionaries, for their exemplary leadership and dedication to this initiative.

For Norm and DeRionne, this Economic Advisory Panel is the second time they have been asked to step up and give their public service in the name of economic reform. On behalf of our state, both were leaders in the 2015 Maryland Economic Development and Business Climate Commission, more commonly referred to as the Augustine Commission. Their work was a foundation for Maryland's economic transformation that, prior to the pandemic, led to the lowest state unemployment rate in over a decade and the greatest job growth in the Mid-Atlantic region. With this panel's Action Plan, we are looking forward to a similarly transformative impact in Montgomery County.

MCEDC is committed to acting on the panel's recommendations. This is not a work product to be simply placed on a shelf. We intend to adopt the recommendations as organizational priorities. To put the plan on a path to success, MCEDC will seek to execute those recommendations on our own where we can and lead through collaborations with appropriate stakeholders for the others.

We also expect that this Action Plan will help serve as both a conversation starter and a catalyst for the creation of the upcoming Montgomery County Comprehensive Economic Strategy that has been tasked to MCEDC. The County Council in May 2021 enacted Bill 10-21, sponsored by Councilmember Andrew Friedson, which transfers the creation of the Comprehensive Economic Strategy from the County Executive to MCEDC with the transmittal of a draft plan by the end of the year.

There has been no shortage of recommendations for Montgomery County to improve its economic competitiveness over the years. We believe this Action Plan can serve as an effective rallying cry on consensus priorities for a near-term economic recovery and on aspirational goals for our future long-term economic standing. MCEDC looks forward to partnering with all stakeholders to implement the panel's recommendations and advance economic development for a stronger and more inclusive Montgomery County.

Robby Brewer, MCEDC Chair



Ben Wu, MCEDC President & CEO



ECONOMIC ADVISORY PANEL CO-CHAIRS MESSAGE

We believe **Montgomery County has the necessary ingredients to be a regional, national, and global economic powerhouse.** It possesses a diverse and educated population, thriving academic and research institutions, hubs of collaboration and innovation, and a healthy mix of businesses including global companies at the leading edge of breakthrough technologies. To take full advantage of these extraordinary assets, Montgomery County must do a better job of linking and leveraging these resources.

We need a coordinated consensus strategy to harness our strengths. We need a focused, unified, and energized implementation effort. In short, we need an Action Plan to CONNECT THE DOTS and thereby strengthen Montgomery County's business growth and ensure a prosperous future. Now is the time to connect every dot.com, dot.org, dot.edu, dot.gov, dot.mil, dot.biz in Montgomery County into a team that can pull together in the same direction—forward.

The Economic Advisory Panel respectfully submits and unanimously endorses this Action Plan that offers **recommendations and priorities we believe are necessary to transform Montgomery County's economic climate into the top tier nationally.** As Co-Chairs, we are honored to have been asked to serve alongside our distinguished panel colleagues.

The charge that MCEDC gave us was straightforward: Analyze years of economic development recommendations, find common themes, realign them, and then offer a set of priorities based on our panel's experience and expertise that can successfully find public and private consensus.

This was accomplished with just four months of meetings. While our panel's work may have been daunting, particularly on such a compressed timeline, we recognize its importance and have given it our priority.

The panel believes that Montgomery County's latent potential to enhance economic development, business growth, and job creation is immense and ready to be seized, but there are no magic solutions in tackling the barriers that continue to inhibit our local growth and prosperity. The panel recognizes that to change the course of our many troublesome economic trends there must be consensus and a communal will to move in a new direction.

We offer these recommendations and priorities with the hope to create the consensus necessary for action. Some of the recommendations require short-term investments to realize longer-term benefits. Others can be implemented with modest or even no financial commitment. All require political and community leadership.

There is not a moment to waste. By working together, we can seize the opportunity and potential before us and strengthen the economic future of both Montgomery County and the State of Maryland. It is time to start **Connecting the Dots ... today.**

Norm Augustine, Co-Chair



DeRionne Pollard, Co-Chair



EXECUTIVE SUMMARY

If Montgomery County were a business, its economy likely would be termed an underperforming asset. This matters.

Such is the judgment of a group of 20 businesspersons asked to examine Montgomery County's overall record in growing businesses and jobs—major elements of the economy. The review group has a collective of over 500 years of residency in Montgomery County and its members have held leadership positions in firms ranging in overall size from a handful of staff to 180,000 employees and having annual revenues ranging from a few million to \$45 billion. As a group, its members have over their lifetimes conducted business in every state. Most have made decisions about where to locate new businesses or expand established businesses. They are proud residents of Montgomery County and are committed to its future prosperity.

In various surveys conducted throughout the world, including in the United States, respondents have consistently indicated that the single most important factor in their well-being is having a good job. And based on national data, growing the number of jobs by just one percentage point will require increasing the County's GDP by approximately 1.7 percentage points. And to do that depends on having a strong business sector.

Montgomery County's Gross Domestic Product (GDP); i.e., its economy, not only underpins the creation and sustainment of jobs but also provides the tax base to fund such vital services as education, public safety, and infrastructure. Not surprisingly, the competition for both jobs and economic growth is intense, reaching far beyond any local jurisdiction's borders, extending across states and even into other nations. Further, a strong economy demands that people of all backgrounds and businesses of all sizes are given the support that will enable them to prosper and contribute to the prosperity of the whole.

For Montgomery County to succeed, so too must Maryland...and for Maryland to succeed, so must America. But Forbes currently ranks the United States as #17 on its list of "Best Countries for Business." Within the U.S., CNBC shows Maryland at #12 among the "Top States for Business 2021"—and #26 in "Business Friendliness." Obviously, there is much more that remains to be accomplished in the United States and Maryland; and, as is indicated in this report, Montgomery County is no exception.

Montgomery County is not your typical county. If it were a state, Montgomery County's population would make it larger than seven other states. Nationally, it ranks in the top one percentile of counties in income of its residents and also in their net worth. Its GDP is larger than that of 12 states. Among large counties with over one million population, Montgomery County is number one in the nation among large counties in its percent of residents having an advanced degree. According to WalletHub, Montgomery County has four of the seven most ethnically diverse cities among the 500 largest cities in the nation. One-third of the County's residents were born abroad or have an immediate family member who was born abroad. Over 150 different languages are spoken by students in the Montgomery County Public School system.

So how is Montgomery County faring in the competition to attract and retain businesses and thereby grow its economy and its number of jobs, especially high wage jobs? In the decade just prior to the onset of the COVID-19 pandemic, job growth in Montgomery County (6.9%) lagged behind Arlington, VA (12.0%), Washington D.C. (11.9%), Fairfax, VA (8.5%), and Prince George's (7.7%). Among a group of national competitor counties with a similar high-technology innovation concentration in Silicon Valley, San Diego, Boston, and Research Triangle,



Montgomery County's job growth (6.9%) greatly lagged the average 27% growth rate achieved by the other members of the group.

Addressing inflation-adjusted GDP, from 2010-2019, in the decade prior to the onset of COVID-19, Montgomery County produced growth of 12.3% as compared with an average of 92% in Silicon Valley, 53% in Research Triangle and 28% in both San Diego and Boston. Of particular concern is that during the most recent five years, Montgomery County's inflation-adjusted, year-over-year GDP was essentially flat.

Montgomery County possesses the fundamental resources to do better—far better, and to even become one of the top counties in the nation in expanding its economy and creating jobs. In this regard, growing businesses generally requires four categories of assets: (1) ***ideas*** and ***knowledge assets***, (2) ***human assets***, (3) ***financial assets***, and (4) a ***business-supportive ecosystem***.

Ideas and knowledge can appear virtually anywhere. For example, the Theory of Relativity came from a worker in a patent office. However, it is not an accident that many of the most prosperous areas of the country contain, or have ready access to, great universities: Boston, Silicon Valley, and Research Triangle are examples. Montgomery County is generally well served in this regard, containing the Universities at Shady Grove with nine Maryland public universities represented on its campus, Montgomery College as a top-ranked national community college, and the nearby flagship campus of the University of Maryland, College Park. Additionally, Johns Hopkins University is not far away. The University of Maryland is ranked #20 in the nation among public universities in the latest *U.S. News and World Report* assessment and Johns Hopkins is ranked #9 among all universities.

Human assets are developed in programs granting certificates in the trades or other special skills, in community colleges and universities, and simply from motivated highly-dedicated individuals. For example, Ford Motor Company, Microsoft, and Facebook were all founded by school dropouts. It is also noteworthy with regard to a community as international as Montgomery County that half the nation's Fortune 500 companies were started (all or in part) by an immigrant or by the children of immigrants.

Acquiring needed ***financial assets*** can be a particularly great challenge for startups and small established firms. Over 70% of the venture capital in the United States is invested in just three states (California, Massachusetts, and New York) — and Maryland is not one of them. Correcting this under-resourcing would significantly enhance Montgomery County's attractiveness to young, fast-growing businesses. Similarly, making available more mentors, wet labs, prototype shops and connections to customers, suppliers and community leaders would be impactful.

The area wherein Montgomery County arguably can make the greatest impact is in enhancing its ***business ecosystem***. Forthrightly stated, Montgomery County has the reputation of being unfriendly to business. This is a reflection of the County's licensing, regulation, reporting, responsiveness, taxing and overall attitude towards business. It should be noted that some of this reputation is undeserved—but much is not. Reversing this perception—or reality, as the case may be—is the single most important action the County could take to bolster business and job growth. Some of the necessary effort will require financial investment; some will require none at all.



Montgomery County, as the location of many federal facilities, is extremely fortunate—but the economic impact of this dependence on federal funds has helped mask the importance of maintaining a substantial, highly competitive presence in the private sector business economy—a demand that in many other counties around the country long ago propelled their intense market competitiveness. Particular concern is raised by data released by the Congressional Budget Office (CBO) that projects that within less than two decades, the “discretionary” portion of the federal budget (that portion which funds defense, infrastructure, homeland security, research and development, and more) will altogether *vanish*. This implies that *any* funding for these budget items will need to be derived through major tax increases, large reductions in social programs, and/or substantially greater borrowing (which increases the cost of interest on the debt, exacerbating the budgetary dilemma). Furthermore, the CBO forecast did *not* include the impact of current increased federal pandemic-related spending or any other spending and tax legislation enacted by the current and immediate past Congresses. Among other imperatives, Montgomery County, while continuing to nurture its status with the federal government, will need to diversify and accelerate the growth of the private sector element of its economy.

Montgomery County contains many established businesses of all sizes that possess substantial nascent growth potential. Three such sectors are particularly noteworthy: Life Sciences, Hospitality, and the emerging field of Quantum Technology. Each of these is poised to grow significantly over the long term, and each benefits from Montgomery County being situated adjacent to the nation’s capital. Other important opportunities include artificial intelligence, automation, and robotics, although the County’s position in these fields is less established.

If Montgomery County is to achieve its true potential, there is much to be done. Based on the panel’s review of dozens of prior studies, augmented by the panel’s own experience, 20 recommendations are offered with 33 implementing actions. One of the recommendations includes making sure that there is proper accountability for executing the panel’s recommendations and providing regular and annual reports to update the panel and the public on its implementation. This responsibility falls to MCEDC.

There is no silver bullet solution that will resolve the issues described above. This accounts for the large number of recommendations the panel offers.

Of the panel’s recommendations, the following ten below are considered high priority:

- **Greatly Increase Additional Laboratory Infrastructure** with Private Developers to Accommodate the Critical Demand Surge of Recent Life Sciences Growth with an Additional Two Million Square Feet of Laboratory Space
- **Create a Global Pandemic Prevention and Biodefense Center** in the County to Leverage Existing Local Strengths and Further Advance the Stature of International Leadership
- **Establish an Incubator or Accelerator for Hospitality Tech Startups** to Expand and Support the Connected Networks of Local National Hospitality Headquarters
- **Create a Quantum-Ready Workforce, a Greater Washington Regional Quantum Innovation Cluster, and a Quantum Computing Curriculum** in Local Education and Academic Institutions to Build an Early Lead in National Quantum Business Development
- **Prepare an Economic Development Plan for the Purple Line Corridor** to Strengthen Direct Linkages with the University of Maryland, College Park
- **Establish a \$1 million Public-Private Entrepreneurship Innovation Center** to Strengthen the Entrepreneurial Ecosystem and Startup Formation



- **Reform the Montgomery County Business Incubator Network** to Better Support Local Incubator Companies and Greater Entrepreneurship
- **Launch a \$1 Million Montgomery County Marketing Partnership Initiative** to Rebrand Economic Development in the County
- **Benchmark a Culture of Superior Customer Service and Responsiveness** to Business Using Private Sector Customer Experience Experts to Measure Support and Identify Specific Areas Needing Attention
- **Create a Montgomery County Competitiveness Council** of Public Members to Identify Long-Term Economic Competitiveness Issues and Monitor Progress in their Resolution

In summary, Montgomery County is poised to expand its business base, grow its economy, and create quality jobs. It possesses such essential assets as a generally strong primary and secondary education system, a widespread presence of federal laboratories, an established set of firms working in rapidly growing fields; many citizens with considerable financial resources; a highly educated populace; and access to important institutions of higher education.

To execute real change and create new momentum, all of Montgomery County's numerous assets must be leveraged together in partnership, from the business community, federal and military facilities, nonprofits, academia, and private citizens. The impediments facing the County are largely self-imposed—and therefore self-correctable.

What remains is to Connect the Dots.



CHAPTER 1: MONTGOMERY COUNTY, MD—ASSETS AND LIABILITIES

A. Montgomery County: By the Numbers

POPULATION

Montgomery County recorded its largest ever number of residents in the 2020 Census but all of Montgomery County’s regional state peers in the Greater Washington area experienced a greater rate of population growth in the past decade.

Located in the Greater Washington D.C. metropolitan region, Montgomery County is the most populous jurisdiction in the State of Maryland. Montgomery County accounts for about one-sixth of the state’s population and became the first jurisdiction in Maryland history to register more than one million residents in a decennial census, according to the 2020 U.S. Census that was preliminarily released in August 2021.

Montgomery County’s 2020 population now stands at 1,062,061 residents, representing a growth of 9.3% in the last decade. Since the 1970 Census when there were 522,809 people, Montgomery County’s population has more than doubled. In the past thirty years since 1990, the County’s population has grown 38%, beginning with 765,476 residents.

Comparatively, the State of Maryland’s 2020 population has now increased to 6,177,224 residents, a growth of 7% since the 2010 Census. It is the first time in Maryland history that the state’s population has topped more than six million residents in a decennial Census.

Most of Maryland’s population increase since 2010 can be attributed to significant growth in the Greater Washington metropolitan region. Even though Montgomery County’s population grew by a healthy 9.3%, all the county’s peers in the state increased their population at an even faster rate, with Frederick County substantially leading the state’s counties with 16.4% growth, Howard County registered 15.8% growth, Charles County 13.7%, and Prince George’s County 12.0%.

Population Comparisons: Maryland, Washington Metropolitan and Key Baltimore Jurisdictions

Jurisdiction	Population (2020 Census)	Growth (2010-2020)
STATE OF MARYLAND	6,177,224	+7.0%
Montgomery County	1,062,061	+9.3%
Prince George’s County	967,201	+12.0%
Baltimore County	854,535	+6.1%
Anne Arundel County	588,261	+9.4%
Baltimore City	585,708	-5.7%
Howard County	332,317	+15.8%
Frederick County	271,717	+16.4%
Charles County	166,617	+13.7%

Source: U.S. Census Bureau’s 2020 and 2010 Census data. Prepared by the Maryland Department of Planning



Within the Washington Metropolitan Statistical Area (MSA) that includes Northern Virginia counties and the District of Columbia, Montgomery County contains 15% of the region's population, second only to Fairfax County, Virginia. If Montgomery County were a state, its population would be larger than seven of the states (and the District of Columbia), just larger than Rhode Island's population of 1,061,059 and just under Montana's 1,085,004 residents.

GROSS DOMESTIC PRODUCT (GDP)

With a share of the state's GDP almost double its closest peer, Montgomery County is the largest contributor to Maryland's economy and is ranked as one of the top economic jurisdictions in the nation.

By many economic metrics, Montgomery County is one of the strongest counties in the nation. It is consistently ranked in the top 1% of counties in terms of household income, household net worth, and educational attainment; and it is home to the fourth largest life sciences market in North America—a fast-growing market.

The Success of Montgomery County: A 99th Percentile County (Income, Net Worth and Education)

2019 MEDIAN HOUSEHOLD INCOME	2019 MEDIAN HOUSEHOLD NET WORTH	2019 POPULATION AGE 25+ WITH BACHELOR'S OR HIGHER DEGREE
National Median \$61,890	National Median \$121,082	National Median 32.6%
99th Percentile County \$94,468	99th Percentile County \$237,750	99th Percentile County 54.1%
Montgomery County \$105,043	Montgomery County \$356,770	Montgomery County 58.6%

Source: 2020 Research Advisors Report, Montgomery County at a Crossroads

In 2019 (pre-COVID-19) Montgomery County achieved the highest Gross Domestic Product (GDP) of all Maryland counties at just over \$95 billion, representing almost a quarter of the state's total economy. Montgomery County's GDP is larger than the aggregated GDP total of Maryland's 18 smallest counties.¹ If Montgomery County were a state, its GDP would be larger than 12 other states in the country, ranking below Hawaii and above New Hampshire.

¹ *Maryland GDP by County, 2015 – 2018*, <https://commerce.maryland.gov/Documents/ResearchDocument/maryland-gdp-by-county-2020-03-05.pdf>



GDP for Maryland Counties

Jurisdiction	GDP (\$, thousands)	MD Share
STATE OF MARYLAND	\$426,747,449	100%
Montgomery County	\$95,585,447	22.4%
Baltimore County	\$59,076,684	13.8%
Baltimore City	\$54,158,824	12.7%
Anne Arundel	\$51,932,913	12.2%
Prince George's	\$48,596,251	11.4%
All Other Maryland Counties	\$117,397,330	27.5%

Source: U.S. Bureau of Economic Analysis, 2019

EDUCATIONAL ATTAINMENT

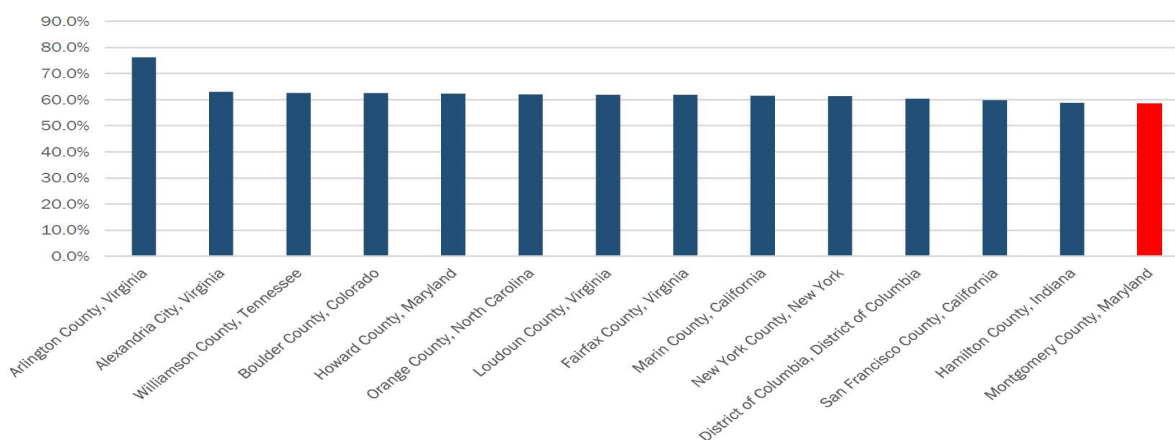
Montgomery County has a highly educated workforce with some of the nation's highest levels of college and advanced university degree recipients.

Montgomery County is one of the most highly college and university educated counties in the United States. With an educational attainment of 31.4% of adults over 25-years old having earned an advanced degree, Montgomery County leads the nation in this category among large counties (population over one million residents).

Regardless of size, Montgomery County's proportion of graduate-level educational attainment ranks among the top ten counties in the country. In the Greater Washington metropolitan area, only Washington D.C., Arlington County, and the City of Alexandria have higher advanced degree representation rates. Fairfax County's rate is a few tenths of a percent lower than Montgomery County. Nationally, other counties ahead of Montgomery include Tompkins County, New York (home to Ithaca College and Cornell University) and Durham County, North Carolina (home to Duke University).

For adults with a bachelor's degree or higher, Montgomery County also scores highly in the national rankings. In Montgomery County, 57.8% of adults over 25-years old have a bachelor's degree or higher, ranking among the top 50 jurisdictions.

Population 25+ with Bachelor's Degree or Higher



Source: 2020 Research Advisors Report, Montgomery County at a Crossroads, 2019



DIVERSITY

Montgomery County has outpaced the state and national diversity trends over the past decade.

The number of Maryland residents who identify as White (alone) has dropped below half the state's population, reflecting a similar nationwide trend, according to the 2020 U.S. Census. Just like the state, Montgomery County has also become more diverse in the last decade.

Montgomery County's 2020 Diversity Index is 73.5%, an increase from 68.1% in 2010. By comparison, the State of Maryland's 2020 Diversity Index is 63.7%. The state's rate is the fourth highest in the United States, below Hawaii, California, and Nevada. (The Diversity Index is a scored measure of racial/ethnic diversity of residents based on six major racial/ethnic groups—White, Black, Latino, Asian or Pacific Islander, Native American, and Mixed/Other race).

People of color comprise more than 57% of Montgomery County's 2019 population. Since 1990, the Hispanic population grew by 258%; the Asian population by 153%; and the Black/African American population by 108%. The basic racial composition of the County in 2019 is shown in the following table.

Racial Composition in Montgomery County

RACE/ETHNICITY	PERCENT OF TOTAL POPULATION
White, non-Hispanic	42.6%
Black/African American, non-Hispanic	18.6%
Asian, non-Hispanic	14.8%
Hispanic, Any Race	20.1%
Multi-racial or Other-race	3.6%

Source: U.S. Census ACS, 2019

Montgomery County had four of America's most ethnically diverse cities listed in the WalletHub 2021 rankings. The report ranked Gaithersburg as the #2 most diverse city in the country, followed by Germantown and Silver Spring at #3 and #5, respectively, and with Rockville at #7. WalletHub compared over 500 of the largest cities in the nation using three indicators of diversity: ethnic, linguistic, and birthplace. The above four were also ranked the top four in the "Small City" category as the most diverse in the country.

GLOBAL CONNECTIVITY

Montgomery County has a significant international and immigrant population.

Not only is diversity a hallmark of Montgomery County, the County is also very international with a significant immigrant population. According to 2019 federal data, about 32.5% of Montgomery County residents were born abroad or have an immediate family member who was born abroad.

Additionally, 41.7% of households in the County speak a language other than English at home. Montgomery County Public Schools report over 150 different languages are spoken by students in the public school system. Of those Montgomery County residents who were born in the U.S., 40.1% of the population was born outside of the state in a state/district/territory other than Maryland.



HOUSEHOLD INCOME

Montgomery County remains a wealthy jurisdiction in both national and regional rankings.

Though Montgomery County median household income has not changed significantly in recent years, the percentage of households with an income of \$200,000 or greater has increased from 22% in 2015 to 23.9% in 2019. This ranks Montgomery County as 15th in the nation for the percentage of households with an income of \$200,000 or higher.

In the category of large jurisdictions with over one million residents, Montgomery County ranks fourth in household income in the country behind Fairfax County, VA; New York, NY; and Nassau County, NY. In the Greater Washington metropolitan region, regardless of the size category, Montgomery County ranks fourth behind Loudoun County, Fairfax County, and Arlington County. Montgomery is first in the State of Maryland.

Per Capita Income Comparisons: Top Maryland Jurisdictions

Jurisdiction	Per Capita Income
STATE OF MARYLAND	\$64,640
Montgomery County	\$90,139
Howard County	\$79,253
Talbot County	\$74,711
Anne Arundel County	\$69,035
Carroll County	\$64,228
Baltimore County	\$62,976
Frederick County	\$64,147

Source: U.S. Bureau of Economic Analysis, 2019

AGE OF RESIDENTS

Montgomery County's population and workforce is growing older.

In 2019, 34.6% of households in Montgomery County had children under the age of 18. This is reflective of many households aging in place after children move out, as well as delayed family formation among millennials. The data also provide two additional takeaways regarding Montgomery County's youth and senior population: (1) The fraction of Montgomery County population under the age of 18 is 23%—this has declined slightly from 23.4% in 2015; and (2) The Montgomery County senior population, ages 65-years or older, is 16.1%—this represents a significant increase from 14.1% in 2015.



B. Economic Impact of the COVID-19 Pandemic

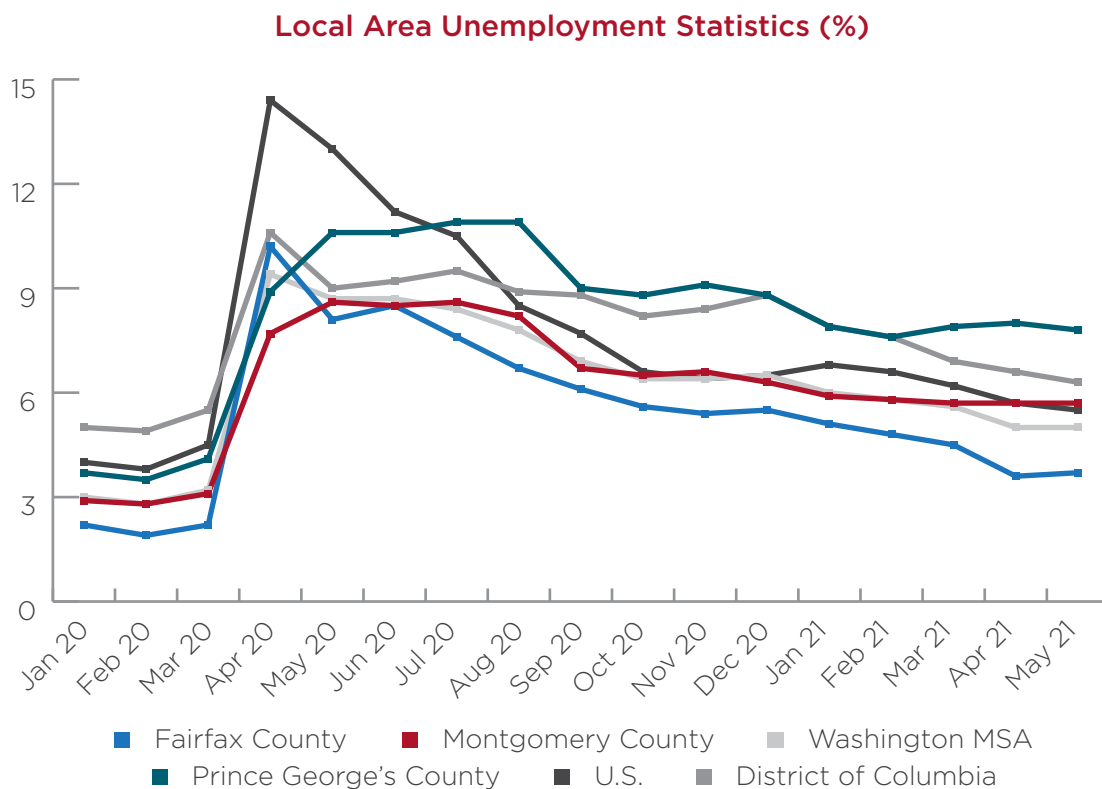
UNEMPLOYMENT IMPACT

The global economy was devastated by the COVID-19 pandemic and Montgomery County has not been immune.

As the pandemic's effects first took hold, business restrictions and shutdowns drove Montgomery County's unemployment rate to a record high of 8.6% in May 2020, well above the rate of 2.8% of just three months earlier. A year later, Montgomery County's May 2021 unemployment rate fell by three percentage points to 5.6%, a level below the national and state rates. Comparatively, the state's unemployment rate for the same period was 9.3% in May 2020 and 6.1% in May 2021.

Prior to the COVID-19 pandemic, both Montgomery County and the Greater Washington D.C. metropolitan region were experiencing historic low unemployment rates. Unemployment in most jurisdictions in the area had fallen below 4%. Montgomery County's unemployment rate hovered at or below 3% for several months prior to the pandemic.

Unemployment in the region, however, started to spike in April 2020 due to the onset of the pandemic. Though the region's unemployment in most local jurisdictions never reached the level of national averages, these local rates were still the highest ever recorded. In the months following April/May 2020, Montgomery County experienced a gradual recovery that trends closely with the regional average.



Source: U.S. Bureau of Labor Statistics

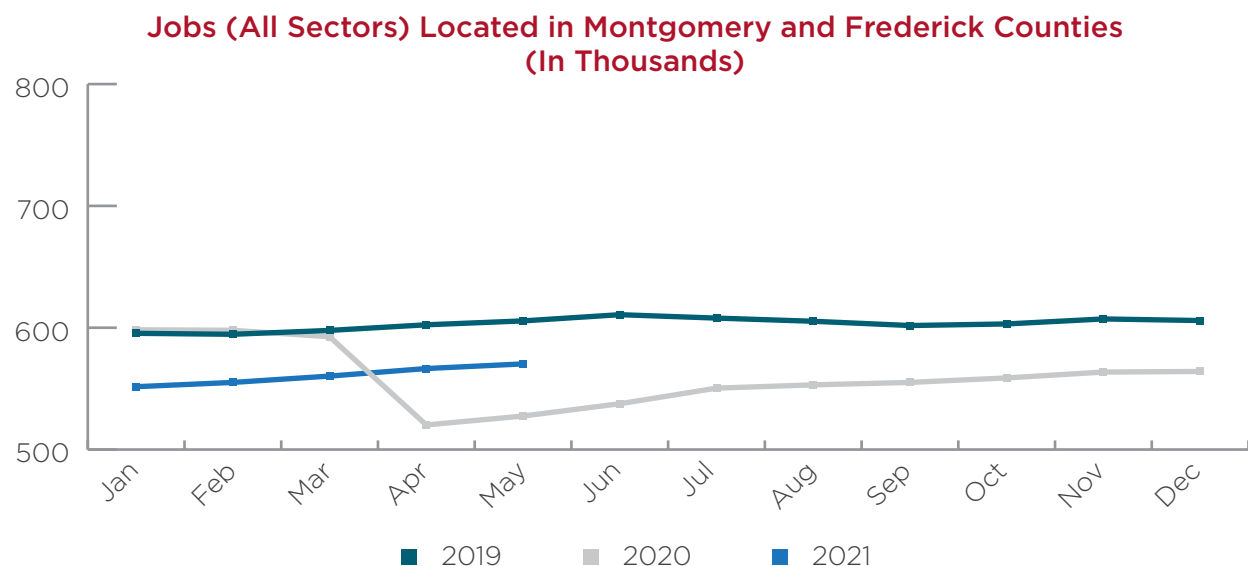


AFFECTED JOBS

The impact of the pandemic has been felt in four business sectors of particular importance to Montgomery County; Food Services jobs and Retail jobs were particularly hard hit and are still facing an uncertain recovery, Professional/Scientific jobs are the major source of local employment and has recovered, and Healthcare jobs are trending toward a recovery.

Bureau of Labor Statistics (BLS) data show that Montgomery and Frederick Counties had a net loss of over 70,000 jobs from March 2020 to April 2020. Since then, a modest recovery took hold, and in the Spring of 2021, there was a net gain of over 40,000 jobs.

The Washington MSA has four divisions: Washington D.C.; Montgomery/Frederick Counties; Prince George's/Charles/Calvert Counties; and Northern Virginia which includes nine counties and six independent cities. Since the job data are recorded by "divisions," the jobs number, for example, refers to a combination of Montgomery and Frederick Counties. Using Montgomery/Frederick data can provide insight into patterns in Montgomery County prior to the availability of county-specific data.



Source: U.S. Bureau of Labor Statistics

An analysis of selected affected jobs in Montgomery County, broken down by industry in the Montgomery/Frederick Washington metropolitan division based on data from the North American Industry Classification System (NAICS) sector codes, is presented in Appendix IV. The following paragraphs summarize the impact of the pandemic on employment in four business sectors of particular importance to Montgomery County.

The Professional, Scientific and Technical category (NAICS Code 54) is the largest single sector in the Montgomery County economy in terms of employment. It is also a major source of high-wage jobs, including such categories as law, research and development, government contracting, architecture, and engineering. The sector suffered major losses during the early phases of the pandemic but employment has since recovered and now exceeds pre-pandemic levels.



Healthcare and Social Assistance (NAICS Code 62), which includes hospitals, medical offices, diagnostic laboratories, home-healthcare firms, assisted living facilities, and daycare centers, has been Montgomery County's fastest growing sector in terms of employment. It too suffered substantial losses during the pandemic but is currently undergoing a recovery—at a relatively slow rate.

Montgomery County's third largest private sector category, **Retail (NAICS Code 44-45)**, includes a full range of retail and grocery stores, department stores, automobile dealerships, specialty stores, gas stations, and convenience stores. Despite early predictions, the sector has recovered much of the loss it suffered during the pandemic. Concern remains, however, over the potential lasting effect of consumers shifting to online shopping during the pandemic.

The Accommodation and Food Services Sector (NAICS Code 72) has been the sector most impacted by COVID-19, both locally and nationally. The sector includes hotels/motels (excluding headquarters), caterers, coffee shops, and bars. It lost over one-third of its jobs from March to April 2020 as government health restrictions were imposed and has since seen only a modest recovery. Future uncertainties include the impact of changing dining and travel practices—particularly the reduction of business travel and the growth of stay-at-home work.

C. Peer Comparisons: Economic Competitiveness

The following section compares Montgomery County to other counties using several indicators relating to economic well-being. Each indicator considers the following three jurisdictions:

- **Comparisons within the State of Maryland:** These sections compare Montgomery County to the four largest counties in Maryland other than the County: Anne Arundel County, Baltimore City, Baltimore County, and Prince George's County.
- **Comparisons within the Washington Metropolitan Statistical Area (MSA):** These sections compare Montgomery County to other counties in the Washington MSA. The County is measured against Washington D.C.; Fairfax County, VA; and Prince George's County, MD. Depending on the particular indicator explored, Prince William County, VA (fifth largest for population and retail square footage) or Arlington County, VA (fifth largest for jobs and office square footage) is also included.
- **Comparisons within Select National Competitors:** These sections compare Montgomery County to select competitor counties around the country. The selected peer jurisdictions have similar high-technology strengths and an innovation economy with a comparable urban/suburban character. *The following counties were selected for comparison:*
 - California: Santa Clara County, San Mateo County, and San Diego County
 - North Carolina: Wake County
 - Massachusetts: Middlesex County

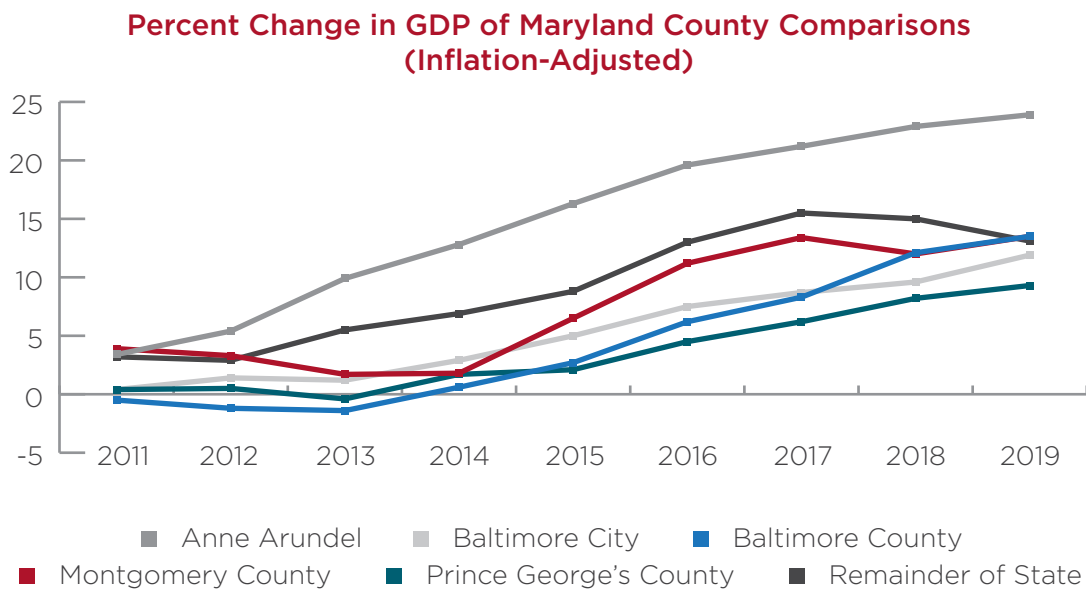


GDP TRENDLINES

Montgomery County's GDP is the largest of all 24 Maryland jurisdictions but its GDP growth rate was lower than all of the five national competitor counties.

Comparisons Within Maryland

- Montgomery County's Gross Domestic Product (GDP) was \$95.6 billion in 2019. This was the largest GDP of any Maryland jurisdiction.
 - Montgomery County's GDP grew about 12.3% from 2010 to 2019 (pre-COVID-19), adjusted for inflation. This growth was comparable to Baltimore City and Baltimore County. It was also greater than Prince George's County. The rest of Maryland's GDP grew by 15.9% during the same time period. Anne Arundel County's GDP growth significantly surpassed the remaining Maryland comparison counties. With a GDP a little more than half the size of Montgomery County, Anne Arundel's GDP growth rate at 23.9% was more than double that of Montgomery County.



Source: U.S. Bureau of Economic Analysis



Comparisons within the Washington MSA

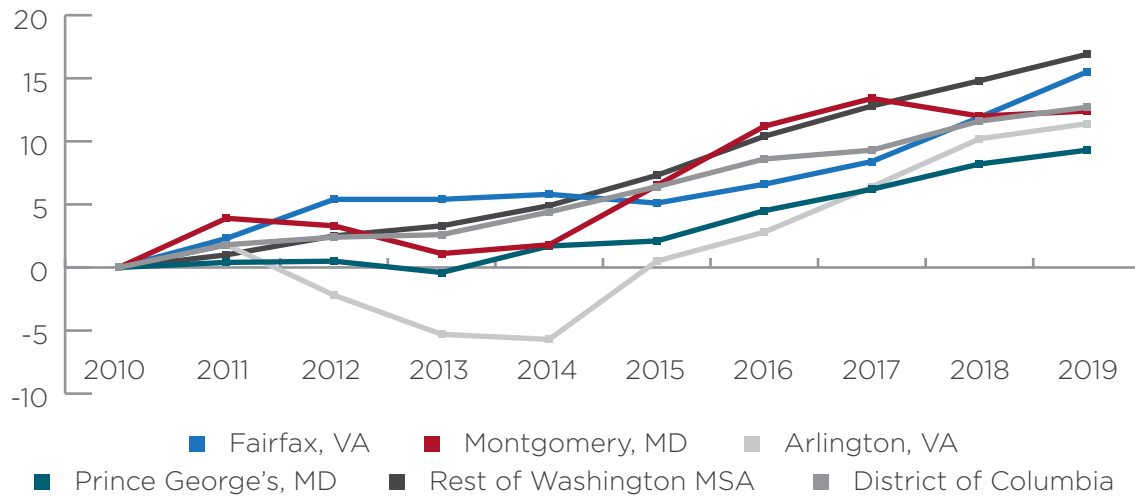
- Montgomery County's GDP in 2019 was the third largest in the Greater Washington metropolitan region after Washington D.C. and Fairfax County, VA (including Fairfax City and Falls Church City).

GDP Comparisons and Percent of MSA Total

COUNTY IN WASHINGTON MSA	GDP IN 2019 (IN \$1,000S)	PERCENT OF MSA TOTAL	PERCENT CHANGE FROM 2010 TO 2019 (CURRENT DOLLAR)
Washington D.C.	\$143,389,328	25.6%	35.1%
Fairfax, VA	\$122,736,939	22.0%	31.6%
Montgomery, MD	\$95,585,447	17.1%	30.3%
Prince George's, MD	\$48,596,251	8.7%	30.1%
Arlington, VA	\$36,838,621	6.6%	30.1%
Rest of Washington MSA	\$111,915,372	20.0%	37.4%

Source: U.S. Bureau of Economic Analysis, 2019

Percent Change of GDP in Washington MSA Counties Comparisons (Inflation-Adjusted)



Source: U.S. Bureau of Economic Analysis

Real GDP is in thousands of chained 2012 dollars. Industry detail is based on the 2012 North American Industry Classification System (NAICS).

* Virginia combination areas consist of one or two independent cities with 1980 populations of less than 100,000 combined with an adjacent county. The county name appears first, followed by the city name(s). Separate estimates for the jurisdictions making up the combination area are not available. Bedford County, VA includes the independent city of Bedford for all years. Metropolitan Areas are defined (geographically delineated) by the Office of Management and Budget (OMB) bulletin no. 20-01 issued March 6, 2020.

* For the All industry total and Government and government enterprises, the difference between the United States and Metropolitan and Nonmetropolitan portions reflects overseas activity, economic activity taking place outside the borders of the United States by the military and associated federal civilian support staff. Last updated: December 9, 2020—new statistics for 2019, revised statistics for 2001-2018.



Comparisons within Select Competitor Counties Nationally

- Montgomery County's GDP in 2019 was the fifth largest compared to the six competitor counties. Every jurisdiction had a larger GDP than Montgomery County except for Wake County, NC.

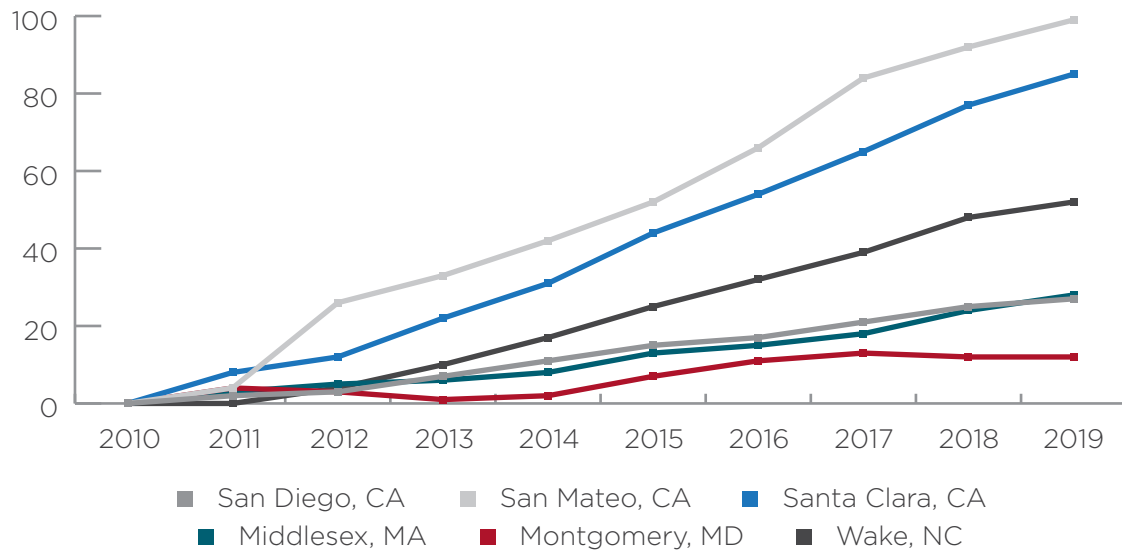
Select Competitor County GDP Comparisons

SELECT COMPETITOR COUNTY	GDP IN 2019 (IN 1,000S)	PERCENT CHANGE FROM 2010 TO 2019 (CHAINED 2012 \$)	COUNTY POPULATION (2020 CENSUS)
Santa Clara, CA	\$331,938,134	85.5%	1,927,852
San Diego, CA	\$253,117,792	27.4%	3,338,330
Middlesex, MA	\$180,236,765	28.0%	1,611,699
San Mateo, CA	\$134,541,113	99.2%	766,573
Montgomery, MD	\$95,585,447	12.4%	1,508,868
Wake, NC	\$84,686,112	51.7%	1,111,761

Source: U.S. Bureau of Economic Analysis, 2019

- All the competitor counties experienced GDP growth that not only surpassed Montgomery County's 12.3% growth rate but also that of the Washington MSA and Maryland comparison counties. San Diego, CA and Middlesex, MA had GDP growth of about 28% from 2010 to 2019. The Washington MSA and Maryland competitor counties had growth of under 20% except for Anne Arundel County, MD, which was 23%. Wake County, NC had growth of 53% and the San Francisco Bay Area counties of Santa Clara and San Mateo produced GDP growth of 85% and 99%, respectively, during the above period.

Percent Change in GDP of Select National Competitor County Comparisons (Inflation-Adjusted)



Source: U.S. Bureau of Economic Analysis, 2019



JOB GROWTH TRENDLINES

Montgomery County had the slowest job growth of the five largest Maryland jurisdictions by 2019 and all the selected national competitor counties had a higher percentage of job growth.

Comparisons within Maryland

In 2019, there were 472,495 jobs in Montgomery County. This was the largest employment in all Maryland jurisdictions.

Maryland Counties Jobs Comparison

COUNTIES IN MARYLAND	JOB IN 2019	PERCENT OF STATE TOTAL
Montgomery	472,495	17.5%
Baltimore County	380,770	14.1%
Baltimore City	344,378	13.0%
Prince George's	322,168	11.8%
Anne Arundel	274,972	10.2%
All Other Maryland Counties	903,330	33.5%

Source: U.S. Bureau of Labor Statistics, 2019

From 2010 to 2019, the percentage increase in Montgomery County jobs was higher than Baltimore City and Baltimore County but lower than Anne Arundel County and Prince George's County. Anne Arundel added the largest number of jobs, especially at the beginning of the decade. Prince George's number of jobs grew by a larger percent but added fewer jobs than Montgomery County.

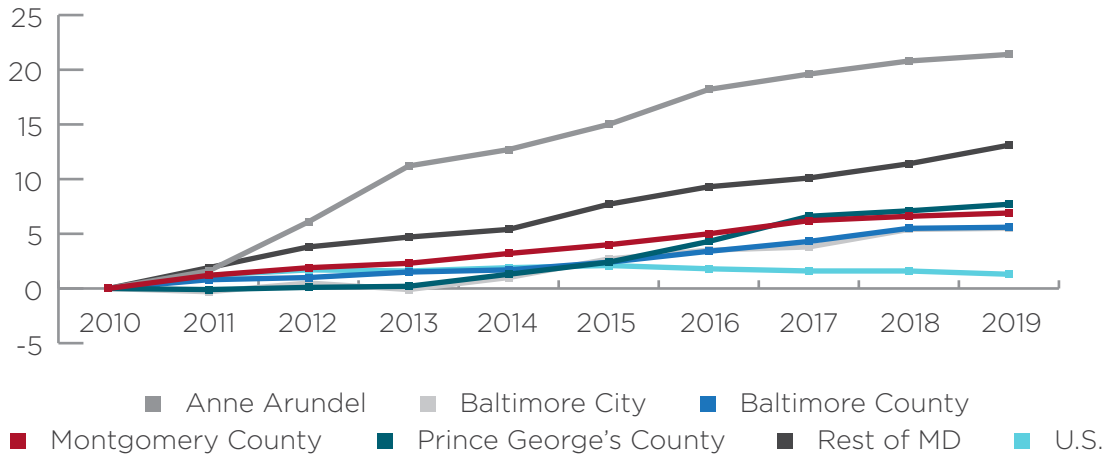
Maryland Counties Job Growth and 2010 - 2019 Comparisons

COUNTIES IN MARYLAND	JOB IN 2010	JOB IN 2019	CHANGE FROM 2010 TO 2019	PERCENT CHANGE FROM 2010 TO 2019
Montgomery	441,887	472,495	+30,608	+6.9%
Baltimore County	360,873	380,770	+19,897	+5.5%
Baltimore City	326,186	344,378	+18,192	+5.6%
Prince George's	299,093	322,168	+23,075	+7.7%
Anne Arundel	226,509	274,972	+48,463	+21.4%
All Other Maryland Counties	798,649	903,330	+104,681	+13.1%

Source: U.S. Bureau of Labor Statistics, 2019



Percent Change of Jobs in Maryland by County Comparisons



Source: U.S. Bureau of Labor Statistics, 2019

Comparisons within the Washington MSA

Montgomery County had the third largest job concentration in the Washington MSA after Washington D.C. and Fairfax County, VA in 2019.

Regional Job Growth Comparison

COUNTIES IN WASHINGTON MSA	JOB IN 2019	PERCENT OF MSA TOTAL
Washington D.C.	776,041	24.0%
Fairfax, VA	622,226	19.8%
Montgomery, MD	472,495	14.8%
Prince George's, MD	322,168	10.0%
Arlington, VA	182,197	5.8%
All Other MSA Counties	805,818	25.5%

Source: U.S. Bureau of Labor Statistics, 2019

Montgomery County employment trended in the middle of the Washington MSA at the start of the decade, then displayed the slowest job growth of the five largest counties later in the decade. While Arlington County and Fairfax County had negative job growth in 2013 and 2014, these jurisdictions became the regional leaders in year-over-year job growth by the end of the decade.

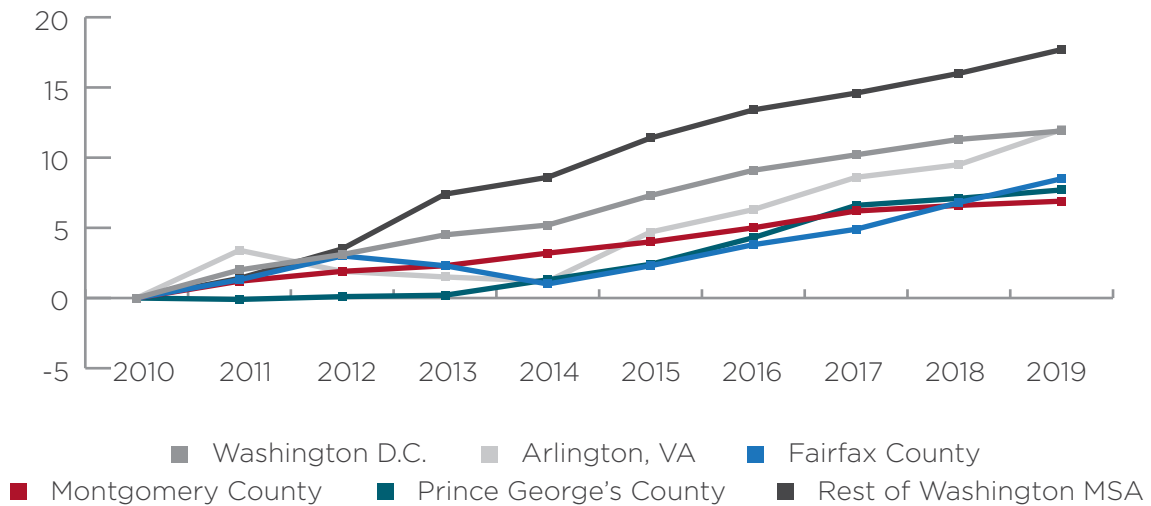
Regional Job Growth Comparisons and Shifts

COUNTIES IN WASHINGTON MSA	JOB IN 2010	JOB IN 2019	CHANGE FROM 2010 TO 2019	PERCENT CHANGE FROM 2010 TO 2019
Washington D.C.	693,274	776,041	+82,767	+11.9%
Fairfax, VA	573,551	622,226	+48,675	+8.5%
Montgomery, MD	441,887	472,495	+30,608	+6.9%
Prince George's, MD	299,093	322,168	+23,075	+7.7%
Arlington, VA	162,679	182,197	+19,518	+12.0%
All Other MSA Counties	684,554	805,818	+121,264	+17.7%

Source: U.S. Bureau of Labor Statistics, 2019



Percent Change of Jobs in the Washington MSA Counties Comparison (MSA by County Year-on-Year)



Source: U.S. Bureau of Labor Statistics, 2019

Comparisons within Select Competitor Counties Nationally

Of the national competitor counties, only San Mateo County, CA had fewer jobs than Montgomery County in 2019.

Comparisons to Select National Competitor Counties

SELECT NATIONAL COUNTIES	JOB IN 2019
San Diego, CA	1,488,281
Santa Clara, CA	1,119,639
Middlesex, MA	940,312
Wake, NC	575,410
Montgomery, MD	472,495
San Mateo, CA	415,999

Source: U.S. Bureau of Labor Statistics, 2019

All the selected national competitor counties had a higher percentage of job growth from 2010 to 2019 than Montgomery County. San Mateo, Santa Clara, and Wake counties had an increase in jobs of more than 30%. This is higher than Anne Arundel County at 21.4%, the highest of the largest counties in Maryland and the Washington MSA.

In terms of the numbers of jobs added, the national competitor counties added more than triple the number of jobs added by Montgomery County. Only Washington D.C. in the comparison group had job growth numbers greater than half the number of jobs generated by San Mateo County, CA, which was the national competitor county that added the fewest jobs.

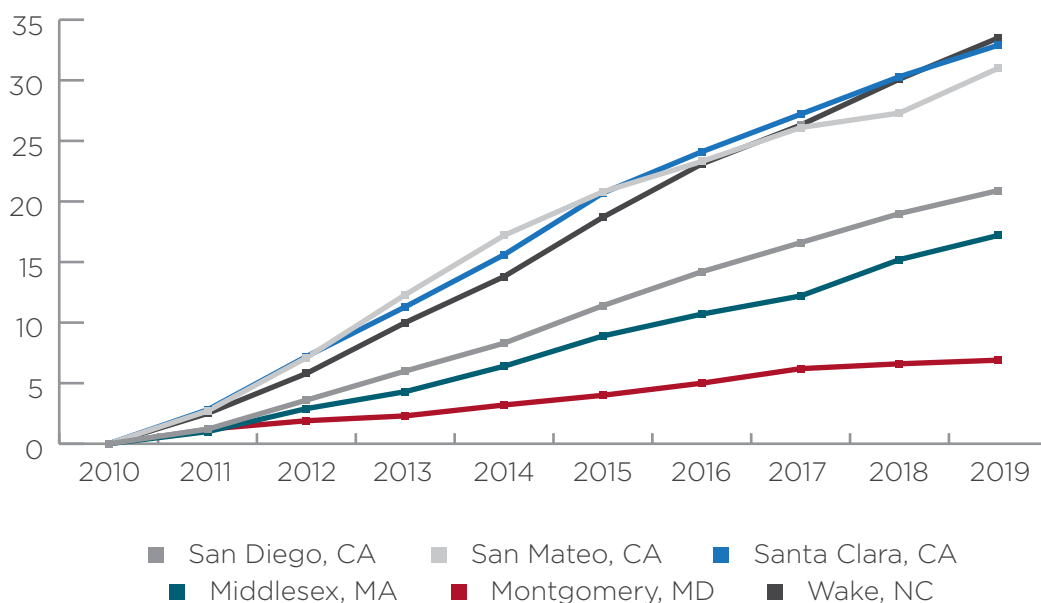


Comparisons to Select National Competitor Counties

SELECT NATIONAL COMPETITOR COUNTY	JOBS IN 2010	JOBS IN 2019	CHANGE FROM 2010 TO 2019	PERCENT CHANGE FROM 2010 TO 2019
San Diego, CA	1,230,694	1,488,281	+ 257,587	+20.9%
Santa Clara, CA	842,581	1,119,639	+ 277,058	+ 32.9%
Middlesex, MA	802,468	940,312	+ 137,844	+ 17.2%
Wake, NC	430,935	575,410	+ 144,475	+33.5%
Montgomery, MD	441,887	472,495	+ 30,608	+6.9%
San Mateo, CA	317,576	415,999	+ 98,423	+31.0%

Source: U.S. Bureau of Labor Statistics, 2019

Percent Change in Jobs



Source: U.S. Bureau of Labor Statistics, 2019

UNEMPLOYMENT TRENDLINES

Since hitting a record high during the pandemic, Montgomery County's unemployment has fallen by 3% but is still higher than some of the regional counties and four of the five selected national competitor counties.

Comparisons within Maryland

In April 2021, a year after the COVID-19 pandemic began, Montgomery County's unemployment rate had fallen to 5.6%. This is lower than the unemployment rates of Prince George's County, Baltimore County, Baltimore City, and the State of Maryland. This rate though is higher than that of Anne Arundel County.

The unemployment rate refers to the percent of labor force that is not currently employed but is actively seeking employment. These numbers reflect where people live rather than where their job is located. It does not include those who have abandoned efforts to seek work—a number that can be significant in many cases, as is reflected in national statistics.



Unemployment and Labor Force Comparisons for Maryland Counties

MARYLAND COUNTIES	UNEMPLOYMENT RATE APRIL 2021	LABOR FORCE APRIL 2021
Maryland, statewide	5.8%	3,111,886
Montgomery	5.6%	538,286
Prince George's	8.0%	491,531
Baltimore County	5.7%	438,665
Anne Arundel	4.7%	305,348
Baltimore City	7.6%	276,142

Source: U.S. Bureau of Labor Statistics, 2019

Comparisons within the Washington MSA

The Montgomery County April 2021 unemployment rate was lower than the unemployment rates of Washington D.C. and Prince George's County, but is higher than Fairfax County, Prince William County, and the overall average Washington MSA unemployment rate.

Unemployment and Labor Force Regional Comparisons for April 2021

WASHINGTON MSA COUNTIES	UNEMPLOYMENT RATE APRIL 2021	LABOR FORCE APRIL 2021
Washington MSA region	5.0%	3,333,092
Fairfax, VA	3.5%	612,385
Montgomery, MD	5.6%	538,286
Prince George's, MD	8.0%	491,531
Washington D.C.	6.6%	401,028
Prince William, VA	4.1%	238,872

Source: U.S. Bureau of Labor Statistics, 2019

Comparisons within Select Competitor Counties Nationally

The April 2021 Montgomery County unemployment rate was lower than the unemployment rates of San Diego County, CA but higher than the other four selected national competitor counties.

SELECT NATIONAL COMPETITOR COUNTIES	UNEMPLOYMENT RATE	LABOR FORCE
San Diego, CA	6.7%	1,515,125
Santa Clara, CA	4.7%	1,002,906
Middlesex, MA	4.7%	897,063
Wake, NC	3.6%	593,051
Montgomery, MD	5.6%	538,286
San Mateo, CA	4.8%	423,410

Source: U.S. Bureau of Labor Statistics, 2019



EDUCATIONAL ATTAINMENT TRENDLINES

Montgomery County ranks quite well among all counties across the country in educational attainment with the highest percentage among the selected national competitor counties.

Comparisons within Maryland

Montgomery County has a much higher percentage of adults ages 25 and older who possess an advanced degree or bachelor's degree than the rest of the largest Maryland jurisdictions.

Educational Attainment Comparisons in Maryland Counties

COUNTIES WITH LARGEST POPULATION IN MD	PERCENT OF ADULTS AGED 25 AND OLDER WITH ADVANCED DEGREE	PERCENT OF ADULTS AGED 25 AND OLDER WITH BACHELORS OR HIGHER
Montgomery, MD	31.4%	57.8%
Prince George's, MD	14.4%	33.6%
Baltimore County, MD	17.5%	40.8%
Baltimore City, MD	15.7%	33.3%
Anne Arundel, MD	19.2%	43.9%

Source: U.S. Bureau of Economic Analysis

Comparisons within the Washington MSA

In the Washington MSA, Washington D.C. is the only large jurisdiction with a higher percentage than Montgomery County of adults 25-years or older possessing an advanced degree.

Educational Attainment Comparisons in Regional Counties

COUNTIES WITH LARGEST POPULATION IN WASHINGTON MSA	PERCENT OF ADULTS AGED 25 AND OLDER WITH ADVANCED DEGREE	PERCENT OF ADULTS AGED 25 AND OLDER WITH BACHELOR'S OR HIGHER
Fairfax, VA	30.9%	62.4%
Montgomery, MD	31.4%	57.8%
Prince George's, MD	14.4%	33.6%
Washington, D.C.	34.0%	59.7%
Prince William, VA	17.4%	43.0%

Source: U.S. Bureau of Economic Analysis

Comparisons within Select Competitor Counties Nationally

Montgomery County ranks among the top ten counties nationally for the percentage of advanced degrees of adults 25 and older possessing an advanced degree. Montgomery County has the highest percentage among the selected national competitor counties.



Educational Attainment in Select National Comparisons

NATIONAL COMPARISON COUNTIES WITH LARGEST POPULATION	PERCENT OF ADULTS AGED 25 AND OLDER WITH ADVANCED DEGREE	PERCENT OF ADULTS AGED 25 AND OLDER WITH BACHELOR'S OR HIGHER
Montgomery, MD	31.4%	57.8%
Middlesex, MA	29.0%	57.2%
Santa Clara, CA	25.7%	53.7%
San Mateo, CA	23.6%	52.3%
Wake, NC	21.2%	54.1%
San Diego, CA	15.4%	39.9%

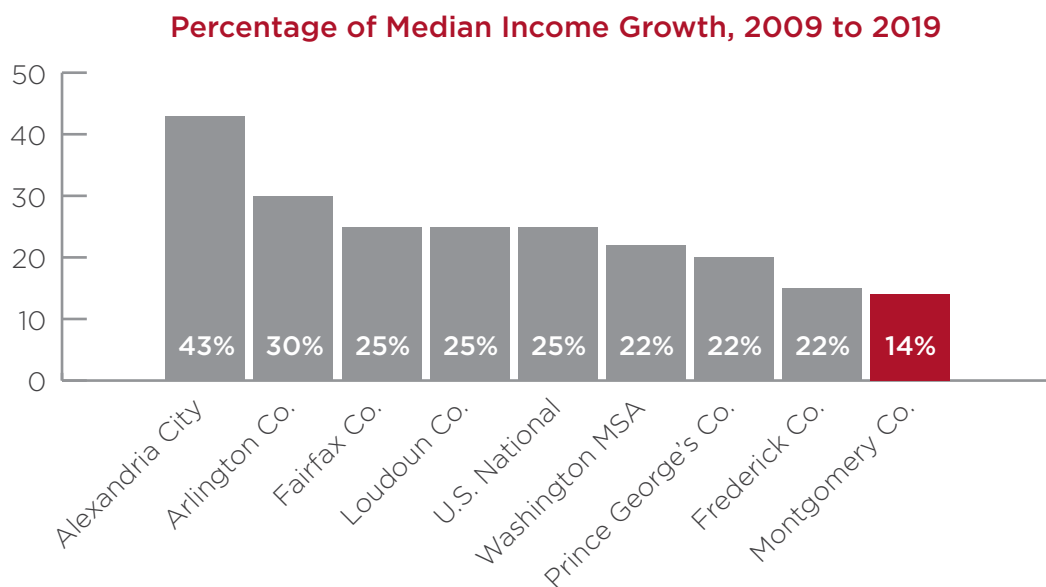
Source: U.S. Bureau of Economic Analysis

MEDIAN HOUSEHOLD INCOME TRENDLINES

Although Montgomery County continues to rank in the top 1% of counties in the nation for median income, growth has stagnated.

Regional and National Comparisons

Montgomery County's growth in median household income has lagged both the regional and national averages.



Source: Reach Advisors, 2020



COMMUTING (WHERE WORKERS LIVE) TRENDLINES

Montgomery County has a low percentage of jobs held by non-residents compared to other Maryland jurisdictions and among the national competitor counties.

Comparisons within Maryland

Approximately one-third of the people who work in Montgomery County live outside of Montgomery County. This is one of the lowest percentages of jobs held by non-residents (those from other jurisdictions) of any county in Maryland. The low percentage suggests both that Montgomery County has fewer non-residents commuting to work in the County than its state peers and that Montgomery County residents tend to work where they live.

Percentage of Jobs Held by Residents of Select Maryland Jurisdictions

COUNTIES WITH LARGEST POPULATION IN MARYLAND	PERCENT OF JOBS HELD BY RESIDENTS OF OTHER JURISDICTIONS
Baltimore City, MD	53.4%
Prince George's, MD	45.8%
Baltimore County, MD	45.4%
Anne Arundel, MD	42.2%
Montgomery, MD	37.5%

Source: U.S. Bureau of Economic Analysis

Comparisons within the Washington MSA

Montgomery County's percentage of jobs held by residents of other jurisdictions is lowest of any county in the Washington MSA.

Percentage of Jobs Held by Residents of Other Regional Jurisdictions

COUNTIES WITH LARGEST POPULATION IN WASHINGTON MSA	PERCENT OF JOBS HELD BY RESIDENTS OF OTHER JURISDICTIONS
Arlington, VA	73.5%
Washington D.C.	64.3%
Fairfax, VA	52.1%
Prince George's, MD	45.8%
Montgomery, MD	37.5%

Source: U.S. Bureau of Economic Analysis

Comparisons within Select Competitor Counties Nationally

Just over a third of the people who work in Montgomery County live outside the County. Among national competitors, San Diego County, CA is the only county with a lower percentage.

It should be noted, however, that San Diego is a significant outlier because San Diego's MSA is fully inside one jurisdiction, San Diego County, but also includes San Diego City. Additionally, San Diego is one of the larger MSAs that is not part of a Combined Statistical Area (CSA). (A CSA is created when two MSAs grow so close together that commuting between them is considered common—for example, the Washington-Baltimore CSA is one of the largest CSAs in the country). Since San Diego County is a self-contained MSA and is not part of a CSA, it is to be expected that commuting from other counties would be low.



Percentage of Jobs Held by Residents of Select National Jurisdictions

NATIONAL COMPARISON COUNTIES WITH LARGEST POPULATION	PERCENT OF JOBS HELD BY RESIDENTS OF OTHER JURISDICTIONS
San Mateo, CA	63.9%
Middlesex, MA	51.3%
Wake, NC	47.5%
Santa Clara, CA	40.2%
Montgomery, MD	37.5%
San Diego, CA	18.8%

Source: U.S. Bureau of Economic Analysis

COMMUTING (WHERE RESIDENTS WORK) TRENDLINES

Most Montgomery County residents live and work without a need to commute out of the County. Montgomery County has a comparatively higher percentage of those who live and work in the same jurisdiction regionally and nationally.

Comparisons within Maryland

More than half of Montgomery County residents (59.3%) work in jobs in the County and don't commute outbound to their workplace in another jurisdiction. Of the largest jurisdictions in Maryland, only Baltimore City has a higher percentage of residents who live and work in the same jurisdiction.

Maryland Select Comparison of Workforce that Live and Work in the Same Jurisdiction

COUNTIES WITH LARGEST POPULATION IN MARYLAND	PERCENT OF WORKFORCE THAT LIVE AND WORK IN SAME JURISDICTION
Baltimore City, MD	61.2%
Montgomery, MD	59.3%
Anne Arundel, MD	56.0%
Baltimore County, MD	51.3%
Prince George's, MD	40.1%

Source: U.S. Bureau of Economic Analysis

Comparisons within the Washington MSA

In the Washington MSA, only Washington D.C. has a higher percentage of residents who live and work in the same jurisdiction.



Regional Select Comparison of Workforce that Live and Work in the Same Jurisdiction

COUNTIES WITH LARGEST POPULATION IN WASHINGTON MSA	PERCENT OF WORKFORCE THAT LIVE AND WORK IN SAME JURISDICTION
Washington D.C.	74.5%
Montgomery, MD	59.3%
Fairfax, VA	53.7%
Prince George's, MD	40.1%
Prince William, VA	33.6%

Source: U.S. Bureau of Economic Analysis

Comparisons within Select Competitor Counties Nationally

The percentage of Montgomery County's residents who live and work in the County is lower than San Diego County, Santa Clara County, and Wake County, but higher than Middlesex County and San Mateo County.

National Select Comparison of Workforce that Live and Work in the Same Jurisdiction

NATIONAL COMPETITOR COUNTIES	PERCENT OF WORKFORCE THAT LIVE AND WORK IN SAME JURISDICTION
San Diego, CA	80.3%
Santa Clara, CA	68.8%
Wake, NC	64.8%
Montgomery, MD	59.3%
Middlesex, MA	54.9%
San Mateo, CA	38.9%

Source: U.S. Bureau of Economic Analysis

AVERAGE COMMUTE TIMES

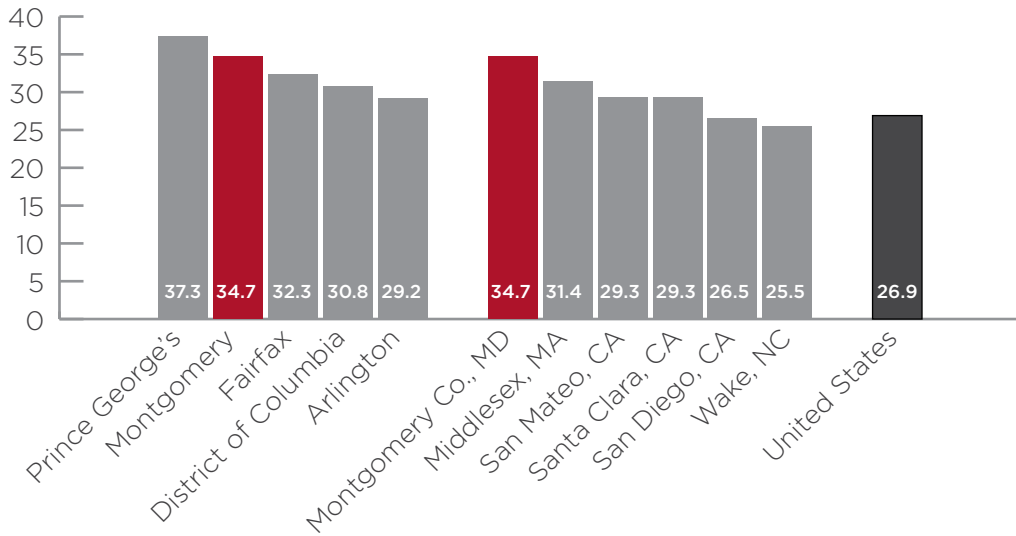
Long commuting times can act as a deterrent to business attraction and expansion opportunities, especially to those needing to recruit a talented workforce that has other employment options.

The median one-way commute to work is 35 minutes in Montgomery County. This is higher than the surrounding jurisdictions including the District of Columbia (31 minutes), the Virginia jurisdictions of Arlington (29 minutes) and Fairfax (32 minutes), but less than Prince George's County (37 minutes).

Similarly, the County's commute times are higher than major counties in California (San Mateo and Santa Clara at 29 minutes) and San Diego (27 minutes). In addition, Montgomery County's commute times are higher than Middlesex County, MA (31 minutes) and Wake County, NC (26 minutes.)



Mean One-Way Travel Time to Work, 2019



Source: U.S. Census, 2019

COST OF LIVING

The cost of living is the amount of money needed to cover basic expenses; how expensive a location is for residents can be a factor that affects talent recruitment and business attraction.

While the overall cost-of-living index in Montgomery County index is 39% above the U.S. average, this is lower than in the District of Columbia (54% above the U.S.), and in the Virginia jurisdictions of Arlington (69% above the U.S. average) and Fairfax (52% above).

The County also has substantially lower indices than major counties in California (San Mateo, 171% above average), and Santa Clara (142% above average). Montgomery's index is also lower than Middlesex County, MA (46% above the U.S. average).



Cost of Living Index Compared to U.S. (U.S. = 100)

LOCATION	OVERALL	HOUSING
Arlington	168.7	294.8
District of Columbia	154.3	244.8
Fairfax	152.0	238.4
Montgomery	139.4	195.0
Prince George's	121.3	128.9

LOCATION	OVERALL	HOUSING
San Mateo, CA	270.6	610.2
Santa Clara, CA	241.5	519.2
San Diego, CA	154.4	259.6
Middlesex, MA	145.7	231.7
Montgomery, MD	139.4	195.0
Wake, NC	105.6	124.8

Source: BestPlaces.net

According to BestPlaces.net, the District of Columbia, Arlington, Alexandria, Fairfax and Loudoun counties have higher overall and housing indices than Montgomery.

OFFICE MARKET TRENDLINES

Montgomery County compares competitively in Maryland, regionally in the Greater Washington area, and nationally in commercial office inventory and has a high vacancy rate.

Comparisons within Maryland

Montgomery County has the largest office space of any county in Maryland at 75.4 million square feet. Of the large office markets in Maryland, Montgomery County also has the highest current vacancy rates.



Maryland Counties Select Comparison of Office Inventory and Vacancy Rates

COUNTIES IN MD WITH MOST OFFICE	TOTAL OFFICE INVENTORY (2021 Q2)	VACANCY RATE (2021 Q2)
Montgomery	75.4 M	15.5%
Baltimore City	54.2 M	11.5%
Baltimore County	43.5 M	10.1%
Prince George's	27.8 M	13.1%
Anne Arundel	23.5 M	9.4%

Source: CoStar

Comparisons within the Washington MSA

In the Washington MSA region, only Washington D.C. and Fairfax County, VA have more office inventory than Montgomery County. The County's vacancy rate is lower than Fairfax County and Arlington County but higher than Washington D.C. and Prince George's County.

Regional Select Comparison of Office Inventory and Vacancy Rates 2021 Q2

COUNTIES IN WASHINGTON MSA WITH MOST OFFICE	TOTAL OFFICE INVENTORY (2021 Q2)	VACANCY RATE (2021 Q2)
Washington D.C.	162.0 M	14.1%
Fairfax, VA	118.0 M	17.1%
Montgomery, MD	75.4 M	15.5%
Arlington, VA	42.4 M	21.3%
Prince George's, MD	27.8 M	13.1%

Source: CoStar

Comparisons within Select Competitor Counties Nationally

Among national competitor counties, Montgomery County places behind Middlesex County, Santa Clara County, and San Diego County for office space but has more than Wake County and San Mateo County. Montgomery County's office vacancy rate is the highest of these competitor counties.

National Select Comparison of Office Inventory and Vacancy Rates 2021 Q2

NATIONAL COMPARISON COUNTIES WITH MOST OFFICE	TOTAL OFFICE INVENTORY (2021 Q2)	VACANCY RATE (2021 Q2)
Middlesex, MA	142.0 M	10.1%
Santa Clara, CA	134.0 M	12.3%
San Diego, CA	119.0 M	12.1%
Montgomery, MD	75.4 M	15.5%
Wake, NC	73.1 M	8.2%
San Mateo, CA	57.2 M	10.3%

Source: CoStar



RETAIL MARKETS TRENDLINES

Montgomery County's retail space is not as large as other Maryland and regional peers and is significantly less in comparison with other national competitor counties.

Comparisons within Maryland

Montgomery County has the third largest retail square footage space in Maryland after Baltimore and Prince George's Counties. Of the large retail markets in Maryland, Montgomery County's vacancy rate is higher than Prince George's County and Baltimore City but lower than Baltimore County and Anne Arundel County.

Maryland Select Counties Comparison of Retail Square Footage and Vacancy Rates 2021 Q2

COUNTIES IN MD WITH MOST RETAIL	TOTAL RETAIL SQUARE FOOTAGE (2021 Q2)	VACANCY RATE (2021 Q2)
Baltimore County, MD	46.8 M	6.2%
Prince George's, MD	40.0 M	4.8%
Montgomery, MD	37.0 M	5.2%
Baltimore City, MD	31.6 M	3.7%
Anne Arundel, MD	31.2 M	6.5%

Source: CoStar

Comparisons within the Washington MSA

In the Washington MSA region, Montgomery County also has the third largest retail square footage space after Fairfax and Prince George's Counties. Montgomery County's vacancy rate is the highest of the five largest retail markets in the Washington MSA except for Washington D.C.

Regional Select Counties Comparison of Retail Square Footage and Vacancy Rates 2021 Q2

COUNTIES IN WASHINGTON WITH MOST RETAIL	TOTAL RETAIL SQUARE FOOTAGE (2021 Q2)	VACANCY RATE (2021 Q2)
Fairfax, VA	45.1 M	3.4%
Prince George's, MD	40.0 M	4.8%
Montgomery, MD	37.0 M	5.2%
Washington D.C.	24.0 M	6.5%
Prince William, VA	21.9 M	4.3%

Source: CoStar



Comparisons within Select Competitor Counties Nationally

National competitor counties had significantly more retail square footage than Montgomery County except for San Mateo County. Only San Diego County and San Mateo County have higher vacancy rates.

National Select Counties Comparison of Retail Square Footage and Vacancy Rates 2021 Q2

NATIONAL COMPARISON COUNTIES WITH MOST RETAIL	TOTAL RETAIL SQUARE FOOTAGE (2021 Q2)	VACANCY RATE (2021 Q2)
San Diego, CA	139.0 M	5.4%
Santa Clara, CA	78.5 M	4.4%
Middlesex, MA	72.8 M	3.3%
Wake, NC	64.6 M	3.2%
Montgomery, MD	37.0 M	5.2%
San Mateo, CA	31.5 M	5.4%

Source: CoStar



CHAPTER 2: CONNECTING THE DOTS: CHALLENGES AND SOLUTIONS

A. The Challenges

In addition, to the immediate need to recover from the COVID-19 pandemic, Montgomery County faces entrenched tensions that impact its economic competitiveness. Obstacles that warrant attention include relatively flat economic expansion, stagnant job growth, administrative barriers to new startups and entrepreneurship, an unfavorably perceived business climate, a high cost of living, and growing disparities in economic success between segments and geographies of the County.

Montgomery County also faces current and future threats that include federal budget uncertainty, an aging workforce, a declining middle skill/middle income job base, contraction of federal leases of private commercial space, intense regional and national competition, high taxes (state plus county), traffic congestion across the region that inhibits economic development, and post-pandemic remote work away from local commercial office clusters that will further impact vacancy rates.

LAGGING JOBS GROWTH

Data show that the rate of job and new business establishment growth in Montgomery County has slowed significantly over the past 15 years compared to other parts of the Washington region.

Moreover, growth has been disproportionately in lower-wage jobs, while losses have been disproportionately in higher-wage jobs.

Majority of Job Growth: Lower-Paid Jobs
Majority of Job Loss: Higher-Paid Jobs

SECTOR	AVERAGE WAGES 2019 (MONTGOMERY COUNTY)	PERCENTAGE OF ALL JOBS GAINED/LOST 2014 TO 2019
Professional, Scientific, and Technical Services	\$107,940	26%
Health Care and Social Assistance	\$58,840	25%
Educational Services	\$69,050	13%
Accommodation and Food Services	\$27,285	7%
Administrative and Support	\$49,059	6%
Finance and Insurance	\$129,552	-30%
Information	\$112,828	-25%
Retail Trade	\$37,130	-25%
Management of Companies and Enterprises	\$136,755	-6%

Source: Reach Advisors, 2020

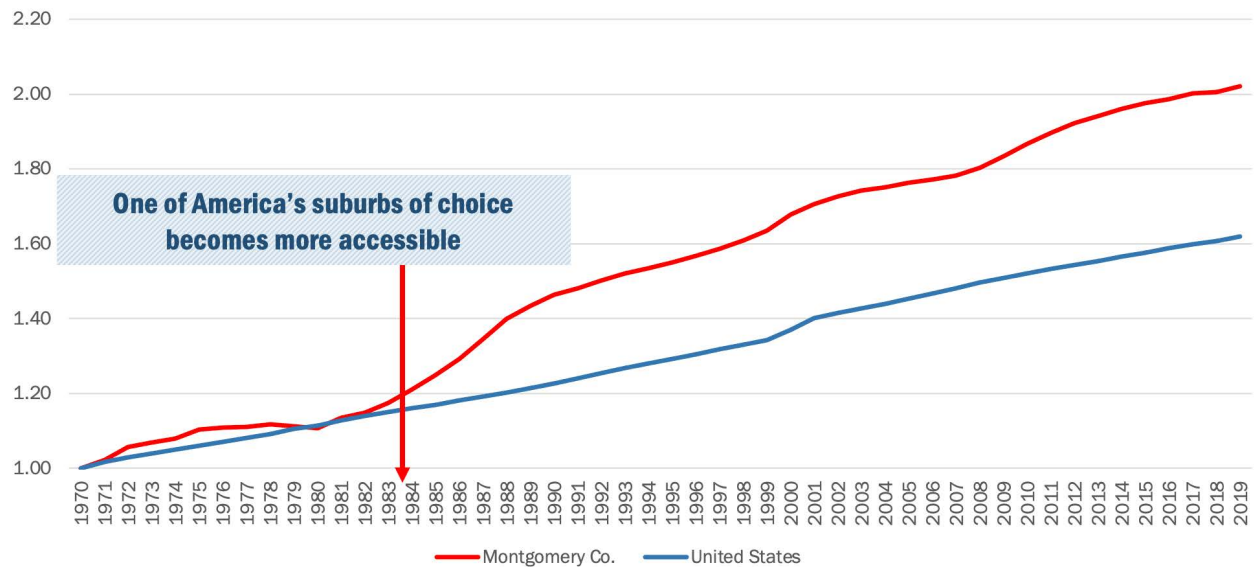
While a quarter of job growth in Montgomery County from 2014 to 2019 was in the highly-paid professional, scientific, and technical services category, more than half of the job growth was in lower-paying jobs (e.g., education, health services, administrative support, and accommodation and food services). When looking at job loss from 2014 to 2019, about 61% of job losses from 2014 to 2019 were in highly-compensated categories (e.g., financial, insurance, business management and information).



Montgomery County's population accelerated dramatically in the mid- to-late 1980s. This was largely due to the County's premier position at that time as the "suburb of choice" for well-educated Baby Boomers in the Washington D.C. area. This demographic cohort was in peak family formation years, often choosing Montgomery County for its nationally highly-ranked K-12 public school system and community character.

Major transportation investments and the resulting ease of commuting helped to boost suburban growth with the Red Line Metro expansion to Shady Grove in 1984 and the enhancement of Interstate highway commuter roads, including the widening of I-270 and the opening of I-370.

Population Growth in Montgomery County and U.S. Indexed to 1970 Population



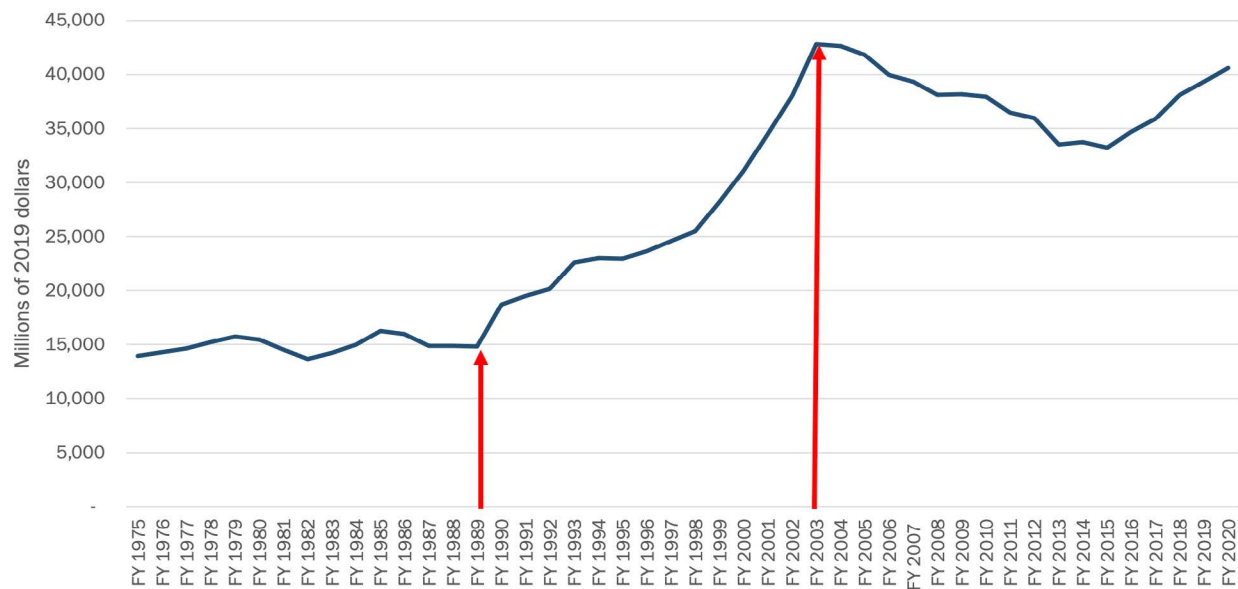
Source: Reach Advisors, 2020

As a result of these demographic and infrastructure forces, as well as proximity to federal activities in Washington D.C., Montgomery County saw some of the nation's highest growth of a well-educated, high-income population from the mid-1980s through the 1990s.

The County's continued growth coincided with federal spending shifts, including a threefold budgetary increase for the National Institutes of Health (NIH) from 1989 to 2003. This funding increase helped to nurture talent and fuel the growth of Montgomery County's life sciences industry.



NIH Budget Growth from FY 1975 to 2003



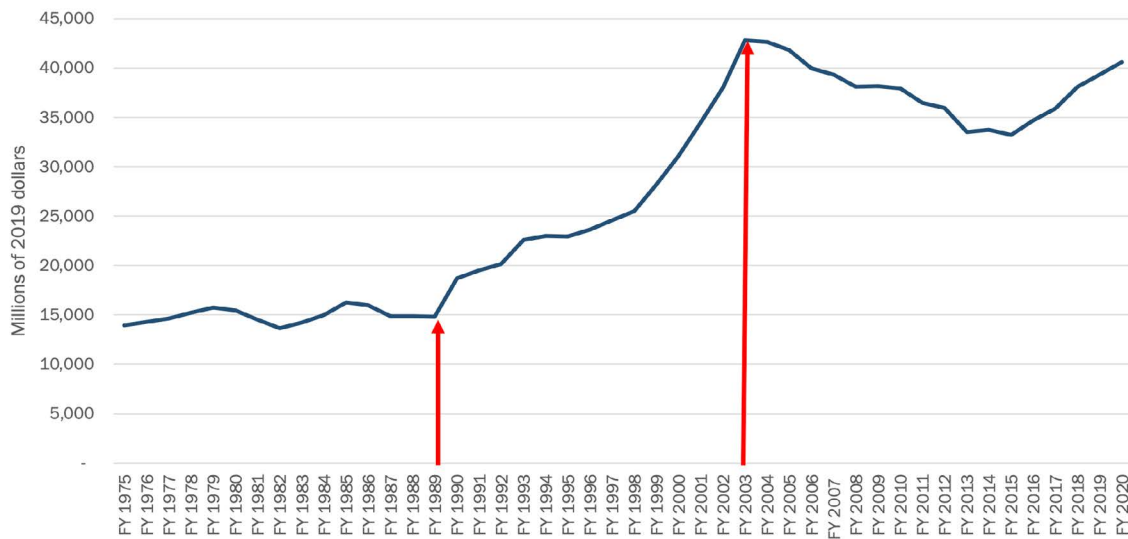
Source: Reach Advisors, 2020

Today, there are more than 50 federal facilities in Montgomery County. The federal government is a major presence with 48,000 direct jobs and thousands more contractor jobs in the private sector, each of which in turn creates additional jobs in the local economy. Federal jobs in Montgomery County, with higher salary scales for scientific and technical positions such as those at the National Institutes of Health (NIH), the Food and Drug Administration (FDA), and the National Institute of Standards and Technology (NIST), pay an average of 25% more than the average federal job and 30% more than the average job in the County. Employment in Montgomery County in federal health-related agencies and facilities exceeds the employment of the County's largest private-sector employer by more than ten times.

However, over the past 15 years, Montgomery County's economic trajectory has declined. One driving factor was reduction in federal spending at the NIH from 2003 to 2015, as seen in the graph above. This decline removed one of the significant drivers of growth for the County. The NIH budget has shown upward trends in recent years.



NIH Budget FY 1975 to 2020

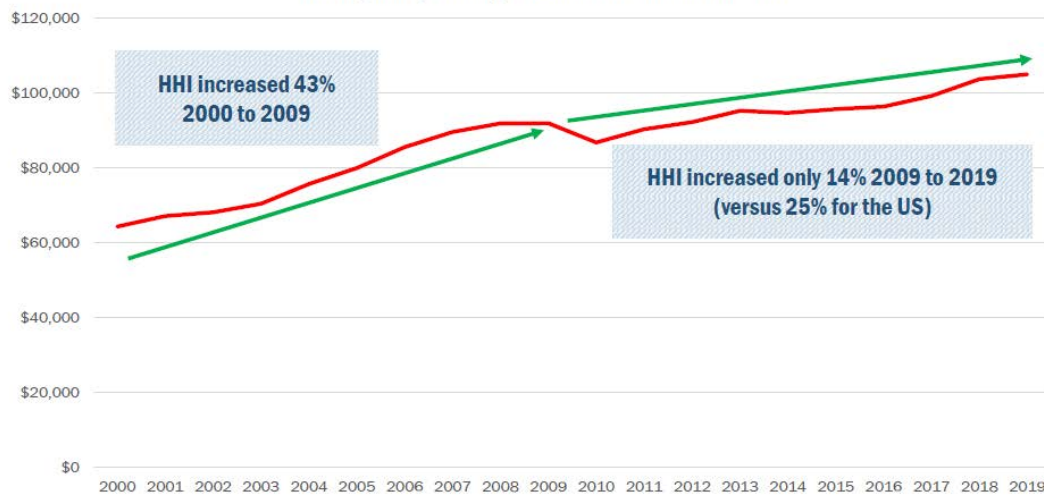


Source: Reach Advisors 2020

By contrast, the Department of Defense has exhibited consistent year-over-year budget increases during the past 15 years. Spurred by the 9/11 attacks and subsequent U.S. interventions in Afghanistan and Iraq, and the resulting rise in military contracting, Northern Virginia particularly benefited from the federal spending increase. Its defense sector received increasing contracting budgets which in turn spurred job growth throughout the region.

Following the above period of growth, the U.S. economy reversed. During the Great Recession that began in 2008, Montgomery County's economic performance fell more precipitously than the rest of the Greater Washington region and the composition of the workforce and employment base shifted. The post-recession median household income growth rate was only one-third of its prior growth rate, slower than other communities in the region.

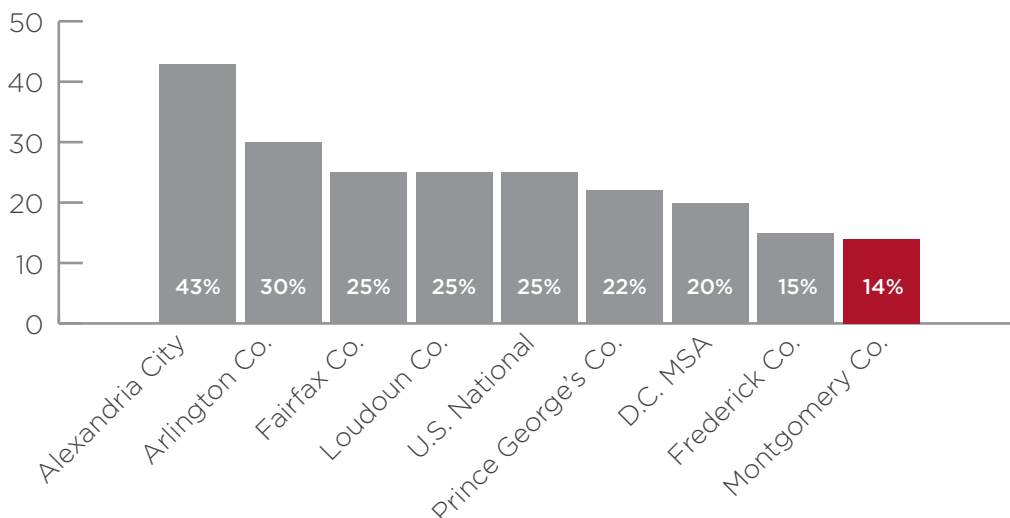
Montgomery County Post-Recession Income Growth Only 1/3 of Prior Growth Montgomery County Median Household Income (HHI)



Source: Reach Advisors, 2020



Post-Recession Income Growth Slower than Rest of the DMV Median Income Growth 2009 to 2019



Source: Reach Advisors, 2020

The current problem, in relative terms, is that Montgomery County's accelerated growth of prior decades was driven by highly unusual, one-time forces (i.e., attracting a disproportional share of high-income, highly educated Baby Boomers in peak family formation years, expansion of the Red Line, and the tripling of the NIH budget from the 1990s into the early 2000s).

Today, without those one-time economic stimulants, job growth and income growth in the County have dropped below regional and national trends. There remains only a modest level of job and new business establishment growth, and an unusually low level of high-growth businesses. Stated otherwise, one-time stimulants have tended to mask a more fundamental weakness in job growth.

The effects of slowing employment growth can be far reaching. This trend, along with changes in the way that companies are using physical space, has placed a strong downward pressure on the commercial real estate market, as evidenced by growing office vacancy rates. The preference for more dense, walkable, and amenities-rich locations has resulted in higher rents and lower vacancy rates in office submarkets, favoring downtown and Metro-accessible locations as compared with suburban office parks that supported the County's earlier growth.

Additionally, there is a dynamic in recent years in which companies prefer newer buildings with amenities and floor plates that can accommodate open plans. Economic growth has not been strong enough to backfill older abandoned spaces, resulting in higher vacancies in older, car-dependent suburban office locations.

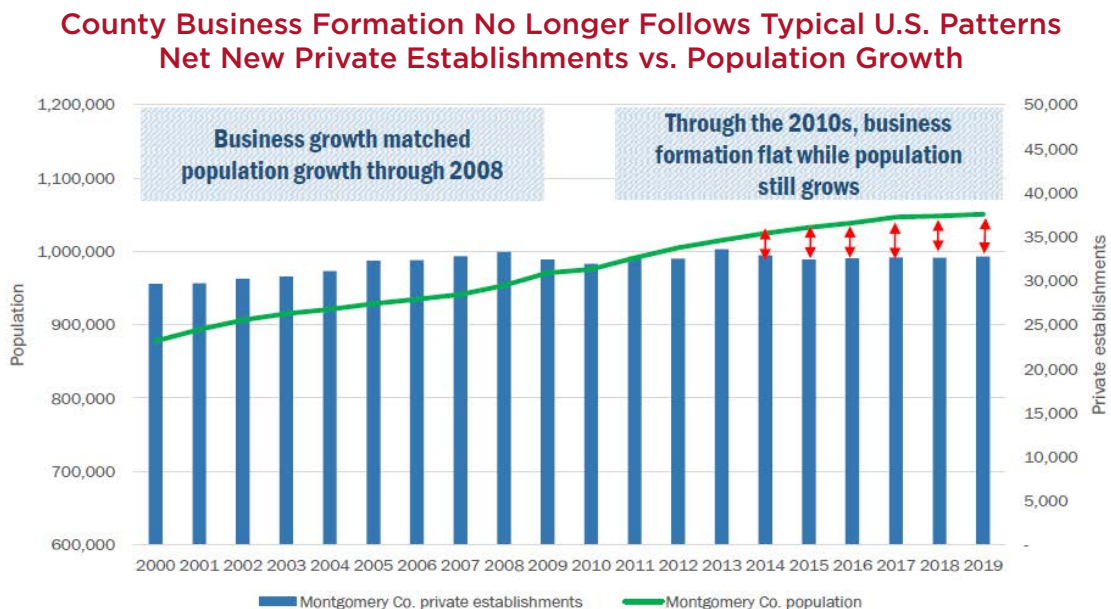
In an economy like Montgomery County, the effects of slow or negative economic growth are somewhat diminished by the strong federal presence which helps provide stability; however, that same presence puts much of Montgomery County's economic advancement at the mercy of federal spending priorities. Aside from the 12-year budget decline at NIH, the prior over-reliance on federal spending growth also likely contributed to a lack of private sector dynamism. Although the County economy is somewhat protected in times of economic crisis, it has not expanded in response to market opportunities as readily as many other economies. Without the inducement of unusual one-time forces, it is not clear that Montgomery County currently has a favorable industry structure to grow at the pace of much of the rest of the nation during periods of economic expansion.



Montgomery County is realizing near-zero growth in the number of younger adults aged 25-44, and for those adults, there are shrinking levels of income, net worth, home ownership, and educational attainment compared to much of the rest of the region and to the Montgomery County of the past. Additionally, the County is seeing an increasing ratio of aging adults as compared with younger adults. This is highly likely to lead to some of the slowest growth, or even negative growth, of household income and property values putting downward pressure on the local tax base and the services the County can provide its residents.

WEAK ENTREPRENEURIAL ECOSYSTEM

The Economic Advisory Panel also found another challenge: the perceived lack of a supportive Montgomery County environment for entrepreneurs to start and grow companies, especially as compared to nearby alternative locales. This is evidenced by the fact that the County has seen no net new business growth despite continued population growth, even though that relationship is linear in almost all other regions of the country.



Source: Reach Advisors analysis of Bureau of Labor Statistics Quarterly Census of Employment and Wages, U.S. Census Bureau population estimates data

There are many causes of a lack of entrepreneurial activity within a given geographic area. These include: (1) an insufficient number of people prepared to follow an entrepreneurial path; and (2) prospective entrepreneurs being more easily able to access the resources they need in alternative locations.

A variety of approaches have been adopted by different communities to address these factors and encourage higher levels of entrepreneurial activity. To a considerable degree, Montgomery County's approach to supporting entrepreneurs, particularly in the high-technology innovation space, has been limited to the retention and attraction of existing businesses by offering real estate, such as incubator space. While the County has invested in an incubator program since the early 1990s, it followed a model popular at the time which focused on providing tenants physical space accompanied by some type of support (administrative, technical, managerial) while the tenants pay rent.



Since the 1990s, important market shifts occurred that include the emergence of accelerator models that prioritize coordinated access to funding, support networks, and critical services over the provision of physical space. Additionally, the continued growth of web-based businesses further reduced the emphasis on traditional office space, with more co-working spaces beginning to appear. In the early 2010s, the “maker concept” was gaining momentum along with new techniques for manufacturing, robotics, production, and automation, affirming the importance of specialized facilities and equipment. Also gaining momentum was the rise of the “entrepreneurial ecosystem,” which focuses on creating a holistic infrastructure to support a broad population of entrepreneurs by addressing issues such as lack of access to capital, support networks, specialized C-suite management, and customer connections.

Today there is a continuing role for Montgomery County to play in providing specialized facilities and equipment to support early-stage innovation within biotechnology due to the added higher costs of wet laboratory space, which often present a barrier to entry for life science research entrepreneurs. More broadly, Montgomery County should progress from a limited focus on real estate leasing towards a more specialized and coordinated approach that addresses gaps that hinder businesses.

Additionally, the County should pursue opportunities to bolster entrepreneurship within small, independent businesses. This is important for the economy as it creates a path to middle-income jobs. One of the major challenges for small-scale production businesses, “mom and pop” stores, and local restaurants is that they often face difficulties competing with the economies of scale available to national chains. New transit-oriented developments around Montgomery County’s Metro stations and other high-density centers not only have higher rents, but they also tend to have retail space too large for many small stores and restaurants. Unfortunately, Montgomery County is also widely considered to be a difficult zoning and regulatory environment for entrepreneurs.

PERCEPTION OF BUSINESS UNFRIENDLINESS

The notion of Montgomery County being unfriendly towards businesses is difficult to quantitatively analyze. But whether the idea exists as perception or reality, it is repeatedly raised as an impediment to Montgomery County’s ability to foster business competitiveness. It is commonplace among business leaders in the County to express deep concern over the County’s regulatory practices including permits, licenses, inspections, taxes, and the administration thereof.

Much of the conversation about Montgomery County being a difficult place to do business resonates within the real estate development community. To developers who work exclusively in Montgomery County as well as those who also work in local jurisdictions, the County is perceived to have overly complex land use regulations, and the effort and resources required to navigate these regulations is perceived to add time, uncertainty and cost to development projects.

It is worth noting that the perception of a community’s “business-friendliness” is one that can be entirely relational. In the past, Montgomery County has engaged with developers who regularly work in New York City, Washington D.C., and other highly urban environments; these developers tend to find Montgomery County a relatively easy place to do business. It is often developers used to working in local suburban jurisdictions who find Montgomery County to have a relatively cumbersome land use framework relative to the suburban markets in the Greater Washington region.

Regardless of whether Montgomery County’s development partners have suburban or urban experience, the County needs to recognize the importance of streamlining the development



processes. This is crucial to the County's ability to facilitate future growth. Montgomery County has begun to make improvements in this area, such as the recent *Speed-to-Market* initiative that is intended to streamline zoning approvals, ease regulatory burdens, and expedite the planning process. Efforts like this will move the County forward in helping facilitate the tear downs, renovations, and development that are needed to accommodate future population and business expansion.

Small businesses also complain about the perceived and real challenges of doing business in Montgomery County. Prior to the pandemic, during April and June 2019, elected officials conducted listening sessions as part of the County's *4Business—Benchmarking to Be the Best for Business* initiative to hear from the local business community. A strong sentiment, especially expressed in survey and website comments, was that the County is either hostile or unfriendly towards business. Some businesses did refer to perception, but many gave clear specific examples based on their own difficult first-hand experience—citing over-regulation, fees, and taxes, among others.

In the case of startup businesses, particularly high-tech startups, roadblocks can become existential. While startups in fast-moving technologies offer great promise, non-essential delays can take them from Day One to bankruptcy within a few months. And in the case of large, existing, geographically-tied mature businesses, unnecessary delays provide the rationale for companies to choose expansion in other, more business-friendly locations.

While it should be expected that there will be examples of similar issues raised with state and local governments in virtually every community in the country, Montgomery County suffers from what appears to be a chronic perception of a negative business climate. This unwelcome reputation has long lingered and becomes very real when local peers—including virtually every neighboring jurisdiction in the region—are very publicly reforming their structures to be more accommodating to business growth and expansion. Unless addressed and countered, the perception of Montgomery County's business unfriendliness will harden beyond reality and continue to adversely affect economic growth.

Businesses in America have a choice of where they want to be located. All things being equal, companies will prefer to locate in jurisdictions where they find it easier to conduct business. While business friendliness can be subjective and may not be easy to measure, the perception of Montgomery County can make or break future success and prosperity.

Since job creation is dependent on employers, if a company is dissatisfied with its current location as not being sufficiently supportive or being difficult in which to do business, the threat looms of that company taking its business and employees elsewhere. Similarly, attracting jobs to any given jurisdiction is made more difficult when an unfavorable reputation for business friendliness exists.

Perhaps the best objective gauge of whether a jurisdiction is a friendly place for business is whether there has been an increase in the total number of businesses over time relative to its competitor jurisdictions. Using this standard, Montgomery County has not been successful, especially when compared to its regional peers.

Montgomery County can and should make every effort to deliver top-quality customer service to those seeking to do business in the County. There has been recent improvement with business-friendly initiatives, as well as a greater awareness of the benefits of reforms in the areas of planning, permitting, and small business support. These actions should be recognized, expanded, and promoted as part of the County's effort to improve its business climate and economic competitiveness.



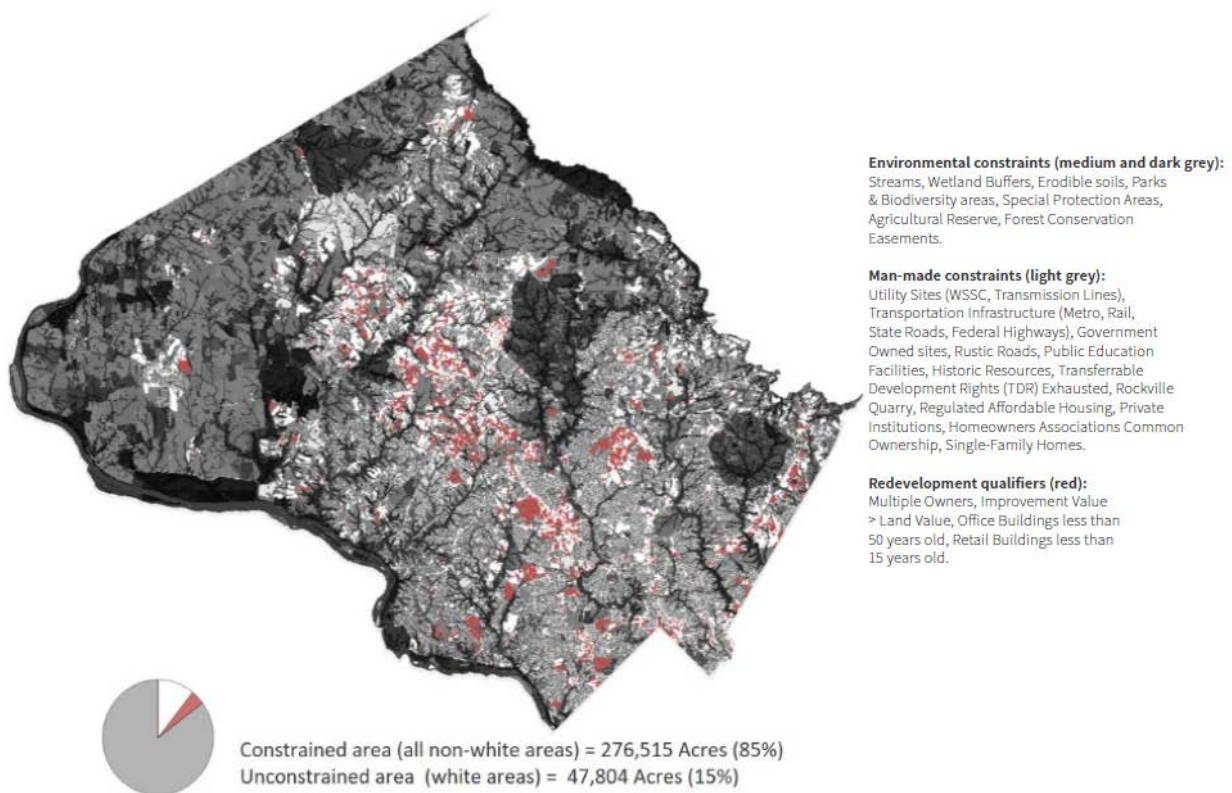
A successful marketing and branding strategies can help attract companies and a workforce that values the local quality of life. It should be noted, however, that a marketing strategy can be no stronger than the reality that exists behind it.

LACK OF AFFORDABILITY

One of the greater challenges facing Montgomery County today is limited available land to accommodate growth. Although the population of the County is increasing more slowly than in past decades, the Metropolitan Washington Council of Governments projects that the regional population is still expected to grow by 200,000 people over the next 30 years.

The County has little undeveloped land to accommodate this growth. Approximately 85% of land in the County is already developed or otherwise constrained. Montgomery County protects a third of its land in the upper county as an agricultural preserve.

Montgomery County Environmental and Man-Made Constraints (Agricultural Reserve) Limit Available Areas for Economic Development Activities



Source: Planning Board, Thrive2050 Report

The lack of available land puts pressure on the cost of real estate development that in turn constrains opportunities for business growth.

Additionally, housing prices have increased significantly in parts of Montgomery County. As a result of the pandemic, record low mortgage rates, and a renewed interest in the suburbs, Montgomery County's real estate prices recently reached the highest level in over a decade. The median sales price for a home of any kind (single family detached, single family attached, condominium, or co-op) was \$535,000 in 2021. This represents a \$100,000 increase over the April 2017 median home sales price of \$435,000.



Median Housing Prices in Montgomery County April 2017 – April 2021

MONTH	MEDIAN SALES PRICE FOR ALL HOME TYPES IN MONTGOMERY COUNTY
April 2017	\$435,000
April 2018	\$445,000
April 2019	\$464,000
April 2020	\$500,000
April 2021	\$535,000

Source: Greater Capital Area Association of Realtors (GCAAR)

Increasing sales prices coincided with purchasers paying more over the listing price than in previous years. In April 2021, the average sales price was 3.7% over the listing price. This contrasts with -1.5% in April 2017. Homes selling higher than the listing price indicate insufficient inventory to fulfill demand, which in turn impacts employers' ability to recruit and retain a talented workforce.

Sales and Listing Home Price Differentials in Montgomery County April 2017 – April 2021

MONTH	PERCENT DIFFERENCE BETWEEN SALES PRICE AND LISTING PRICE
April 2017	-1.5%
April 2018	-1.3%
April 2019	-1.3%
April 2020	-0.9%
April 2021	+3.7%

Source: GCAAR

BUSINESS TAX CLIMATE

Among the more tangible competitive disadvantages from which Montgomery County and the State of Maryland suffer nationally is a comparatively high corporate tax burden. The Economic Advisory Panel considers this to be a major concern for Montgomery County's long-term economic competitiveness.

The panel though does not make any specific recommendations regarding the local tax structure given that its direct charge is to develop a consensus plan that is achievable. There is not currently a consensus for action from Montgomery County's political institutions on this issue.

Taxes are clearly a sensitive subject that cannot be adequately addressed on a local basis alone. Reducing taxes needs to be balanced with the loss of governmental revenue, some of which have led to the creation of the competitive advantages that the County currently enjoys. This includes an educational system that has helped produce one of the most highly qualified workforces in the nation.

Taxes are of course not just a local matter. Any Maryland-based business will be affected by the state tax code. According to the Tax Foundation, Maryland ranks #44 out of 50 states for Business Tax Climate. Although this ranking is very low nationally, it is still ahead of some of the County's economic competitors including New Jersey (#50), New York (#49), California (#48),



Minnesota (for medical devices, tied at #46), and Washington D.C. (tied at #46). However, the states with which Montgomery County regularly competes are ranked higher, such as Massachusetts (#34), Virginia (#26), and North Carolina (#10).

Initial review of U.S. Census Bureau data conducted by Harpswell Strategies, LLC in 2021 suggests that per capita, combined state and local tax burdens are 10.1% higher in Maryland than in Virginia, which could help explain some of Montgomery County's economic underperformance relative to fast-growth markets regionally.² Personal tax rates are an additional factor that impact a firm's ability to hire and retain sought-after employees.

It has long been recognized that tax policy is a major consideration in a firm's decision of where to locate or remain. An in-depth review of the extent to which Montgomery County and the state's tax structures are an impediment to its long-term economic competitiveness would be beneficial. The County would gain from a regular holistic audit of competitive issues, such as whether there is a noncompetitive tax structure, whether the perceived business attitude is shifting for the better, whether the complexity of the regulatory system is being reduced, and whether the equity goals for the economy are being met, among other potential topics.

B. Specific Opportunities

WORLD-CLASS INNOVATION

Given its existing assets, Montgomery County has several "opportunity-to-win" industry sectors. Three such sectors are life sciences, hotel hospitality, and the emerging field of quantum computing.

In Montgomery County, the life sciences and hotel hospitality sectors are currently the two most substantial industry clusters of interlinked businesses that sell goods and services in markets outside the region, also known as a "traded clusters." Montgomery County is home to the fourth largest concentration of life sciences companies in the nation and is home to half of the publicly traded companies in the hotel hospitality sector.

While there are significant opportunities to stimulate greater business formation in these two industry sectors, Montgomery County has the opportunity to nurture other key innovation clusters. These include hospitality technology companies that build on existing corporate headquarters and emerging startups in quantum computing, enabled by the work of the University of Maryland, College Park and local federal institutions like the National Institute of Standards and Technology (NIST). Further, there are great opportunities if Montgomery County can seize a leadership role in cybersecurity and emerging advanced technologies such as artificial intelligence and robotics.

- **Life Sciences Epicenter**

Montgomery County is currently a thriving center of innovation and development in biotechnology. The human genome was originally mapped in the County in the early 2000s. Over time, a robust biotechnology industry cluster emerged as the concentration of federal and private research labs provided a critical mass of bioscience talent, including entrepreneurial scientists who went on to form local companies.

Today over 480 private biotechnology companies are based in Montgomery County, including global leaders and emerging trailblazers such as AstraZeneca, Autolus, GlaxoSmithKline, REGENXBIO, United Therapeutics, and Supernus Pharmaceuticals.

2 *Jobs, Jobs, Jobs: Post-pandemic Economic Leadership for Montgomery County*, <https://harpswellstrategies.com/wp-content/uploads/2021/06/Post-Pandemic-Economic-Leadership-for-Montgomery-County.pdf>



Montgomery County's life sciences cluster has created nearly 14,000 high-paying private sector jobs. Since 2015, Montgomery County life sciences companies have generated 161 venture capital deals, capturing \$2.21 billion in private investment.

Within the biosciences area, Montgomery County has developed a globally-recognized cluster of cell and gene therapy firms that are paving the way for next generation healthcare. Hundreds of immunotherapeutic-focused firms have located in Montgomery County where they rapidly develop and commercialize products with Montgomery County recognized as the 'Immunology Capital Next to the Nation's Capital.' Several novel treatments for lupus originated in the County, as did NIH's gene therapy for sickle cell disease. Other developments have included MacroGenics' FDA-approved breast cancer medication, MaxCyte's technology for cell therapy development, Novavax's promising coronavirus vaccine and influenza candidates, and Cartesian Therapeutics' first cell therapy treatment for COVID-19, among others.

The COVID-19 pandemic focused an international spotlight on the County's life sciences innovations as many local companies, including Novavax, Qiagen, Altimmune and Emmes, took leading roles in COVID-19 vaccine development, therapies, and testing. In 2020 alone, close to \$8 billion in federal, private, and foundational funding was invested in Montgomery County life sciences companies. The County has played a significant role in coronavirus vaccine research and other immunotherapeutic developments. Moreover, four of the top ten recipients of the federal "Operation Warp Speed" for COVID-19 vaccine research were located in Montgomery County.

- **Hospitality Hub**

Another promising sector where Montgomery County possesses economic strength and opportunity is hospitality headquarters and hospitality technology. Montgomery County has a significant concentration of some of the nation's major hospitality headquarters, including Marriott International and Choice Hotels.

America's Hospitality HQ Epicenter

- Sodexo
- Choice Hotels
- Kalibri Labs
- Marriott International
- HMSHost
- StayNTouch
- Host Hotels & Resorts
- DiamondRock Hospitality
- Hilton Hotels & Resorts
- Park Hotels & Resorts
- Hospitality Partners Hotel Management
- Condor Hospitality Trust
- Pebblebrook Hotel Trust
- RLJ Lodging Trust
- HI USA
- Sol Vista
- B. F. Saul Company Hospitality Group
- myDigitalOffice
- Donohoe (The Donohoe Companies)
- PM Hotel Group

Source: Reach Advisors, 2020



An estimated 50% of the hospitality industry's publicly traded U.S. market capitalization is headquartered in Montgomery County, with Marriott International and Choice Hotels representing a combined \$43.9 billion in annual sales. Additionally, an estimated 50% of the U.S. lodging REIT market capitalization is headquartered in the County, with \$14.8 billion represented by Host Hotels & Resorts, Pebblebrook Hotel Trust, RLJ Lodging Trust, and Diamond Rock and Condor Hospitality Trust.

Additionally, hospitality technology company Wedding Wire raised almost \$400 million in private capital; other companies like Kalibri Labs, Qu, StayNTouch, and myDigitalOffice have also collectively raised over \$40 million in venture capital since 2016 to advance innovative hospitality technology market solutions.

- **Quantum Corridor**

Montgomery County has the potential to significantly impact the field of quantum technology. The State of Maryland and Montgomery County have been incubating this nascent technology for the last thirty years. For example, in 2015, Chevy Chase-based venture firm New Enterprise Associates (NEA) invested \$2 million in IonQ, a small quantum technology company sited at the University of Maryland, College Park and associated with 25 years of academic research for such Montgomery County-based federal agencies as the National Institute of Standards and Technology (NIST) and the Intelligence Advanced Research Projects Activity (IARPA). With subsequent investments from NEA and others, IonQ is presently valued at over \$2 billion in 2021. With quantum computing and related applications poised to transform a number of industries, most immediately cyber security, cryptography and biotechnology, the market potential of this emerging technology in Montgomery County and Maryland can be vast.

The University of Maryland is a leader in the quantum field with over 200 researchers actively engaged in the science and its applications, making the state's flagship campus one of the largest concentrations of quantum research in the world and a top-ten program nationally. The University of Maryland has invested significantly in innovation through a quantum accelerator for startups and the Quantum Technology Center pursuing applied research that won a \$25 million National Science Foundation (NSF) award, alongside 11 other research universities to advance opto-electronic quantum technology. The under-construction Purple Line transit project will soon create direct light-rail connectivity between Montgomery County and the University of Maryland's College Park campus, further enhancing the County's reach.

Federal research laboratories in the area that are heavily engaged in quantum research include NIST, NIH, IARPA, Johns Hopkins University Applied Physics Laboratory, U.S. Department of Energy, the National Security Agency, and the Army Research Lab. Montgomery County companies at the forefront of quantum commercialization include Lockheed Martin, Qrypt, Quaxys, and QuantumXChange.

OVERALL ASSETS

- **Education**

In addition to their primary educational mission and research endeavors, the County's academic institutions can play a critically important role in economic development. Greater linkages should be forged to reinforce this connection, especially through curriculum development and certificate training. Doing so will ensure that students have career pathways that lead to good-paying jobs and will also help provide local firms with qualified employees.



Montgomery County Public Schools (MCPS) consistently rank among the top public-school systems in the United States, with 36 MCPS schools cited as national Blue-Ribbon institutions. The County's public education system offers award-winning STEM-only magnet schools as well as the nation's #2 ranked STEM high school, Montgomery Blair High School.

Montgomery County is home to six of the top public high schools in the state as ranked by US News & World Report. High school participation in Advanced Placement classes is more than double the nation's average. Approximately 20,000 foreign-born students study in Montgomery County schools each year with a graduation rate greater than 98%. Opportunities for students include elementary-level language immersion programs, computer science courses in all high schools, magnet elementary and secondary STEM programs, arts programs, programming courses, robotics clubs, and more than 40 career readiness programs, many of which are focused on science, engineering, and technology.

Montgomery College provides postsecondary educational programs on three campuses in Germantown, Rockville, and Takoma Park. Montgomery College has received national recognition for the strength of its curriculum, "real-world" experience offered, and diverse student body. It leads the development of the first life sciences park in the country located on a community college campus which includes a hospital as an anchor tenant and educational partner. Montgomery College is a national leader in community college curricula and offers certifications within the fields of life sciences, cybersecurity, and engineering.

The Universities at Shady Grove (USG) is a unique component of the County education pipeline. Located in Rockville, USG offers over 80 undergraduate and graduate degree programs in partnership with nine public universities throughout the state, providing an affordable and flexible career pathway for County residents. In the region, leading universities include Johns Hopkins, Georgetown, American, Howard, and George Washington.

- **Workforce Talent**

Montgomery County's technology-led economy centers around some of the world's most cutting-edge, innovation-intensive industry sectors. With these high-value industries constantly in search of advanced technical skills and knowledge, the global race for talent and expertise is more competitive than ever before.

A competitive advantage can be derived by investing in people. Businesses are demanding increased educational attainment and credentialing programs for their current and future workforces. In this regard, Montgomery County's government and business community have a mutual interest in joining with local academic institutions to help close the education achievement gap and drive skills-based workforce development. Community, economic, and talent development leaders need to join forces to ensure that the future workforce has access to the tools and opportunities required to overcome challenges in today's fast-accelerating talent race.

Montgomery County continues to rank among the best jurisdictions in the country for its highly educated workforce, including having the largest percentage of residents with an advanced degree among counties with one million residents or more. Despite such an enviable concentration, local employers still face challenges in finding suitable talent, particularly in the technical fields. There is a growing gap for entry-level life sciences talent, computer programmers, analysts, architects, engineers, healthcare workers; and professionals with entrepreneurial experience in startup management.



- **Diversity and Equity**

A key strength of Montgomery County is its socioeconomic diversity. About one third of County residents were born outside of the United States, and 42% of households speak a language other than English as a primary language. The most common non-English languages spoken in the County are Spanish (17.1%), Chinese (3.89%), and Amharic, Somali and other Afro-Asiatic languages (2.7%).

The most common birthplaces of foreign-born Maryland residents are El Salvador, India, and Guatemala. In recent years, Montgomery County has seen an increase in migration from China, India, Japan, Columbia, and France.

Diversity should be considered an asset and must be promoted. There should be a goal to further diversify Montgomery County's economy by overcoming the economic, racial, and educational inequities that persist.

Unfortunately, the disparity between Montgomery County's more prosperous residents and those who are not thriving continues to grow. Overall growth, as measured in the County's GDP, has not ensured a shared prosperity, especially for communities of color.

The County's entire population must be able to contribute to Montgomery County's economic well-being if it is to be competitive. An inclusive economy, including racial, gender, and geographic equity is a keystone for all economic development initiatives.

For Montgomery County to further develop its robust technology-based economy, greater opportunities need to be provided for creating innovation-based businesses operated by entrepreneurs of color. These businesses face disparities and distinct challenges that are far more pronounced than their non-minority counterparts as they seek to start, capitalize, and scale. These challenges include obstacles in networking, insufficient mentorship, access to capital, and a dearth of customer connections.

Taken together, these hurdles have relegated many minority entrepreneurs to low-growth sectors with fewer barriers to entry, lower capital requirements, and higher rates of failure. Public, private, and philanthropic leaders need to be engaged to remove the systemic and institutionalized barriers for minority business startup, development, and growth. Failure to do so as the State's minority community continues to grow will not only compromise the prosperity of individual citizens but also of the County at large.

The County's academic institutions, from the Montgomery County Public Schools, Montgomery College, and the University System of Maryland through the Universities at Shady Grove, can and are helping to address this inequity that persists in the talent pipeline.

- **Federal Assets**

Federal laboratories are a distinctive local source of talent, company founders, knowledge and funding for new companies. An effective engagement strategy for federal facilities will benefit the Montgomery County innovation economy. As has been repeatedly noted, the State of Maryland is richly endowed with technology assets through the federal research laboratory system.

Maryland has over 95 federal laboratories located within its borders, representing the largest concentration of federal laboratories in any state. In 2017 alone, Maryland-based federal agencies and laboratories received a federal R&D investment of \$15.4 billion.³ The research accomplishments of the federal laboratories and agencies can benefit society through their application by the private sector. Montgomery County can perform a significant service by

3 *Federal Labs State Profile, <https://federallabs.org/about/state-profiles#profile>*



assisting in the transition of knowledge gained by the federal sector into applications by the private sector.

In the National Capital area, Montgomery County benefits from many outposts of the federal government within its borders and in the broader region.

Federal agencies that have headquarters or a significant presence within the County borders include:

- Food and Drug Administration (FDA)
- National Institutes of Health (NIH)
- National Geospatial-Intelligence Agency (NGA)
- National Institute of Standards and Technology (NIST)
- National Oceanic and Atmospheric Administration (NOAA)
- Naval Medical Research Center (NMRC)
- Naval Surface Warfare Center (NSWC)
- Uniformed Services University of the Health Sciences (USU)
- US Department of Energy (DOE)
- US Consumer Product Safety Commission (CPSC)
- US Nuclear Regulatory Commission (NRC)
- Walter Reed National Military Medical Center and Walter Reed Army Institute of Research (WRAIR)
- Department of Energy (DOE)
- Veteran's Health Administration (VHA)

In addition to federal agencies, the high concentration of research laboratories in the area provides unique opportunities for local businesses to leverage federal investment and resources. There are opportunities available through the federal technology transfer system to develop and commercialize nascent federal technology; these provide significant opportunities for Montgomery County technology companies with commercialization capabilities. In April 2021, MCEDC formalized a partnership with the Federal Lab Consortium (FLC), to build a strong relationship between the federal labs and Montgomery County's private sector. The FLC consists of a national network of over 300 federal labs, agencies, and research centers.

During the pandemic, Montgomery County has benefited from substantial federal spending related to record levels of pandemic economic recovery appropriations. The possibility of additional local federal funding, pending Congressional approval from an infrastructure bill, as well as legislation significantly increasing research funding for U.S. technology competitiveness, offer further economic opportunities.

Federal funds, however, should be considered only as part of a near-term strategy. In the long-term, federal spending can be expected to diminish due to greater global stabilization of the pandemic, and the need to address the growing national deficit and debt.



Montgomery County's economy, which has depended directly or indirectly on federal spending for decades, will suffer correspondingly unless measures to diversify its economy are taken in advance. There must be greater reliance and support of private sector investment to ensure the County's future.

Locally, the Montgomery County incubator system, known as the **Business Innovation Network (BIN)**, can be better utilized to support entrepreneurship growth. The incubators currently lack a cohesive and unified mission. Montgomery County's incubators were once the leading system in the state, but several other jurisdictions have since developed their own incubators, successfully linking companies with academic institutions and other partners. An effective Montgomery County incubator network can nurture startup companies seeking to commercialize innovative technologies in the life sciences and other fields.

In 2018, Montgomery County launched the nation's first county fund to provide **matching grants for federal SBIR/STTR awards to stimulate local innovation**. Through technology transfer and commercialization, local companies can partner with federal facilities through statutory technology licensing authorities or through Cooperative Research and Development Agreements (CRADA).

- **Global Connections**

Montgomery County has significant assets to attract international business. The County provides easy access to three international airports, Baltimore/Washington International Thurgood Marshall, Dulles International, and Ronald Reagan Washington National airports. This infrastructure provides over 1,000 non-stop flights to over 47 international destinations. Moreover, one third of the U.S. population is accessible within an overnight drive from Montgomery County which enhances domestic connectivity and customer access.

Over 270 foreign-owned companies have major operations in Maryland. The state has international trade relationships among over 7,000 Maryland companies that export to 209 countries. Some of Montgomery County's most significant global companies include: GlaxoSmithKline, BAE Systems, Choice Hotels, Lockheed Martin, Marriott International, AstraZeneca, Qiagen, Sodexo, and United Therapeutics, among others. Given Montgomery County's demographics as one of the most ethnically diverse counties in the nation, an international focus can be an aggressive component of Montgomery County's economic strategy.

Montgomery County's diversity has contributed to a rich tapestry of small business owners and industry leaders who draw upon unique expertise and experiences to launch companies. Additionally, Montgomery County's diversity allows county businesses to recruit a dynamic and diversified workforce. From 2014 to 2016, more than three quarters of the high-tech jobs in the County were held by a female, non-white person, or foreign-born person (alone or in combination).

C. Comparison to Silicon Valley

The Economic Advisory Panel has heard the common refrain that Montgomery County needs to be more like some of the top innovation regions in the country such as Silicon Valley. This raises the question of what makes Silicon Valley so economically resilient and powerful.

According to the late noted economist Tapan Munroe in his 2012 book, *Innovation: Key to America's Prosperity and Job Growth*, there are seven key elements of Silicon Valley's innovation ecosystem: (1) Research universities to trigger innovation by providing critical training for the workforce and offer companies access to high-tech labs and equipment;



(2) Entrepreneurs to convert ideas into products; (3) Investment capital to fuel the process of converting ideas into products; (4) Skilled and dedicated workforce to get things done; (5) Social and professional networks that cluster shared opportunities for the exchange of information, ideas, contacts, and connections despite a highly competitive business environment; (6) Supportive and nurturing business-friendly environment that contributes to the health of an economic development ecosystem; and (7) High quality of life to attract the best and brightest from many lands to work and live there. Munroe argues that to replicate Silicon Valley's success, with its transformation in a half-century from fruit orchards to world epicenter of innovation, a jurisdiction must synergistically do all seven elements well and remain vigilant and non-complacent in prioritizing the success of each of the elements.

Indeed, Montgomery County shares several striking similarities with Silicon Valley. Montgomery County is one of the most innovative, prosperous, and successful jurisdictions in the United States. The County boasts world-class research institutions, a highly educated and diverse population, and some of the top globally recognized companies and brands.

Montgomery County scores relatively well in three of the first four basic elements essential to prosper in today's highly competitive global marketplace, as defined by the landmark 2005 congressionally mandated bipartisan commission established under the National Academies of Sciences, Engineering, and Medicine. The four elements, identified in the *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future* (2007) report, are: (1) Idea/Knowledge Assets through research and innovation; (2) Human Assets including researchers, engineers, and technicians who can produce, distribute, operate, and maintain products; (3) Financial Assets from access to capital, venture funding, and financing that can sustain and transform a startup to a high growth company; and (4) An entrepreneurial ecosystem that encourages creativity, prudent risk-taking, and financial investment. Conversely, factors that can hinder a successful entrepreneurial environment include excessive regulation, high taxes, burdensome litigation, archaic communication, and congested transportation systems, and, especially, an anti-business or even business-neutral attitude.

A different, less optimistic picture emerges when assessing Montgomery County's entrepreneurial ecosystem. The panel noted the common perception of the County's entrepreneurial ecosystem as being seriously deficient. Whether this is anecdotal dissatisfaction or repeated perceptions hardened to reality, the belief is real and pervasive. This perception or misperception is repeated to the point that regional competitors use it as a talking point to attract companies to their location and away from Montgomery County.

The County's entrepreneurial ecosystem deficiencies are also borne out of data as well. The ultimate standards for measuring entrepreneurialism are business growth and job creation. By these objectives, Montgomery County has fared poorly compared to its peers in the region and the state over the course of the past two decades. It is insufficient to have strengths in ideas/knowledge assets, human assets, and financial assets without successfully leveraging those elements in an effective entrepreneurial ecosystem.



CHAPTER 3: RECOMMENDATIONS

Montgomery County possesses the fundamental resources to do better and to even become one of the top counties in the nation in expanding its economy and creating jobs. In this regard, growing business generally requires four elements: (1) ***Ideas/Knowledge Assets***; (2) ***Human Assets***; (3) ***Financial Assets***; and (4) ***A Business-Supportive Ecosystem***.

Using the above four elements, the Economic Advisory Panel makes the following recommendations to call out specific actions needed to strengthen Montgomery County's economy in ways that will create opportunity for all residents. The recommendations are intended to fully leverage existing physical, economic, and networking assets which include: substantial innovation and entrepreneurial capabilities; significant industrial concentrations in life sciences, hospitality, and quantum technology; unique proximity to the nation's federal research and regulatory institutions; a highly-educated workforce; and a powerful global connectivity and population diversity.

ELEMENT #1: Idea/Knowledge Assets

Capture Montgomery County's "Opportunity-to-Win" Industries:

Win the Race for Dominance in Our Leading Growth Sectors

ELEMENT #2: Human Assets

Make Montgomery County's Talent Pipeline Best-in-Nation:

Invest in Our Competitive Workforce Strengths

Leverage Montgomery County's Diversity to Accelerate Economic Growth:

Reinforce Equity Through Shared Prosperity

ELEMENT #3: Financial Assets

Make Montgomery County the Place Entrepreneurs Go to Grow:

Create Support Systems from Startup to Scaleup

ELEMENT #4: Business Supportive Ecosystem

Shift Montgomery County from Business-Wary to Business-Friendly:

Break Business Barriers for Economic Growth



ELEMENT #1: IDEA/KNOWLEDGE ASSETS

Capture Montgomery County’s “Opportunity-to-Win” Industries:

Win the Race for Dominance in Our Leading Growth Sectors

Montgomery County should target key industry sectors through proactive economic development efforts. Specifically, the top three identified target industries are: life sciences and biotechnology, hospitality, and quantum computing. Collectively, these industries are considered Montgomery County’s “opportunity-to-win” sectors. They reflect high growth opportunities because the companies within these industries can sell their products and services to customers outside the region, nationally and globally. Additionally, these are industries most likely to consider expanding or relocating to Montgomery County due to the unique assets and competitive advantages that exist in the area. Other industry sectors in which Montgomery County has shown strength are in cybersecurity and robotics. Targeting these sectors of economic activity will allow the County to leverage its competitive advantages and capture the value these industries bring to the community in the form of fostering innovation and entrepreneurship, spurring private sector growth and investment, creating new jobs, and elevating the standard of living.

RECOMMENDATION 1A. Seize National Leadership in Key Emerging Innovation Areas: Life Sciences

PURPOSE:

Even with considerable recent global pandemic-related recognition and job growth success, Montgomery County must maintain life sciences as an economic development priority and cannot decelerate its efforts to continue attracting increased private investment; otherwise the County risks the potential of squandering an opportunity to advance in the national rankings or be overtaken by a competitor jurisdiction.

IMPLEMENTING ACTIONS:

- **Create Laboratory Infrastructure by an Additional Two Million Square Feet to Meet the Critical Demand Surge Fueled by Greater Life Sciences Activity**

If Montgomery County is to continue its momentum as a magnet for new life sciences development, MCEDC should work with private sector developers to accommodate a growing demand for local life sciences laboratory space. There is a major surge for increased leasing and investment of lab space. With rising demand and just 5.2% availability for the county’s existing lab space beyond the current 10.6 million square feet of total lab inventory already in Montgomery County, an additional two million square feet at minimum will be required to attract and grow life sciences companies at such a rapid pace. Government must be willing to accommodate the rapid construction to meet this critical demand through streamlined and expedient zoning, permitting, and regulatory processes.

Dots to Connect: Industry, Government

- **Rise to a Top Three National Life Sciences Cluster with an Aggressive Life Sciences Expansion Strategy that Highlights Recent Growth and Success**

Once the COVID-19 pandemic travel restrictions have been fully lifted and international conferences are able to resume in-person, MCEDC should participate and engage in key national and international life sciences forums, gatherings, and initiatives, such as the BIO International Conference, to market Montgomery County assets to business attraction



prospects and highlight its upward trajectory. Montgomery County should be promoted regionally and nationally as a champion for growth-stage life sciences companies. These opportunities to brand and reinforce Montgomery County as a top national life sciences leader can spur future business retention and attraction opportunities.

Dots to Connect: Industry, Government, Federal Facilities, Military Installations; Nonprofits

- **Coordinate Holistic Long-Term Planning Strategies Among Stakeholders to Increase Life Sciences Business Development and Attraction Opportunities Throughout the County**

MCEDC should focus its life sciences business development efforts to bridge government and industry solutions to issues of land-use, economic development incentives, and industry support programs in order to continue growing the local biotech presence. To help spur and expedite development, MCEDC must utilize the Montgomery County Commerce Cabinet, which it chairs, to leverage formalized approaches for collaboration and engagement by the many agencies that influence laboratory construction and provide speed-to-market solutions. The Commerce Cabinet, established by order of the County Executive in June 2020, is a 14-member interagency coordination body among agencies that have a significant impact upon economic development. Specific issues being addressed include expedited land-use decisions that foster critical life sciences infrastructure development, especially on issues of zoning, permitting, transportation, and environmental remediation.

Dots to Connect: Industry, Government

- **Create a Global Pandemic Prevention and Biodefense Center in Montgomery County**

Montgomery County life sciences companies are currently helping to address the global COVID-19 pandemic with vaccines and new therapies and these County-based assets can help prevent the next viral outbreak around the world. MCEDC should support the establishment of a Global Pandemic Prevention and Biodefense Center in the United States and to have it located in Montgomery County. The Center should be designed as a cross-sector partnership between government, private industry, academia, and the local community. Locating the Center in Montgomery County will bolster the local life sciences industry. MCEDC should work with regional organizations, such as Connected DMV, to develop a working model for the Center, help secure foundational funding and federal support from the Maryland congressional delegation, and leverage Montgomery County's life sciences assets including the National Institutes of Health and other federal research facilities.

Dots to Connect: Industry, Government, Federal Facilities, Military Installations, Academia

RECOMMENDATION 1B. Seize National Leadership in Key Emerging Innovation Areas: Hospitality Tech

PURPOSE:

The COVID-19 pandemic had a devastating impact on the hospitality industry. At the county level, it will take time for this industry to fully recover to pre-pandemic market levels. Innovative technology solutions are expected to play a large role in satisfying post-pandemic customer preferences in the hospitality industry. Montgomery County can enhance its significant hospitality presence and leverage the post-pandemic reinvention of the industry.



IMPLEMENTING ACTIONS:

- **Initiate an Inaugural CEO-led Work Group to Determine Industry Sector Growth Pathways**

The hospitality industry was a significant casualty of the COVID-19 economic downturn. As the hospitality industry moves to recover and reinvent itself in a post-pandemic world, MCEDC should be the convening force to bring together local companies in the hospitality industry to provide future community solutions. MCEDC should help to build business-to-business connections between the Montgomery County headquarter companies, hospitality tech, startups, and local suppliers.

Dots to Connect: Industry

- **Develop an Incubator or Accelerator for Local Hospitality Tech Startups to Expand the Entrepreneurship Ecosystem and Support Local Hospitality Headquarters**

MCEDC should cultivate relationships with the emerging hospitality tech startups that exist in Montgomery County and develop a support system to attract new entrepreneurs in this space. MCEDC should explore the establishment of an incubator or accelerator to create new local hospitality tech companies. MCEDC should engage established hospitality sector leadership to create partnerships and provide capital access for hospitality tech startups.

Dots to Connect: Industry, Government, Academia

- **Create Workforce Training Initiatives with Industry to Meet Hospitality Tech Talent Demand Growth**

MCEDC should work with WorkSource Montgomery, Montgomery College, and the Universities at Shady Grove to develop workforce training initiatives to meet current hospitality industry talent demand and to engage and re-deploy high-skilled talent disrupted by the COVID pandemic. The industry growth must be ensured through a sufficient talent pipeline.

Dots to Connect: Industry, Government, Academia

RECOMMENDATION 1C. Seize National Leadership in Key Emerging Innovation Areas: Quantum Technology

PURPOSE:

Develop a foundation for Montgomery County to attract existing firms and premier quantum technology start-ups by utilizing local and regional assets to play a leadership role in the global quantum imperative. Montgomery County has related assets across research, technology, investment capabilities, and proximity to cutting-edge federal research. The County is well positioned to lead at the intersection of quantum technology and the life sciences to problem-solve in complex areas such as drug discovery, clinical trial design, genome sequencing, personalized medicine, pandemic preparedness, and health data encryption.

IMPLEMENTING ACTIONS:

- **Capture the Early Lead to Globally Position the County in Quantum Technology Applications Through Direct Engagement in National Strategic Initiatives and in Collaboration with Local Federal Agencies**

Quantum computing will disrupt current industries and drive innovation and economic growth around the world. Rapidly maturing companies are quickly moving to capture the nascent potential of quantum technology for their industry sectors. Montgomery County can gain a leadership role in helping shape this emerging industry sector. The County must



also prepare for the coming quantum era by creating the necessary foundational resources to address issues of workforce, business development, and research. Montgomery County and the State of Maryland's strengths in quantum technology have a pivotal part to play in the U.S. international economic and national security imperatives. MCEDC should engage with federal agencies and research laboratories to form partnerships and collaborations that can further Montgomery County as a prime destination for research in the quantum sciences and its applications. These federal facilities include the National Institute of Standards and Technology (NIST) and the National Institutes of Health (NIH). On behalf of Montgomery County, MCEDC should apply for membership in the Quantum Economic Development Consortium (QED-C) to be the first and only county-level jurisdiction as a QED-C member. QED-C is the leading national consortium of major industry, academia, and government entities established to develop the U.S. quantum industry.

Dots to Connect: Industry, Government, Federal Facilities, Military Installations

- **Create a Greater Washington Potomac Quantum Innovation Cluster to Leverage Regional Strengths and Bolster the County's Standing and Create Local Opportunities for Collaboration**

Montgomery County and the State of Maryland have significant assets in the quantum fields, as does the Greater Washington area. In order to tap into significant federal and state funding, MCEDC should work to bring together regional resources in order to advance Greater Washington, and Montgomery County by extension, as a global and national leader. MCEDC can lead through regional entities such as ConnectedDMV, the Greater Washington Board of Trade, and the Maryland National Capital Region Economic Development Alliance (MNCREDA) to formalize regional quantum compacts and structures to support a local quantum workforce, education, and business development initiatives. These regional alliances can also be used as a vehicle to apply for federal funding to support local initiatives.

Dots to Connect: Industry, Government, Federal Facilities, Military Installations, Academia

- **Accelerate the Formation of an Integrated and Inclusive Local Innovation Community Related to Quantum Technology to Ensure Diverse Representation**

MCEDC should engage Montgomery County academic institutions to develop a quantum workforce with skills training and educational curriculum that includes under-represented communities. MCEDC should work with the academic institutions to institute metrics for their success of this action, such as diversity representation in degree programs and minority graduates or participants in curriculum or certificate programs. To support international cooperation, MCEDC also should develop relationships with international research institutes and startups to create an integrated innovation community in the applications of quantum technology.

Dots to Connect: Industry, Government, Academia



RECOMMENDATION 1D. Seize National Leadership in Key Emerging Innovation Areas: Cybersecurity

PURPOSE:

Utilize Montgomery County resources, including access to top talent and key federal institutions, to pivot towards an even greater role in supporting cybersecurity.

IMPLEMENTING ACTIONS:

- **Formalize a Direct Partnership with the National Cybersecurity Center of Excellence to Facilitate Local Business Engagement**

The Rockville-based National Cybersecurity Center of Excellence (NCCoE) is a part of the National Institute of Standards and Technology (NIST). The NCCoE is a collaborative hub for industry, government, and academia to address the most pressing cyber needs of businesses. The NCCoE provides Montgomery County cyber companies a unique opportunity for local collaboration with a federal laboratory. Working through NIST, MCEDC can develop a formal direct relationship with NCCoE that allows Montgomery County cybersecurity companies to access and interact with this unique local federal asset. There does not currently exist an entry point for local companies to engage and support NCCoE activities. These engagements and collaborations could lead to enhanced commercialization and new business models for local companies.

Dots to Connect: Industry, Federal Facilities

- **Utilize Federal and Academic Assets to Support New and Emerging Information Technology Applications for Local Business Growth or Startups**

Information technology trends suggest that consumer-driven technologies such as mobile devices and “the Internet of Things,” cloud computing, and data analytics will occupy an increasing share of the future marketplace. These innovative fields are integrally linked as information technology has become increasingly intertwined with every segment of today’s economy; as an example, in emerging crossover technologies such as digital health. To make Montgomery County as competitive as possible in these areas, MCEDC should work with academic institutions and federal partners, such as the NCCoE, to develop entrepreneurial startup support and a workforce talent pipeline.

MCEDC can also work with local academic institutions to expand offerings in cybersecurity. With access to significant degree programs in cybersecurity and computer science and a strong local and regional cybersecurity ecosystem, Montgomery County can take advantage of the enormous growth potential in this industry. Montgomery College is among the largest and most successful engineering programs of two-year colleges nationwide. The Universities at Shady Grove have robust degree opportunities through the renowned information technology and cybersecurity curriculums of the University of Maryland, College Park, and the University of Maryland, Baltimore County.

MCEDC should partner with organizations such as the Maryland Tech Council and local business chambers to support the business-to-business connection between cybersecurity, advanced technology, and life sciences companies through networking activities.

Dots to Connect: Industry, Federal Facilities, Military Installations, Academia, Nonprofits



RECOMMENDATION 1E. Seize National Leadership in Key Emerging Innovation Areas: Other Advanced Technologies

PURPOSE:

From Robotics to Artificial Intelligence to Advanced Manufacturing, Montgomery County can make selected other advanced technologies a targeted industry by capitalizing on local workforce advantages and innovation research.

IMPLEMENTING ACTIONS:

- **Cultivate a Network of Companies and Entrepreneurs in Select Advanced Technology Industry Sectors to Enhance Collaboration**

MCEDC should explore collaboration opportunities with federal and university research laboratories to support emerging advanced technology companies. MCEDC should expand resources and engagement of local advanced technology companies through the development of an industry network that can link to similar companies or industry clusters around the country. To advance growth, MCEDC can support sector expansion with internship and apprenticeship opportunities that increase the available local talent pool.

Dots to Connect: Industry, Federal Facilities, Military Installations, Academia

- **Support the Placement of Advanced Manufacturers in Special County Zoning Locations**

Since some advanced manufacturers have special site location needs, MCEDC should work with county officials and the Planning Board, to support the supply chain, niche market, and space needs of particular companies to place them in designated or dedicated special county zones. To support the emerging fields of robotics and artificial intelligence, MCEDC should help academic institutions align with these companies and entrepreneurs for workforce and research support.

Dots to Connect: Industry, Government

ELEMENT #2: HUMAN ASSETS

Make Montgomery County's Talent Pipeline (Best-in-Nation): Invest in Our Competitive Workforce Strengths

Business leaders understand that education is one of the most valuable drivers of competitive economic development—it is a critical investment that ensures companies can hire and access needed talent to fuel business growth. To satisfy business demand for workers across the talent spectrum, Montgomery County should continue investing significantly in its educational institutions from the K-12 Montgomery County Public Schools (MCPS) to the higher education institutes of Montgomery College and Universities at Shady Grove. Montgomery County should prioritize collaborating directly with these entities and businesses to upskill an entry-level workforce that meets industry needs through certification, vocational training, and apprenticeships. Additionally, the County should explore enhanced partnerships with the University System of Maryland to develop graduate and post-graduate talent. Engaging with these institutions to strengthen the entire talent continuum will make Montgomery County a premier “diploma destination”—a place where bright learners at the cutting edge of knowledge meet high-opportunity industries.



RECOMMENDATION 2A. Expand the Talent Pipeline to Support Targeted Industry Sectors

PURPOSE:

Montgomery County should generate talent to strengthen the key industry sectors that drive its economic growth.

IMPLEMENTING ACTIONS:

- **Form an Industry-Driven Talent Pipeline Coalition to Hear Industry Needs Directly and Regularly**

With private sector guidance on required workforce needs for key industry growth, MCEDC should partner with WorkSource Montgomery to formalize industry coalitions that meet regularly to be attuned to current industry workforce needs. Local companies need a process for direct industry input to be heard, to strategize on emerging talent gaps, and to execute new initiatives that provide the skill trainings necessary for businesses to remain competitive and to grow. Additionally, MCEDC should work with state and County officials to implement, on an expedited basis, the County-level recommendations of the Maryland Commission on Innovation and Excellence in Education, also known as the Kirwan Commission.

Dots to Connect: Industry, Government, Academia

- **Reinforce the Importance of Academic Institutions as Economic Drivers by Launching Direct Collaborations to Address Specific Industry Needs**

MCEDC should work collaboratively with Montgomery County academic institutions to enhance workforce education and skills development programs that prepare residents for entry-level and middle wage jobs in high-growth sectors. Working with business and labor groups, MCEDC should set the goal of substantially increasing the number and scope of skills certification programs at Montgomery College and MCPS.

Past successful programs to consider expanding include the newly created Bio Boot Camp pilot project done in partnership with Montgomery College, the Universities at Shady Grove, and WorkSource Montgomery. The program, launched in 2021, provides career mobility opportunities to displaced and underemployed workers for entry-level positions with local life sciences companies. MCEDC should replicate the Bio Boot Camp concept to support the workforce needs of local cybersecurity companies and other industry sectors.

MCEDC should formalize a Memorandum of Understanding that facilitates economic development partnerships with Montgomery College and the Universities at Shady Grove and would recognize these academic institutions as core economic drivers that can develop innovation and workforce-industry linkages in the education, innovation, and entrepreneurial sectors. Initiatives to explore include externship opportunities, apprenticeship programs, and business sponsored projects.

Dots to Connect: Industry, Academia

- **Link Talent with Company Needs Through Strategic Matchmaking and Placement Programs**

To accomplish this goal, MCEDC should partner with WorkSource Montgomery and the academic institutions in new and enhanced placement initiatives. These could include online matchmaking programs connecting apprentices and other job seekers with employment opportunities in target sectors.

With significant federal and state funding now available to support a post-pandemic economic recovery, MCEDC should support application collaborations and seek grant



funding to partner with businesses and address industry needs and market Montgomery County to individual job seekers in target industries.

With its connections to industry, MCEDC and WorkSource Montgomery should join with academic institutions to develop curriculum and sector strategies that solve emerging talent pipeline needs of local companies.

Additionally, MCEDC should create new workforce development initiatives that encourage target industry sector companies to hire post-doctoral talent as a means of retaining homegrown, highly-skilled talent. MCEDC should also explore with the County Executive and the County Council the creation of a fund to help offset relocation expenses for prospective highly-skilled personnel from jurisdictions around the country in key industry sectors, such as life sciences.

Dots to Connect: Industry, Government, Academia, Nonprofits

RECOMMENDATION 2B. Utilize K-12 STEM Programs to Sustain Technology Competitiveness

PURPOSE:

Expand early exposure to key programs and curricula that provide K-12 students with a career advantage in Montgomery County's innovation workforce.

IMPLEMENTING ACTIONS:

- **Develop K-12 STEM Curriculum and Program Support for Quantum Computing**

As recognition of the importance of the K-12 curriculum in the development of an educated workforce that will provide Montgomery County with a global competitive advantage in the emerging field of quantum computing, MCEDC should lead and support MCPS with a K-12 STEM core competency in the field. MCEDC should connect MCPS to business partners to determine industry needs. This will allow MCPS to create an organizational strategy, determine student curriculum needs, support teacher training, and create student clubs to build quantum computing skills and develop a foundational workforce competency that can start as early as the primary and secondary school levels. MCEDC should cultivate with MCPS industry partners that could help financially or organizationally support these initiatives.

Dots to Connect: Industry, Academia

- **Support Academic Partnerships for K-12 STEM Student Engagement in Key Industry Sectors**

MCEDC should continue to lead in the development of programs with academic partners and private industry to prepare K-12 students in STEM skills that support key industry sectors. For example, within information technology, MCEDC should continue and extend its partnership support for the Montgomery Can Code and MoCo Hacks partnerships.

With the academic partners, MCEDC should further the goal of doubling the number of participants in the Montgomery Can Code program. At the middle school level, Montgomery Can Code, now in its third year, offers 1,000 middle school students a unique, tuition-free summer camp experience. Montgomery College, MCPS and MCEDC have collaborated with Apple to offer the opportunity for students to learn skills needed to pursue careers in the app economy through coding and programming.



MoCoHacks is a free 36-hour hackathon organized by and for MCPS high school students. Students create various programming solutions to solve a problem and share their group projects. MCEDC has collaborated directly with high-schoolers to provide financial support and facilitate industry participation that inspires and educates students about career pathways.

Dots to Connect: Industry, Academia

Leverage Montgomery County's Diversity to Accelerate Economic Growth: Reinforce Equity Through Shared Prosperity

With its clear embrace of diversity and representation, Montgomery County can be a regional and national leader in creating an inclusive economy—one that envisions broad economic prosperity, especially for populations that have faced historical and structural barriers. Setting the stage for Montgomery County's economic recovery after the devastation of the global COVID-19 pandemic requires addressing the structural economic inequalities that were further exposed during the pandemic. Achieving equity will require leadership and commitment from all stakeholders. Tasks include initiatives to advance new business formation, small business procurement, and small business support in an inclusive manner. Unfortunately, small businesses led by owners of color are today disproportionately disconnected from capital and strategic social networks that can facilitate business growth.

RECOMMENDATION 2C. Reinforce Equity Through Inclusive Economy Opportunities: Small Business Support

PURPOSE:

Reduce or eliminate challenges for Small, Minority and Women-Owned Businesses as they start, capitalize, and scale up.

IMPLEMENTING ACTIONS:

- **Create new initiatives to support Small, Minority and Women-Owned Businesses through Specialized Outreach, Capital Access Programs, and Resource Networks**

MCEDC should implement mechanisms to overcome obstacles that small, minority, and woman-owned businesses typically face, such as insufficient mentorship, lack of access to capital, and lack of access to strategic social networks and customers. Greater connections to federal and state agencies and prime contractors should be supported to create more pathways to small and minority certifications that can facilitate procurement opportunities. Additionally, MCEDC should help leverage federal and state resources that provide access to capital for small businesses.

Small businesses need assistance to fill the gaps in the loan pipeline. MCEDC should explore with private-sector financial institutions means of expanding existing opportunities. MCEDC should also explore new public funding and technical assistance programs for early and growth-stage businesses, with an emphasis on low-income entrepreneurs and underserved geographic areas. MCEDC should also explore partnerships with local organizations that can provide direct services to female and minority entrepreneurs. MCEDC should also maintain metrics and establish an inclusive economy dashboard that provides data on Montgomery County trends.

Dots to Connect: Industry, Government, Academia, Nonprofits



RECOMMENDATION 2D. Reinforce Equity Through Inclusive Economy Opportunities: Targeted Community Investment

PURPOSE:

Support targeted local communities through Small, Minority and Women-Owned Business Investment.

IMPLEMENTING ACTIONS:

- **Coordinate Public and Private Investment to Drive Redevelopment of Targeted Communities in Underserved Areas: Prepare an Economic Development Plan for the Purple Line Corridor to Strengthen Direct Linkages with the University of Maryland, College Park**

MCEDC should explore strategic support (i.e., physical space, capital resources, mentoring, business-to-business connections) within industries with lower barriers to entry than traditional target sector industries. These could include advanced manufacturing, maker space, food businesses, and businesses commonly found in communities with high immigrant populations, ethnically diverse populations, and highly entrepreneurial populations.

MCEDC should also promote entry-level and mid-level opportunities with career advancement potential associated with the county's targeted and in-demand industries within underserved populations and geographies in the county. For example, advancing coalition-building and economic development in the areas along the Purple Line Corridor can help facilitate equitable investment.

MCEDC should prepare an economic development plan for the Purple Line transit project that will by 2024 create direct light-rail connectivity between Montgomery County and Prince George's County, specifically with access to the University of Maryland's College Park campus. This transit linkage puts greater research and educational opportunities more closely within the County's reach, as well as the opportunity to create infrastructure in Montgomery County along the Purple Line.

Dots to Connect: Industry, Government, Academia

RECOMMENDATION 2E. Leverage the County's International Population to Strengthen Global Connectedness

PURPOSE:

Capitalize on Montgomery County's demographics as one of the most ethnically diverse counties in the nation to increase global transactions.

IMPLEMENTING ACTIONS:

- **Focus on International Opportunities to Attract Companies to Montgomery County**

MCEDC should create a Montgomery County global brand and connect it with foreign investors to encourage them to invest in the County. Local global exports should be tracked and benchmarked in conjunction with the Maryland Department of Commerce. MCEDC should participate in the annual U.S. Department of Commerce Select USA Summit in Washington D.C. to help promote foreign direct investment in Montgomery County. MCEDC should coordinate with the State of Maryland on international attraction opportunities. MCEDC should also explore the development of an international soft-landing program at one of the Montgomery County incubators to support direct foreign investment.

Dots to Connect: Industry, Government



ELEMENT #3: FINANCIAL ASSETS

Make Montgomery County the Place Entrepreneurs Go to Grow: Create Support Systems from Startup to Scaleup

Supporting entrepreneurship allows new startups to replace lost jobs and incomes. During the economic downturn a decade ago, business startups declined nationally and were slow to recover, which in declining companies contributed to a slow economic recovery. With the crucial role entrepreneurs and startups play, efforts must be redoubled to remove barriers and speed the growth of small businesses. There is great economic value of entrepreneurs and early-stage companies focused on bringing innovative solutions to market. Though not every startup enterprise will be successful, it has been clearly demonstrated that some of these entities will scale quickly and generate significant economic benefits including job growth, C-suite talent development, and major private investment.

RECOMMENDATION 3A. Create a \$1 million Entrepreneurship Innovation Center and Expand Capital Access in High-Opportunity and Key Industry Sectors.

PURPOSE:

Strengthen Montgomery County’s entrepreneurial ecosystem and startup formation through the establishment of a public-private \$1 million Entrepreneurship Innovation Center in partnership with academic institutions and county, state, and federal partners.

IMPLEMENTING ACTIONS:

- **Bring Private Capital Attraction through New Venture Capital**

MCEDC should lead in forming new venture capital relationships and developing Montgomery County’s competitive brand with investors through events and marketing campaigns. These efforts should be highly focused, emphasize a specific sub-sector and relevant investor audience, and be aimed at both domestic and international investors. For example, life sciences-themed events would target growth-stage investors, while quantum events would focus more on speculative and early-stage funders due to the sector’s still-emerging nature. MCEDC should help entrepreneurs aggregate sources of capital access such as private banks, state funding sources, and venture capital. MCEDC should undertake efforts to recruit at least one or more venture capital firms to Montgomery County. MCEDC should also explore with the County Executive and the County Council the establishment of a matching Venture Capital Fund using County assets but managed by a non-government entity to support business in the County. This Montgomery County fund could also be linked in partnership or used to supplement the venture funding already provided to local companies through the Maryland Technology Development Corporation (TEDCO).

Dots to Connect: Industry, Government



RECOMMENDATION 3B. Eliminate the Entrepreneurial Talent Gap

PURPOSE:

Expand the pool of market-ready ventures by providing counseling, mentoring, and leadership initiatives.

IMPLEMENTING ACTIONS:

- **Embark Upon New Entrepreneurship Partnership Initiatives through Mentorships, Leadership Programs, and Entrepreneurs-in-Residence**

MCEDC should work with partners to develop new collaborative entrepreneurship initiatives. These initiatives could include Entrepreneurs-in-Residence, mentorship support, and leadership pipeline programs to provide entrepreneurial support, especially for young talent. MCEDC should launch a leadership pipeline program to attract serial entrepreneurs with new enterprises and match experienced startup executives with local early and growth stage companies. MCEDC should partner with organizations such as the Maryland Technology Development Corporation (TEDCO) to create a specialized program for female entrepreneurs.

Dots to Connect: Industry, Government, Nonprofits

- **Partner to Provide Mentorship Services for Local Entrepreneurs**

To support an aggressive entrepreneurial ecosystem, MCEDC should create opportunities for mentorship and dedicated investment advisory services. This could include a leadership placement program to match experienced startup leaders with local early- and growth-stage companies. MCEDC should continue its support of the Maryland Tech Council Venture Mentoring Service (VMS) Program which supports startups by helping them raise capital. The VMS program is one of the leading team mentoring services for Montgomery County tech, cyber and life sciences startups preparing for their first venture or institutional financing. Specially trained teams of volunteers with expertise in entrepreneurial activity and startup businesses are carefully matched with selected ventures to assist them in becoming successful operating companies. The no-fee program is based on the highly successful MIT Venture Mentoring Service.

Dots to Connect: Industry, Nonprofits

RECOMMENDATION 3C. Support Innovation Entrepreneurship: Federal Engagement Strategy

PURPOSE:

Create local jobs and engage world-class national research laboratories, federal government installations, and federal technology transfer offices to provide unique opportunities for local businesses to collaborate, provide translational research opportunities, and potentially commercialize research into the marketplace.

IMPLEMENTING ACTIONS:

- **Attract Public Investment and Facilitate Federal Technology Transfer**

Part of the County's competitive advantage comes from its proximity to federal agencies, especially in sectors that are heavily supported by public investment (e.g., immunology) or still dependent on pre-commercial research and development (e.g., quantum computing). There are numerous opportunities to attract public investment to supplement private capital for early-stage enterprises, spinoffs, and expansion of established companies.



MCEDC should formalize collaborations with federal laboratories and agencies to support technology commercialization, technology licensing, and collaborative research. MCEDC should promote and connect entrepreneurs and companies with technology transfer resources. MCEDC should develop joint programs with federal technology transfer offices, as well as formally partner with state entities such as TEDCO. MCEDC should work with entrepreneurs to support collaborations with research universities and federal agencies, as well with federal funding programs such as the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs which are highly competitive programs. MCEDC should initiate reforms that drive greater impact through the Montgomery County SBIR/STTR grant program, which encourages local small businesses to engage in research and development leading to commercialization.

Linking university research to local companies for commercialization is another potential technology transfer opportunity. MCEDC should explore with the County Executive and the County Council the creation of a small organization within the County to work with the University System of Maryland and Johns Hopkins University entities that seek to promote technology transfer.

Dots to Connect: Industry, Federal Facilities, Military Installations, Nonprofits

RECOMMENDATION 3D. Support Innovation Entrepreneurship: Incubators Network Reform

PURPOSE:

Reform the Montgomery County incubator system to better support entrepreneurial growth.

IMPLEMENTING ACTIONS:

- **Reform the Montgomery County Business Innovation Network to Better Support Local Incubator Companies**

The Montgomery County Business Innovation Network (BIN) is the local network of public incubators. MCEDC should work with the County Executive and the County Council to transform the current system to embed the incubator companies into a broader ecosystem that facilitates access to key resources, such as research and commercialization connections, capital support, talent acquisition, access to new customers, physical space, and local suppliers. The County's BIN should be restructured to provide greater coordination, analysis, and advisory support for the companies housed in the local incubators. This will allow for greater graduation rates for incubator companies and ensure a continued turnover of incoming companies.

Dots to Connect: Industry, Government, Academia, Nonprofits



ELEMENT #4: BUSINESS SUPPORTIVE ECOSYSTEM

Shift Montgomery County from Business-Wary to Business-Friendly: Break Business Barriers for Economic Growth

There is a growing consensus that the nature and scope of business regulation and the attitude of the institutions that enforce it can be a determinant of economic prosperity. For example, unfavorable public procurement practices, tax policies, regulatory requirements, and permitting processes impact the environment of doing business. In a place like Montgomery County, the perception that the County is unfriendly towards business is one that persists. Montgomery County must break down barriers that exist from a regulatory standpoint to attract more business and unlock greater growth potential.

RECOMMENDATION 4A. Create a Public-Private Montgomery County Economic Development Marketing & Branding Initiative

PURPOSE:

Help counter Montgomery County's perceived record of poor business-friendliness with an aggressive communications strategy that positions the jurisdiction as a national hub of economic opportunity, innovation excellence, and private sector success—and back it with tangible actions.

IMPLEMENTING ACTIONS:

- **Launch a \$1 million Montgomery County Marketing Partnership Initiative**

MCEDC should take the lead to develop a public-private marketing initiative that focuses solely on economic development, similar to various successful tourism marketing campaigns. MCEDC should seed this partnership with a \$500,000 contribution and solicit additional support from Montgomery County and the business community. A new Montgomery County Marketing Partnership entity should be created to have a separate governing board and significant private-sector membership and participation. This new entity will develop marketing materials that brand the county as a national innovation hub and thriving location for business success. But this effort can only succeed if Montgomery County *is* in fact a place where businesses thrive.

Dots to Connect: Industry, Government

RECOMMENDATION 4B. Convene Showcase Summits in Montgomery County on Emerging Innovation Issues

PURPOSE:

Position and market Montgomery County as a thought leader for the innovation industry.

IMPLEMENTING ACTIONS:

- **Create Showcase Summits to Spark Business Growth in Emerging Industry Sectors**

MCEDC should connect with partner organizations such as the Maryland Tech Council, TEDCO, or the Montgomery County Chamber of Commerce, to create showcase summits or smaller targeted gatherings locally to spark business growth in emerging business areas. Possible topics could include: the growing convergence of quantum technology and life sciences or hospitality technology innovation. These focused, industry-driven gatherings



will cement Montgomery County's brand identity by drawing national attention to its technology strengths and fostering meaningful engagement between industry thought leaders, potential investors, and serial entrepreneurs.

Dots to Connect: Industry, Federal Facilities, Military Installations, Academia, Nonprofits

RECOMMENDATION 4C. Improve Economic Development Customer Service

PURPOSE:

Foster a more positive business regulatory environment through the adoption of customer service metrics and accountability.

IMPLEMENTING ACTIONS:

- **Instill and Benchmark a Culture of Superior Customer Service and Responsiveness to Business Using Private Sector Customer Experience Experts**

To change the existing narrative that Montgomery County is business unfriendly. MCEDC should lead efforts to create a new culture of customer service to business. MCEDC should create a customer service initiative that can be supported through third-party customer experience experts with experience in the private sector. The customer service initiative should also be benchmarked with dashboards to measure snapshots of agency progress and responsiveness.

MCEDC should contract with an independent corporate assessment firm to conduct annual anonymous samplings of individuals and businesses that during the prior year have had interactions with the County. The summary should produce: (1) a 1-10 scale ranking of the professionalism with which the County engaged the issue at hand; and (2) a list of issues requiring improvement by the County and the identity of the related County agency. It must, of course, be recognized that the County has specific responsibilities and that it may not always be possible to satisfy a specific request made by a business or a would-be business entity. Because of this, responses to the business survey should be aggregated according to whether the request was: (1) approved; (2) denied; or (3) the County was helpful in finding an acceptable alternative solution.

MCEDC should collaborate with the County Executive and the Chief Administrative Officer to ensure that County executive branch staff can receive continuous customer service and business development training. Employer customer service training should be designed to improve efficiency, responsiveness, and consistency. Agencies should develop a customer service initiative in each department with customer service metrics created, evaluated, and acted upon. Agencies should provide follow-through in the form of customer surveys conducted by outside customer experience experts, and corrective actions should be implemented.

The Montgomery County Commerce Cabinet can also be utilized to increase the number of effective interactions between businesses and each government agency that interfaces directly with businesses. MCEDC should also work with the County Executive and the County Council to establish a small permanent customer service entity within County government to support businesses and identify specific areas that need attention.

Dots to Connect: Industry, Government



RECOMMENDATION 4D. Improve Economic Development Regulations

PURPOSE:

Cultivate a positive business environment through reforms that improve the speed and convenience of connecting business and reduce uncertainty and inconsistent timeframes for agency decisions.

IMPLEMENTING ACTIONS:

- **Help Businesses Navigate Existing Regulations**

MCEDC should take the lead in helping agencies pursue continuing efforts to make Montgomery County regulations more streamlined and business supportive. MCEDC will need to engage the business community and executive agencies to review the regulatory process so as to attract more economic development projects. By reviewing the county regulatory process and making the necessary changes, the County can better attract development and investment. An Expediting Office or designated officer within each agency to assist in resolving delays in permitting and licensing should be implemented.

Dots to Connect: Industry, Government

RECOMMENDATION 4E. Establish a Montgomery County Competitiveness Council

PURPOSE:

Conduct an ongoing audit to determine if the County continues to be as competitive as it could be and what significant impediments need to be addressed.

IMPLEMENTING ACTIONS:

- **Create a Montgomery County Competitiveness Council to Review On-Going Issues**

MCEDC should work with the County Executive and the County Council to create by statute a Montgomery County Competitiveness Council of appointed members of the public. The County would gain from the creation of a Competitiveness Council that would conduct a regular and routine audit of impediments to long-term economic competitiveness. The Competitiveness Council should hold reviews on issues such as whether there is a noncompetitive tax structure, whether the perceived business attitude is shifting for the better, whether the complexity of the regulatory system is being reduced, and whether the social equity goals for the economy are being met, among other potential topics. The Competitiveness Council should be provided staff support and meet either biennially or quadrennially and can be modeled after similar structures in other jurisdictions.

Dots to Connect: Industry, Government



RECOMMENDATION 4F. Benchmark the On-Going Success of the Connecting the Dots Action Plan by Holding MCEDC Accountable for its Execution

PURPOSE:

For this Action Plan to have impactful and meaningful success, there must be an accountable entity to lead the execution of the recommendations and measure progress in the report.

IMPLEMENTING ACTIONS:

- **Create a Matrix of Actions Taken to Implement the Recommendations with Regular Reporting on Status and Outcomes**

MCEDC should be held accountable for the execution of this report's recommendations. MCEDC should report regularly on actions taken and results. MCEDC should issue an annual report to the Economic Advisory Panel and to the County Executive and the County Council, in addition to the MCEDC board.

Dots to Connect: Industry, Government



CHAPTER 4: CONCLUDING OBSERVATIONS

Montgomery County is facing an inflection point in its economic future. Actions that are taken—or not taken—in the near-term will determine whether the County can fully achieve its potential as an economically competitive national and international leader. Attaining greater prosperity through the plan’s recommended priorities will be an important factor in determining the quality of life that makes all its citizens proud to call Montgomery County home.

Advancing economic development must be a primary priority for Montgomery County at this moment in time. The prosperity of local businesses benefits all Montgomery County residents and will lead to the creation of jobs for its residents. This will provide increased tax revenues for both the county and the state that will in turn lead to enhancement of the quality of life that all enjoy.

It is crucial to take these deliberate actions not solely to strengthen the economic future of Montgomery County but also for the benefit of the State of Maryland. Montgomery County is undisputedly the economic engine of Maryland. For the state to fully prosper, Montgomery County must prosper.

The potential to enhance Montgomery County’s economic development, business growth, and job creation is immense and needs only to be seized. Doing so will put the County on track towards reversing the startling data of recent years of stagnant job growth. Doing so allows the County to shake the reputation of not being business friendly and of a perceived governmental complacency towards business. Doing so announces to regional, state, national, and global peers that **Montgomery County is a top destination to conduct business and create jobs in the country.**



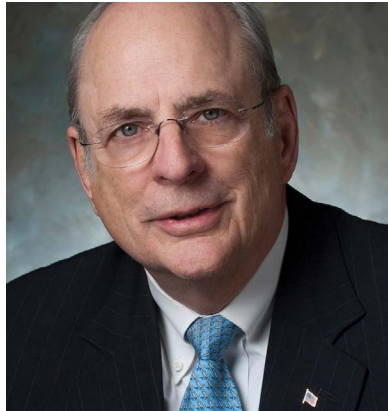
APPENDIX

- I. Biographies of Economic Advisory Panel Members
- II. Charge to the Panel and Work Procedures
- III. Economic Advisory Panel Meetings
- IV. COVID-19 Impact in Montgomery County on Specific Local Market Segments
- V. MCEDC Mission in Montgomery County
- VI. Acknowledgments



APPENDIX

APPENDIX I: MCEDC ECONOMIC ADVISORY PANEL - CO-CHAIRS



NORMAN AUGUSTINE

Retired Chairman and CEO, Lockheed Martin Corporation

A long-time Montgomery County resident, Norm Augustine is a business executive and thought leader on United States competitiveness policy. He is retired chairman and chief executive officer of Bethesda-headquartered Lockheed Martin Corporation, the nation's largest aerospace/defense contractor. He is also a former Under Secretary of the Army and Acting Secretary of the Army. His honors include the National Medal of Technology and the Department of Defense's highest civilian award, the Distinguished Service Medal, presented five times. Mr. Augustine has chaired national commissions focusing on United States international competitiveness and the future of America's space program, among others. In 2015, he chaired the Augustine Commission that was the catalyst for the transformation of Maryland's economic development structure. Mr. Augustine served on corporate boards for Procter & Gamble, Black & Decker, ConocoPhillips and Lockheed Martin and has served on the boards of the University System of Maryland, Johns Hopkins, Princeton and MIT. He was on the Executive Committee of the Business Roundtable and of the Council of Chief Executives and was founder of the Maryland Business Roundtable for Education. He earned his bachelor's and master's degrees in engineering from Princeton and holds honorary degrees from 35 universities.



DERIONNE POLLARD, PH.D.

President, Nevada State College

Dr. DeRionne Pollard served as President of Montgomery College, a three-campus academic institution that is considered one of the top community colleges in the country. In her role, she oversaw the education and student services for 60,000 credit and noncredit students. Since her arrival in 2010, Dr. Pollard pushed Montgomery College to fully embrace its community mission by also prioritizing its role as a local economic driver that can not only provide jobs for its students but also to partner with industry for workforce and curriculum development. Known nationally as an effective and charismatic leader, Dr. Pollard was extremely active in developing and strengthening partnerships with high schools, governmental agencies, social service organizations, business, and industry on behalf of the college. She served on several past initiatives including the Commission on the Future of the Community Colleges and the Commission on Research and Emerging Trends for the American Association of Community Colleges. In 2015, she was a member of the Augustine Commission that was the catalyst for the transformation of Maryland's current economic development structure. Dr. Pollard received her Ph.D. in educational leadership and policy studies in higher education from Loyola University Chicago, and her MA and BA in English from Iowa State University. After 11 years at the helm of Montgomery College, Dr. Pollard has recently accepted the position as President of Nevada State College.



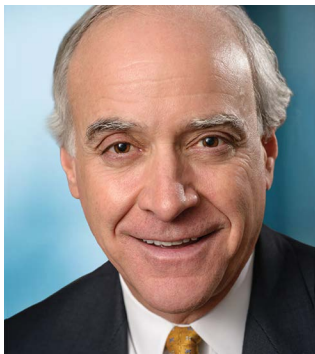


MITCHELL CHAN

CFO & Head of Corporate Strategy, Be Biopharma

Mitch Chan has more than 15 years of finance experience in the life sciences industry and currently serves as the Chief Financial Officer & Head of Corporate Strategy at Be Biopharma. Recently, he was the Chief Financial Officer at Viela Bio and was instrumental in supporting the Company through capital raises with leading global healthcare investors. He successfully raised over \$750 million USD including a 2019 US IPO. In 2021, he also led a merger agreement whereby Viela Bio was acquired by Horizon Therapeutics for \$3.1 billion. Prior to Viela Bio, Mr. Chan served as the Director of Investor

Relations for AstraZeneca, North America. Mr. Chan also held several roles of increasing responsibility at Genentech-Roche including in BioOncology Commercial Finance, R&D Finance and Mergers & Acquisitions. Mr. Chan is the recipient of Executive Certifications from Stanford University, University of California (Haas), and University of Pennsylvania (Wharton) and earned his BS in Biochemistry, MS in Medical Biophysics, and MBA (Rotman School of Management) from the University of Toronto.



DOUG FIRSTENBERG

Founding Principal, Stonebridge

Douglas Firstenberg directs firmwide strategic planning, oversees landmark development projects, and plays a key role in major transaction negotiations for Stonebridge, a real estate development firm in Bethesda. Under his leadership, Stonebridge has developed several of the region's most innovative and successful urban mixed-use properties, including breakthrough transit-oriented developments and public/private initiatives. He has more than 35 years of real estate industry experience, leading complex development projects totaling more than 10 million square feet and

over \$5 billion in value. Mr. Firstenberg graduated from Duke University with a BA and currently serves in leadership roles of several industry and charitable organizations.





JENNIFER HSIN

Partner, CNF Investments LLC

Jennifer Hsin is a Vice President at Bethesda-based Clark Enterprises, Inc. and a Partner at CNF Investments, LLC, the private equity arm of Clark Enterprises. In her role at CNF, she is responsible for sourcing and managing portfolio companies with a focus on SaaS and tech-enabled businesses. Prior to CNF, Ms. Hsin worked at BenefitNation, Inc., an early internet publishing solution company, and at Arthur Andersen, LLP in the audit division with a focus on real estate and banking. Ms. Hsin currently serves as a board member of Regent Education and ViewLift, as

a board observer for Ingo Money and Print Syndicate, and works closely with a number of portfolio companies. Ms. Hsin also works as an adjunct faculty member of the Robert H. Smith School of Business at the University of Maryland where she teaches growth strategies for early stage companies. She also serves on the Board of Advisors for the Dingman Center for Entrepreneurship at the University of Maryland and on the Board of Directors for D.C. Scores. Ms. Hsin is a CPA with a BS in both Accounting and Finance from the University of Maryland's Robert H. Smith School of Business.



A.J. JACKSON

Executive Vice President, Social Impact Investing, JBG SMITH

Brian Allan (AJ) Jackson leads social impact investing at JBG SMITH (NYSE: JBGS), a S&P 400 Real Estate Investment Trust, where he serves as an Executive Vice President. Mr. Jackson created and manages the Impact Pool, an investment fund that provides financing for the preservation and creation of workforce housing in the metropolitan Washington area. Mr. Jackson built JBG SMITH's affordable housing investment platform, raised more than \$100 million in capital from institutional and HNW investors, and has committed more than \$30 million in investment capital to sponsors.

In addition, he collaborates with other investment and development teams within JBG SMITH to incorporate affordable housing investments into the firm's market-rate platforms and sits on the firm's investment committee. Prior to joining JBG SMITH, Mr. Jackson was a partner with EYA, LLC, a Washington, D.C. area urban infill development company. He led EYA's participation in more than one billion dollars of double and triple bottom line investments including: Robinson Landing, a \$180 million waterfront mixed use development in historic Old Town Alexandria; Capitol Quarter, an eight-block mixed income community created in partnership with the D.C. Housing Authority, Forest City, and Urban Atlantic; and Shady Grove Station, a 90-acre mixed-use/mixed-income/transit-oriented redevelopment partnership with Montgomery County, Maryland. Mr. Jackson served on the investment committee and executive committee at EYA and led strategic planning for the firm. Mr. Jackson is a Global Governing Trustee of the Urban Land Institute, and member of ULI Washington's Advisory Council. He serves on the Affordable Housing Advisory Council for Fannie Mae and is a member of the Advisory Council at George Washington University's Center for Washington Area Studies. Mr. Jackson was honored as a Minority Business Leader by the Washington Business Journal and is a Trustee of the Federal City Council, a member of the Economic Club of Washington, and past president and a life director of the Maryland Building Industry Association. Mr. Jackson earned a BA with honors from the University of Alabama and an MBA with distinction from Harvard Business School.





ANJALI KATARIA

CEO and Co-Founder, Mytonomy

Anjali Kataria co-founded and leads Mytonomy, a venture and growth equity backed enterprise SaaS company based in Bethesda, MD that has developed a novel Cloud for Healthcare. Mytonomy's new CRM, delivers a powerful video-based patient engagement platform and integrated communication system that leverages the power of streaming and machine learning to engage patients in their care without added burden on clinicians. Mytonomy has also built an award winning film studio producing a new broadcast quality educational series across 70+ medical conditions helping patients to learn how to care for themselves to achieve better outcomes and a healthier, happier life. Mytonomy was recently named #835 on the 2021 Inc. 5000 list of fastest growing companies. Prior to Mytonomy, Mr. Kataria co-founded Conformia Software, a venture-backed enterprise Product Lifecycle Management company, based in Silicon Valley and acquired by Oracle in 2009 where she served as VP Product Strategy at Oracle. In 2011, Mr. Kataria was appointed Senior Technology Advisor and Entrepreneur in Residence (EIR) in the Obama Administration, and served at the FDA and The Executive Office of the President. Mr. Kataria has been recognized with the FDA Commissioner's Award for Innovation, Top 40 under 40 by the Washington Business Journal, and Top 8 Women in Health IT by Fierce. She received her AB in Public Policy from Duke University where she was awarded a BN Duke Merit Scholarship and completed her MPP in Public Policy from Harvard Kennedy School.



ALBERTO LACAZE

Co-Founder and President, Robotic Research

Alberto Lacaze is the co-founder and president of Robotic Research in Clarksburg, a leading provider of autonomy and robotic technology. He is an internationally recognized leader in robotic engineering and frequently sought-after expert speaker at technology and industry forums around the world. Mr. Lacaze is a robotics engineering visionary, who leads the Robotic Research team in developing innovations that bring greater safety and security to public transportation and defense systems through the power of robotics and supporting technologies, such as artificial intelligence and machine learning. He has written close to 100 patents in the field of robotics and automation. He is a winner of the National Institute of Standards and Technology (NIST) Jacob Rabinow Applied Research Award for "world-leading research and development in robotic perception, planning and control and its application to unmanned ground vehicles."





GRACELYN A. MCDERMOTT

VP of Marketing, Sales and Business Development, Kaiser Permanente

Gracelyn A. McDermott is the Vice President of Marketing Sales and Business Development at the Rockville-based Kaiser Permanente of the Mid-Atlantic States region. She is an innovative and diverse executive with over 20 years of experience in Project, Program and Sales & Account Management. Kaiser Permanente is recognized as one of America's leading health care providers and not-for-profit health plans. In her role at Kaiser Permanente, Ms. McDermott is responsible for marketing, sales & business development, providing

leadership in the development and execution of market and business strategies that deliver predictable and sustainable growth in membership, revenue, and margin. Ms. McDermott holds a MBA from Johns Hopkins University with an undergraduate degree from Mount St. Mary's University. She is the Chair of the Maryland Chamber of Commerce.



SOPHIA MAROON

Founder and CEO, Dress It Up Dressing

Sophia Maroon is the Founder and CEO of Dress It Up Dressing (SoFine Food LLC), a specialty food company based in Bethesda, MD, that produces a line of six all-natural salad dressings. Founded in 2012, Dress It Up Dressing has grown from one single store to become a multi-channel national brand available at retail chains nationwide including Whole Foods, Giant Food, Central Market as well as online and through Amazon. Dress It Up Dressing is a two-time winner of a Specialty Food Association "SOFI" Award, and has won a Good Food Award. The company has also been named "Best

for the World" for the past three years by B-Lab in recognition of its social mission. Ms. Maroon served on the Montgomery County Food Council for four years. Prior to founding SoFine Food, Ms. Maroon was a documentary filmmaker, who produced programs for PBS, ABC and MSNBC while based in New York and Washington D.C. She is a graduate of the University of St. Andrews, in Scotland.



DAVID MARRIOTT

Director, Board of Directors, Marriott International, Inc.

David Marriott was elected to the Marriott International Board of Directors, effective March 15, 2021, in anticipation of eventually assuming the position of Chairman of the Board in 2022. Mr. Marriott joined Marriott International in 1999 and has held several operational roles during his tenure with the company. As President, U.S. Full Service Managed by Marriott, he was responsible for oversight of more than 330 hotels operating under 14 brands in 34 states and French Polynesia. In this capacity, he oversaw Hotel Operations, Human Resources, Sales & Marketing, Finance, Market

Strategy, Information Resources and Development & Feasibility. Previously, Mr. Marriott served as Chief Operations Officer for the Americas Eastern Region from 2010 to 2018, where he was responsible for hotel operations in 23 states. During this time, he also oversaw the U.S. integration efforts of Marriott's acquisition of Starwood Hotels & Resorts. Mr. Marriott is a graduate of the University of Utah.





TONY PARCHMENT

Founder, Upstart Connectors

Tony Parchment co-founded an IT services firm, Buchanan & Edwards, in 1998 and served as president before stepping down in 2015. As Buchanan & Edwards' president, Mr. Parchment worked with the leadership team to define the strategic direction for the firm, focusing specifically on identifying new opportunities to implement Buchanan & Edwards solutions that streamlined and improved business processes for new and existing clients. He now serves on the board of directors at Buchanan & Edwards, providing strategic oversight and supporting strategic initiatives. In 2018, Mr. Parchment founded Upstart Connectors which enables driven, coachable individuals to chart a meaningful course in life. He also co-founded the Montgomery County Black Business Council, an alliance of Black business owners in Montgomery County with a commitment to helping their businesses grow and thrive by sharing knowledge, building strong relationships, holding each other accountable, and supporting the community. Mr. Parchment earned a BS in Management Information Systems from the McIntire School of Commerce at the University of Virginia and has completed executive education courses at the University of Virginia's Darden School of Business.



TODD PEARSON

President and Chief Operating Officer, BF Saul Co.

Since 2005, Todd Pearson has served in a leadership role at BF Saul Co., a Bethesda-based real estate firm. Prior to his current role as President and Chief Operating Officer, Mr. Pearson served as Executive Vice President of Real Estate, Senior Vice President of Acquisitions & Development and Director of Internal Audit. His specialties include financial analysis of real estate acquisition and development projects, contract negotiation, and entitlement and re-zoning. As the point man for land acquisitions and community outreach for B.F. Saul Co. and its affiliates, Mr. Pearson has influenced the development of projects throughout the Greater Washington region. Most recently, he helped build consensus for Saul's 2.8 million-square-foot Twinbrook Quarter, a mixed-use project slated to result in more than \$1.5 billion in investment in Rockville. Mr. Pearson was recognized by the Washington Business Journal as one of the Top 40 Under 40. He is the past Chair of the Loudoun County Economic Development Advisory Commission and currently serves on the Executive and Finance Committee of Rockville Economic Development, Inc. as a board member and Treasurer. Mr. Pearson holds an MBA from the University of Virginia Darden School of Business.





DAVID POLLIN

Co-Founder and President, The Buccini/Pollin Group

Dave Pollin is the Co-Founder and President of The Buccini/Pollin Group (“BPG”), co-headquartered in Chevy Chase, MD and Wilmington, DE. He also serves as Chairman of PM Hotel Group, the hotel management affiliate of BPG. The company has acquired and developed over \$5 billion of properties in every real estate asset class throughout the United States since its founding in 1993. BPG is the developer, owner and operator of over 50 hotels, seven million square feet of office space, 15 major residential communities, numerous retail properties, and multiple sports/entertainment venues. Among BPG’s affiliates, PM Hotel Group manages 60+ hotels and over \$600 million of managed revenue, ranking it as the 15th largest independent hotel management company in the United States. Prior to cofounding The Buccini/Pollin Group and PM Hotel Group, Mr. Pollin was a consultant with Laventhol & Horwath and worked in operations with hospitality leaders Westin and Sheraton. Mr. Pollin graduated from Cornell University’s School of Hotel Administration.



DAN SCHRIDER

President and CEO, Sandy Spring Bank

Dan Schrider is the Vice Chairman, President and Chief Executive Officer of Sandy Spring Bancorp, Inc. and Sandy Spring Bank. Headquartered in Olney, Sandy Spring Bank is the largest community bank in the Washington, D.C. area. Mr. Schrider has been part of Sandy Spring Bank for more than 30 years. He joined the company in 1989 as a commercial lender and became an executive and the bank’s Chief Credit Officer in 2003. He was named President and Chief Executive Officer in 2009. Mr. Schrider holds a bachelor’s degree from the University of Maryland and an MBA from Mount St. Mary’s University. He is also a graduate of the American Bankers Association Stonier Graduate School of Banking. A leader among community bankers, Mr. Schrider has previously served as a director of the American Bankers Association and the chairman of the Maryland Bankers Association.



VIN SINGH

Founder and CEO, Bullfrog A.I.

Vin Singh founded and leads Gaithersburg-based Bullfrog A.I. Holdings, an investor-backed life sciences company in precision medicine. The company mission is to find the link between therapies and patients through a proprietary artificial intelligence technology platform. Bullfrog A.I. seeks to revolutionize drug development and predict which patients will benefit from which medications, effectively improving clinical outcomes and eliminating the problem of trial-and-error prescriptions. Mr. Singh has extensive start-up experience having founded and built several companies in the life science space including BullFrog, Next Healthcare Inc., and MaxCyte Inc. Most recently, he led ThermoFisher Scientific’s global cell therapy services business. Mr. Singh has a BS in Electrical Engineering from Rutgers University, an MS in Biomedical Engineering from Rensselaer Polytechnic Institute, and an MBA from Johns Hopkins University.



JOHN TEGEN

Former VP of Engineering, StayNTouch

Bethesda-based StayNTouch is a hospitality technology company that brings an entirely new approach to how hotels can dramatically streamline operations, increase margins, and help hotels connect and engage their guests. As Vice President of Engineering for StayNTouch since 2018, Mr. Tegen has over 30 years of experience in software engineering for a wide variety of industries, ranging from education to cybersecurity to virtual reality and gaming. Mr. Tegen holds a BS degree in Aerospace Engineering from the University of Maryland, College Park and an MBA in Technology Management from University of Phoenix.



FATA ANTOINETTE TOGBA-MENSAH

Founder, FAsMarketplace

Fata Antoinette Togba-Mensah is a small-business operator, textile artist and the creator of FAsMarketplace. A native of Liberia with a M.Ed., Ms. Togba-Mensah created FAsMarketplace to use the arts as a catalyst for economic growth and community development by creating tangible opportunities for a diverse group of creative entrepreneurs to grow their businesses and reinvest in the local community. Silver Spring-based FAsMarketplace believes that community social shopping can be holistic by bringing together community, education, arts, entertainment, health/fitness, and

shopping. It seeks to provide a safe space for these creatives to grow and where cultural diversity is embraced and celebrated.



STEVEN M. WALKER

Head of Global Early Commercial Strategy, GlaxoSmithKline

Steven Walker is an accomplished life sciences business professional who has served as Head of Global Early Commercial Strategy at GlaxoSmithKline (GSK) since 2020. GSK is a global multinational corporation with its U.S. vaccine headquarters in Rockville. Mr. Walker's extensive experiences include developing pipeline and commercial strategies to maximize market potential, and he has worked on product development in a wide variety of therapeutic areas. Mr. Walker holds a BS in Neuroscience, an MBA, and an MHA, all from the University of Pittsburgh, and has

completed executive training programs at Harvard, MIT, and the University of Pennsylvania.





MARK WALSH

Angel Investor

Mark Walsh is an entrepreneur and venture capitalist. He recently stepped down as CEO of FactSquared, an AI company, upon its sale to FiscalNote. He was the Head of Investment and Innovation for the Small Business Administration (SBA) during for the Obama Administration. Prior, he had a 30+ year career in technology, media, venture capital, and angel investing. He was CEO of a high growth public company, VerticalNet, was a senior executive at General Electric, AOL, and HBO, and has run, invested in and/or served on the board of a number of high-profile public and private companies, including BlackBoard, NutriSystems, half.com (bought by eBay), Day Software (bought by Adobe), Transactis (bought by MasterCard), Homesnap (bought by CoStar) and many others. He got into the convergence of technology and politics early, serving as the first chief technology advisor to the Democratic Party and was the founding CEO of Air America Radio. He also served as a venture partner for Revolution, Inc., the investment fund started by his AOL colleagues, Steve Case and Ted Leonsis. Mr. Walsh was the chairman of the board of his college alma mater, Union College in New York and chair of the Entrepreneurial Center at the University of Maryland. He is currently chair of the New Leaders Council, board member of the Bipartisan Policy Center, and board member of Princeton University's Citizens and Scholars program. He received an MBA from Harvard Business School.



APPENDIX II: CHARGE TO THE PANEL AND WORK PROCEDURE

As the lead economic development organization for Montgomery County, MCEDC has long recognized the need for a private sector-centered Action Plan that creates unified steps from government, the business community, academia, and key external stakeholders to secure and strengthen the local economy. This harmonized plan can also be useful to effectively prevent or mitigate future large-scale economic disruptions, such as a future pandemic or recession.

A number of entities through the years have issued reports on how Montgomery County can improve its competitiveness, support economic development, and promote certain industry sectors. This surplus of strategies without coordination has caused confusion at times and helped to create inertia. There was a necessity for a unified roadmap of priorities that encourages stakeholders to take the deliberate steps needed to ensure sustainable growth.

Thus, the 20 member Economic Advisory Panel was charged with crafting a consensus economic development framework to support job growth and sustainability in the post-pandemic world. The panel's creation also serve as a call to action for the public and private sectors to jointly commit to enhancing Montgomery County's economic development and competitiveness through a set of collective priorities.

For four months from April to July 2021, the Economic Advisory Panel convened monthly. They critically examined several years of data, analyses, and recommendations from past local economic development reports. These reports, culled from the past six years including during the COVID-19 pandemic, had been produced with input from hundreds of Montgomery County business leaders, subject matter experts, and industry specialists.

The panel synthesized common themes from these past efforts that included over 20 reports with 90-plus recommendations. The recommendations of the panel are thus founded on the overall material presented in these reports augmented with the panelists' own collective experience of over 400 cumulative years conducting business in Montgomery County at firms having annual revenues from a few million to \$50 billion.

Another significant basis for this plan is the 2020 Reach Advisors report that was jointly commissioned by MCEDC and the Montgomery County Business Roundtable. The Reach Advisors report analytically assessed Montgomery County's economic history, competitive advantages, and case studies for future growth.

It should be noted that the recommendations in this Economic Advisory Panel Action Plan are not designed to be exhaustive. The charge to the panel intentionally limited the panel's scope. The overarching goal was to develop consensus priorities and find agreement for stakeholder action. Broader issues affecting economic development and competitiveness than those raised in this Action Plan are expected to be addressed in the Montgomery County Comprehensive Economic Development Strategic Plan to be produced by MCEDC at the end of this year.



APPENDIX III: ECONOMIC ADVISORY PANEL MEETINGS

To help guide Montgomery County's economic planning, MCEDC established a blue-ribbon advisory panel of business executives to help synthesize and prioritize past economic growth recommendations. This four-month April–July 2021 effort provided an industry-led, private sector-centered, consensus driven action plan to move all stakeholders effectively and expeditiously towards a full economic recovery from the COVID-19 pandemic crisis and provide a foundation for future growth.

MEETING 1: APRIL 7, 2021 (INTRODUCTIONS & IDENTIFICATION OF ACTION PLAN PRIORITY FOCUS AREAS)

Pre-Meeting Task	Pre-Meeting Deliverables	Meeting Goals
Review and compile existing Montgomery County economic development studies	EAP Background Memo Existing Studies Appendix Aggregated Folder of Existing Studies with recommendations	Provide baseline information on Montgomery County economic development history and current key economic indicators Establish consensus on EAP focus areas

MEETING 2: MAY 6, 2021 (IDENTIFICATION OF ACTION PLAN SUBCATEGORY PRIORITIES)

Pre-Meeting Task	Pre-Meeting Deliverables	Meeting Goals
Organize and refine consensus focus areas	EAP Meetings Outline & Expectations Focus Areas Memo & List of Potential Subcategories	Establish focus area consensus on identified subcategory priorities Select panel members to help lead development of priority topics

MEETING 3: JUNE 10, 2021 (DEVELOPMENT OF EXECUTION STRATEGIES FOR ACTION PLAN PRIORITIES)

Pre-Meeting Task	Pre-Meeting Deliverables	Meeting Goals
Collaborate with panel to draft action plans for each priority focus area	Economic Action Plan Template for review and discussion Refine and establish consensus on implementation and execution of focus area action plans	Establish focus area consensus on identified subcategory priorities Select panel members to help lead development of priority topics

MEETING 4: JULY 8, 2021 (REVIEW ACTION PLAN DRAFT AND NEXT STEP ACTIVITIES)

Pre-Meeting Task	Pre-Meeting Deliverables	Meeting Goals
Develop Economic Action Plan draft report	Economic Action Plan Draft Proposed Timeline for Strategic EAP Implementation and Execution	Comment and achieve consensus on EAP draft report Develop strategies on how to execute EAP recommendations Discuss next step activities (press, webinars, public hearings)



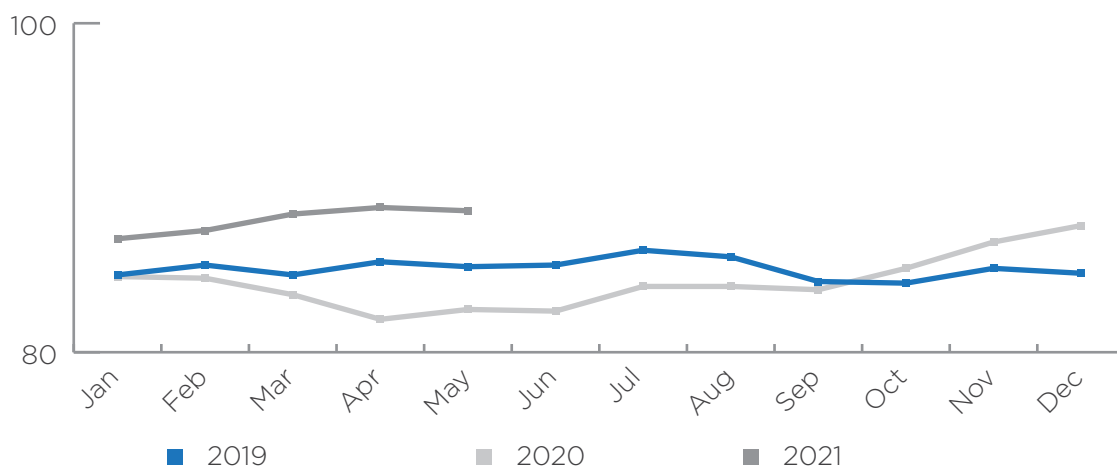
APPENDIX IV: COVID-19 IMPACT IN MONTGOMERY COUNTY ON SPECIFIC LOCAL MARKET SEGMENTS

The global economy was devastated by the COVID-19 pandemic and Montgomery County has not been immune. The following is an analysis of selected affected jobs in Montgomery County, broken down by industry in the Montgomery/Frederick Washington MSA based on data from the North American Industry Classification System (NAICS) sector codes. The following paragraphs summarize the impact of the pandemic on employment in four business sectors of particular importance to Montgomery County.

Professional, Scientific, and Technical Services (NAICS 54)

- Professional, Scientific, and Technical Services is Montgomery County’s largest industry sector, both in terms of the number of jobs located in the county and the number of residents who work in this sector. NAICS data combine 54 groups in the Professional, Scientific, and Technical Services code. They include white collar professions such as consulting, law, research & development, government contracting, architecture, and engineering.
- Much like overall national employment, Professional, Technical, and Scientific Services sector lost many jobs in Spring 2020. Unlike overall employment, however, the number of Professional, Technical, and Scientific Services industry jobs has not only recovered but now actually exceeds pre-pandemic levels. This is likely due to a growth in federal spending by such organizations as the National Institutes of Health (NIH) and the Food and Drug Administration (FDA) as a response to the pandemic.

Professional, Technical, and Scientific Services Jobs in Montgomery and Frederick



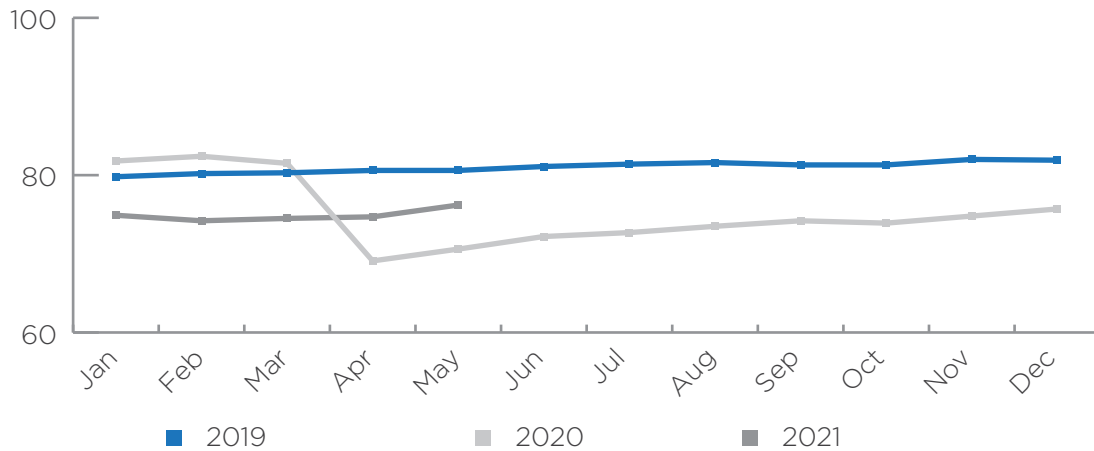
Source: U.S. Bureau of Economic Analysis

Healthcare and Social Assistance (NAICS 62)

- Montgomery County’s fastest growing employment sector includes hospitals, medical offices, diagnostic laboratories, home healthcare companies, assisted living facilities, and daycare centers.
- Much like overall employment, Healthcare and Social Assistance sector lost jobs in Spring 2020. Recovery since then has been gradual. The number of jobs at hospitals had minimal net gains during the pandemic. Losses at daycare centers, assisted living facilities, and dentist offices have persisted, resulting in a slower recovery for healthcare and social assistance overall.



Healthcare and Social Assistance Jobs in Montgomery and Frederick

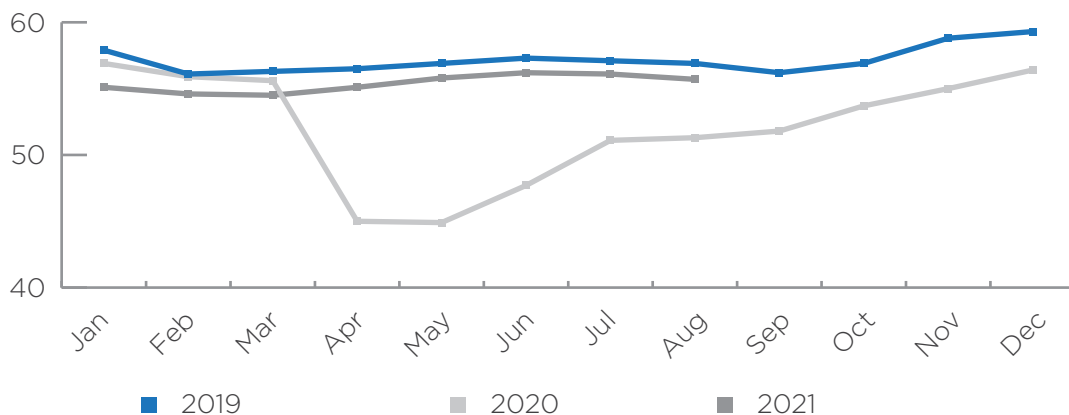


Source: U.S. Bureau of Economic Analysis

Retail (NAICS 44-45)

- Montgomery County's third largest private sector segment includes a full range of retail establishments like grocery stores, department stores, automobile dealerships, specialty stores, gas stations, and convenience stores.
- The retail sector lost many jobs beginning in the spring of 2020 after mandatory government quarantine measures were invoked. In April 2020, there were 10,000 fewer retail jobs than there were in April 2019 before the pandemic. However, despite early dire projects, retail is now recovering much of its job loss. In April 2021, there were only 1,500 fewer retail jobs than there were in April 2019 pre-pandemic. Much of the sustained job loss in the county is concentrated in department stores, which reflects national trends. Due to an increase in online shopping especially during the pandemic, department stores lost many customers. On a positive note, food and beverage stores have now grown in employment beyond pre-pandemic levels.

Retail Jobs in Montgomery and Frederick



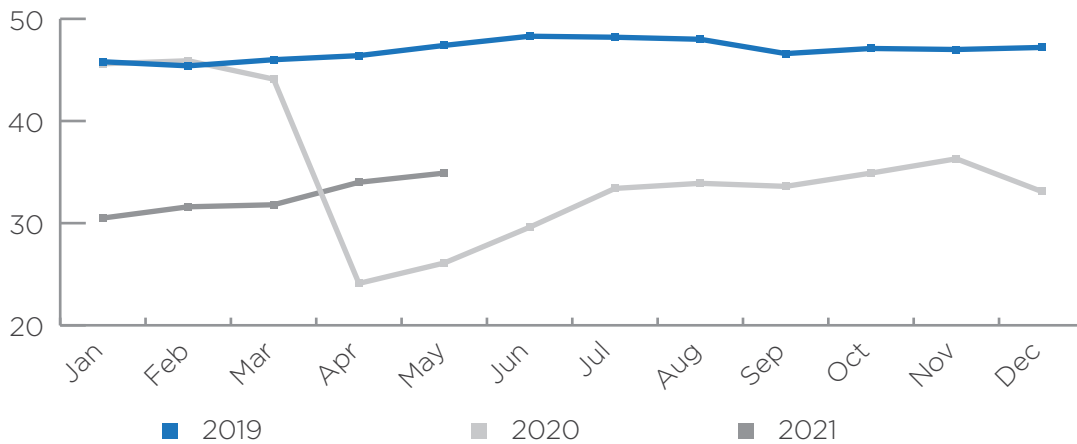
Source: U.S. Bureau of Economic Analysis



Accommodation and Food Services (NAICS 72)

- The Accommodation and Food Services sector, both locally and nationally, has been the most severely impacted by the pandemic. While the sector includes several types of businesses, most of the jobs are in restaurants. Other businesses in this industry include hotels/motels, caterers, coffee shops, and bars. It only includes physical hotels; it does not include headquarters operations.
- Accommodation and Food Services lost over one-third of its jobs from March to April 2020. As government public health restrictions were lifted, employment has undergone modest recovery. With public safety concerns and the mutation of COVID-19 variants, it remains unclear if consumers will resume pre-pandemic dining and travel habits, particularly in the near-term.
- Montgomery County's local hotel industry is dependent on business travel to the country and to the Washington, D.C. area. If employers reduce business travel in perpetuity in favor of virtual meetings, this will reduce the ability of the county's hotels to recover.
- The county's hotel and hospitality headquarters, such as Marriott and Choice Hotels, are included in a separate industry code: NAICS 55 Management of Companies.

Accommodation and Food Services Jobs in Montgomery and Frederick



Source: U.S. Bureau of Economic Analysis



APPENDIX V: MCEDC MISSION IN MONTGOMERY COUNTY

The Montgomery County Economic Development Corporation (MCEDC) was established on July 1, 2016 as the public-private organization to support business attraction, retention, and expansion. The organization's mission is to assist businesses growth and relocation to Montgomery County by providing access to top talent, business resources, market intelligence, and prime locations. In addition, MCEDC develops initiatives to support the County's entrepreneurial and innovation economy and nurture the conditions for diverse and sustainable industry growth.

During the global COVID-19 pandemic, MCEDC has been a leader in supporting the Montgomery County economic response and recovery. MCEDC has created new initiatives and administered over \$22 million in direct business assistance programs to support business survival and continuity of operations.

On May 27, 2021, the County Council unanimously enacted Bill 10-21 to transfer responsibilities for drafting the County's economic development strategic plan from the County Executive to MCEDC. This statutory change reflected the growing recognition of MCEDC's subject matter expertise and leadership capability to provide strategic direction for the County's evolving economy.

The organization is currently governed by an 11 member board of directors comprised of local business executives appointed by the County Executive and confirmed by the County Council. The board includes one member from the County's reorganized workforce development organization, WorkSource Montgomery, in addition to three ex-officio board members from the County Executive's office, the County Council, and the Maryland Department of Commerce.

MCEDC Statutory History

MCEDC evolved from a decision in 2014 by County Executive Isiah Leggett to privatize the county's economic development function. The County Council enacted Bill 25-15 on June 30, 2015, which formally eliminated the Montgomery County Department of Economic Development (DED), a governmental organization, and authorized the Council to designate a nonprofit organization as the lead economic entity.

The principal aim of Bill 25-15 was to privatize DED's core functions and facilitate greater involvement and collaboration with the local business community in confronting the County's rapidly changing economy. The decision to transition the County's economic development structure was based on extensive community input, assessment of neighboring jurisdiction models, and profound changes in the region's economy and competitive landscape. MCEDC formally incorporated as a 501(c)(3) nonprofit organization on October 2, 2015 after the County Council passed the statute creating MCEDC.



APPENDIX VI: ACKNOWLEDGMENTS

The Economic Advisory Panel wishes to acknowledge the work of the many individuals who have contributed to this report, including conducting research, administering its meetings, and providing invaluable assistance to the panel as it created this Action Plan. The panel wishes specifically to thank the entire Montgomery County Economic Development Corporation (MCEDC) staff for their collective engagement and the MCEDC Board of Directors, especially Chair Robby Brewer, Vice Chair Kevin Beverly, and Panel Liaison Elana Fine, for their support.

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