Center for Rural Entrepreneurship
energizing entrepreneurial communities

Scenario Adjustment Factors

Rural Maryland TOW Scenarios

Background and Introduction

As part of the 2017 Rural Maryland Transfer of Wealth Opportunity scenarios, we have completed analysis of unique issues, trends or factors that potentially can impact our scenarios not generally picked up during our standard analysis. This paper summarizes the potential scenario adjustment factors we considered and completed additional analysis. This paper is a supplement to our TOW Findings Research Report.

Adjustment Factors Analysis

The most detailed research on household wealth holding is at the national level. The Federal Reserve through its Survey of Consumer Finance and its Financial Accounts of the United States report which calculates household current net worth (Table B.1 on page 8) provides detailed information on household wealth holding in the United States. Other national research provided by the U.S. Census (regarding Median Household Current Net Worth), the Esri Corporation, and other private research and financial organizations supplement this information.

In each of our TOW studies, we begin analysis with how a community compares to the United States based on the previously mentioned research, and then we employ the following scenario adjustment factors to refine each community's TOW scenarios. The following adjustment trends, issues and factors were included in our additional analysis in support of the Rural Maryland TOW Study:

1. Demographic Trends and Urban Growth Hubs
2. Educational Attainment
3. Dividends, Interest and Rent Income
4. Special Populations
5. Group Quarters Residents
6. Former Residents
7. Factors Impacting Future Growth
8. The Federal Government and Defense
9. Creative Class, Entrepreneurship and Innovation
10. Real Estate and Agricultural Wealth
11. Seasonal and Vacation Homes
12. Climate Change, Extreme Weather Events and Sea Level Rise
13. Energy and Other Natural Resource Development

In each of the following sections, we will provide a brief summary of the adjustment factor, why it is important to our TOW scenarios, and how we adjusted our base scenarios because of this factor.

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Questions and Additional Information
Don Macke – Center for Rural Entrepreneurship
don@e2mail.org – 402.323.7336

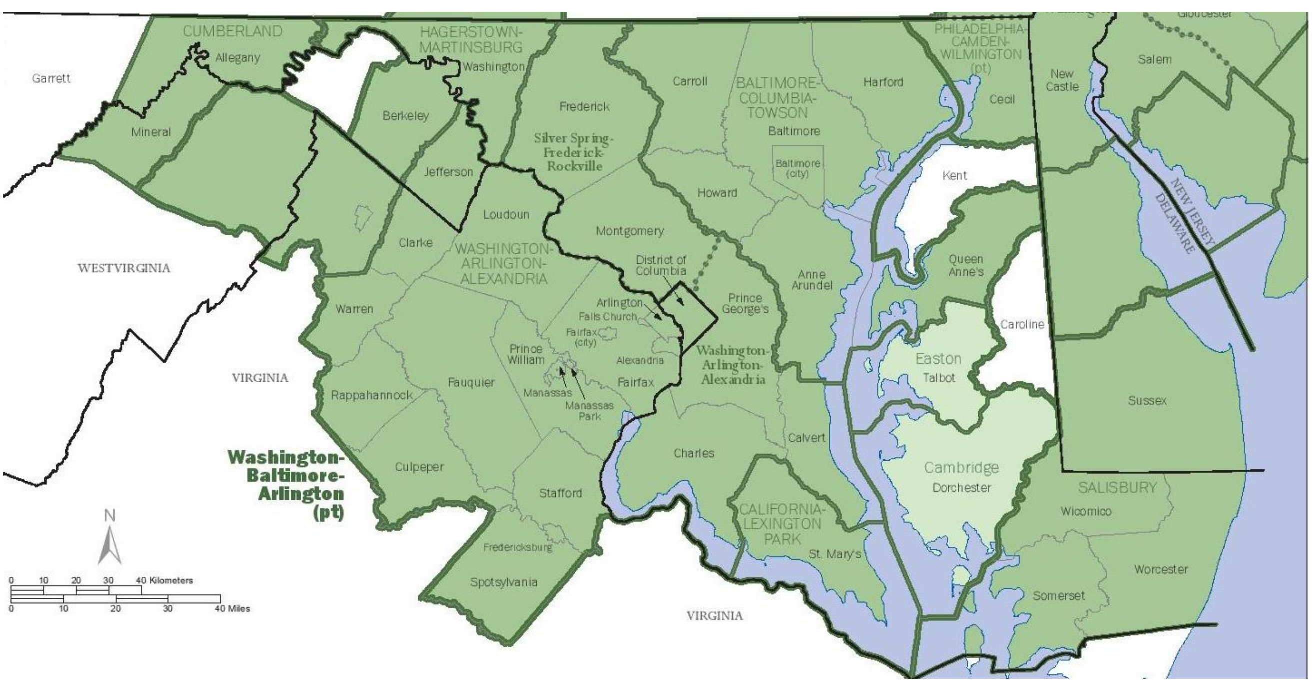
Demographic Trends and Urban Growth Hubs

What? Every state and every community has a unique demographic footprint with varying age cohorts (e.g., 0 to 5 or 85 plus households). Some communities have an aging population with higher concentrations of older residents while other communities are growing younger as immigrants and younger families are moving in to the community. Additionally, across the geographic landscape, there are "urban growth hubs" or employment centers that impact entire regions. Our analysis explores these growth or employment hubs and their relationship with adjacent communities.

Why? Current demographic structure coupled with likely changes in the community's demography over the scenario period can significantly impact wealth formation rates and ultimately the size and timing of inter-generational wealth transfer. Additionally, strong growth and employment hubs can drive economic activity, wealth formation and TOW opportunity.

Rural Maryland? Fortunately through its State Demographer Office – Projections and State Data Center, Maryland Department of Planning (www.mdp.state.md.us/msdc), the State of Maryland has both current and robust population forecasts for each county within Maryland. Our TOW scenarios are employing these forecasts, and we have not found any rationale to adjust these Data Center forecasts. These forecasts were updated in January 2015 and reflect demographic realities in the post-Great Recession period. The Data Center forecasts run through to 2040. Our TOW scenarios extend through 2066 or 26 years beyond the Data Center forecasts. Our team has extended the Data Center's 2040 forecasts out through 2066 employing very conservative assumptions about change. These forecast extensions have been completed in consultation with Mr. Alfred P. Sundara, AICP, Manager of Projections and State Data Center with the Maryland Department of Planning.

We have made no further adjustments for urban growth or employment hubs in our Maryland county analysis.

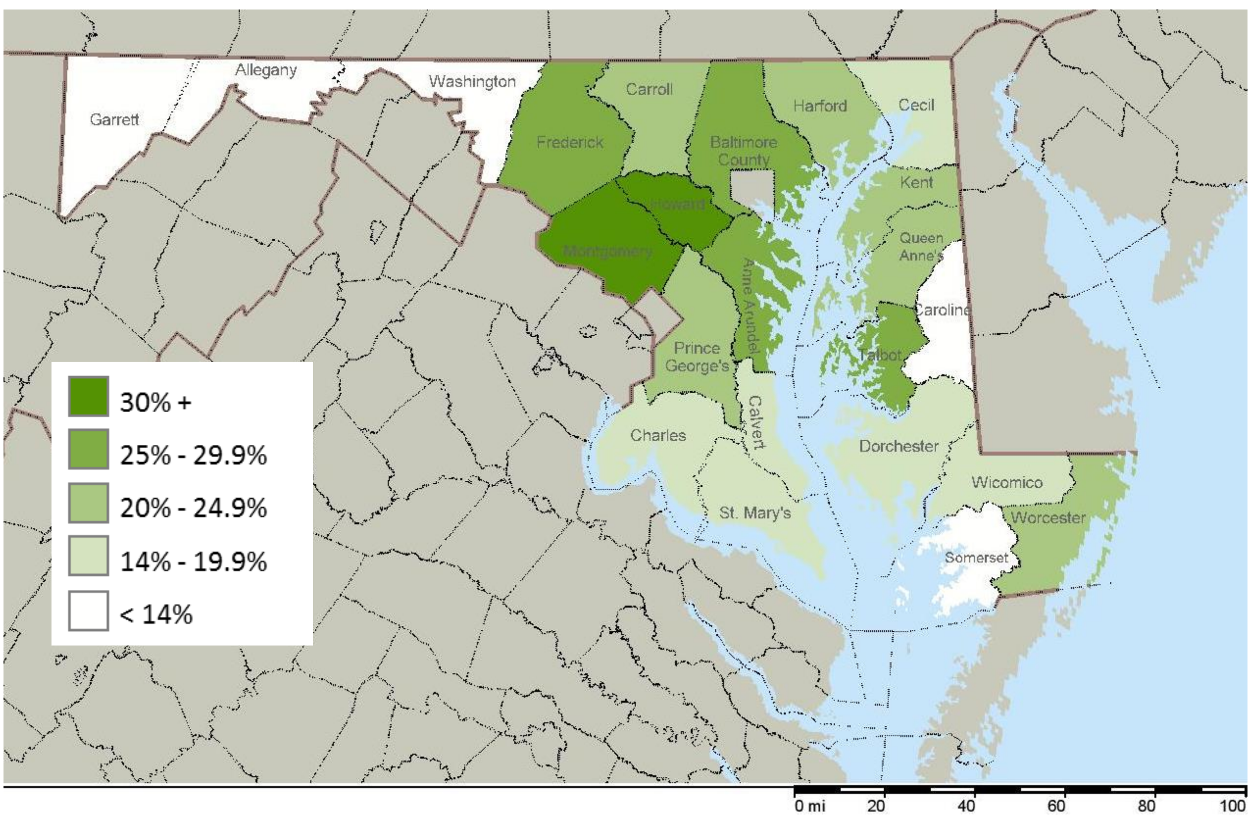


Educational Attainment

What? Historically, there has been a strong correlation between educational attainment, earnings and wealth formation. Over time, educational attainment has risen as higher education has become more necessary to realizing higher earnings and wealth formation than the general population. In the past, the key to a successful and secure middle class living and estate was a high school degree. In time, a bachelor's degree was the likely ticket to personal success. Today, the threshold has risen even higher where degrees are less important and the kind of degree, skills and experience to enable higher earnings and wealth formation.

Why? Where there are higher concentrations of better-educated persons, we typically see higher earnings and wealth formation rates. In this case, we are looking at the share of a community's population with a bachelor's, graduate or professional degrees as a percent of the total population. Where we have more highly educated residents, we will make adjustments in our TOW scenario wealth formation rates.

Rural Maryland? The following map illustrates the share of each county's population with a bachelor's, graduate or professional degree as a percent of the total population.

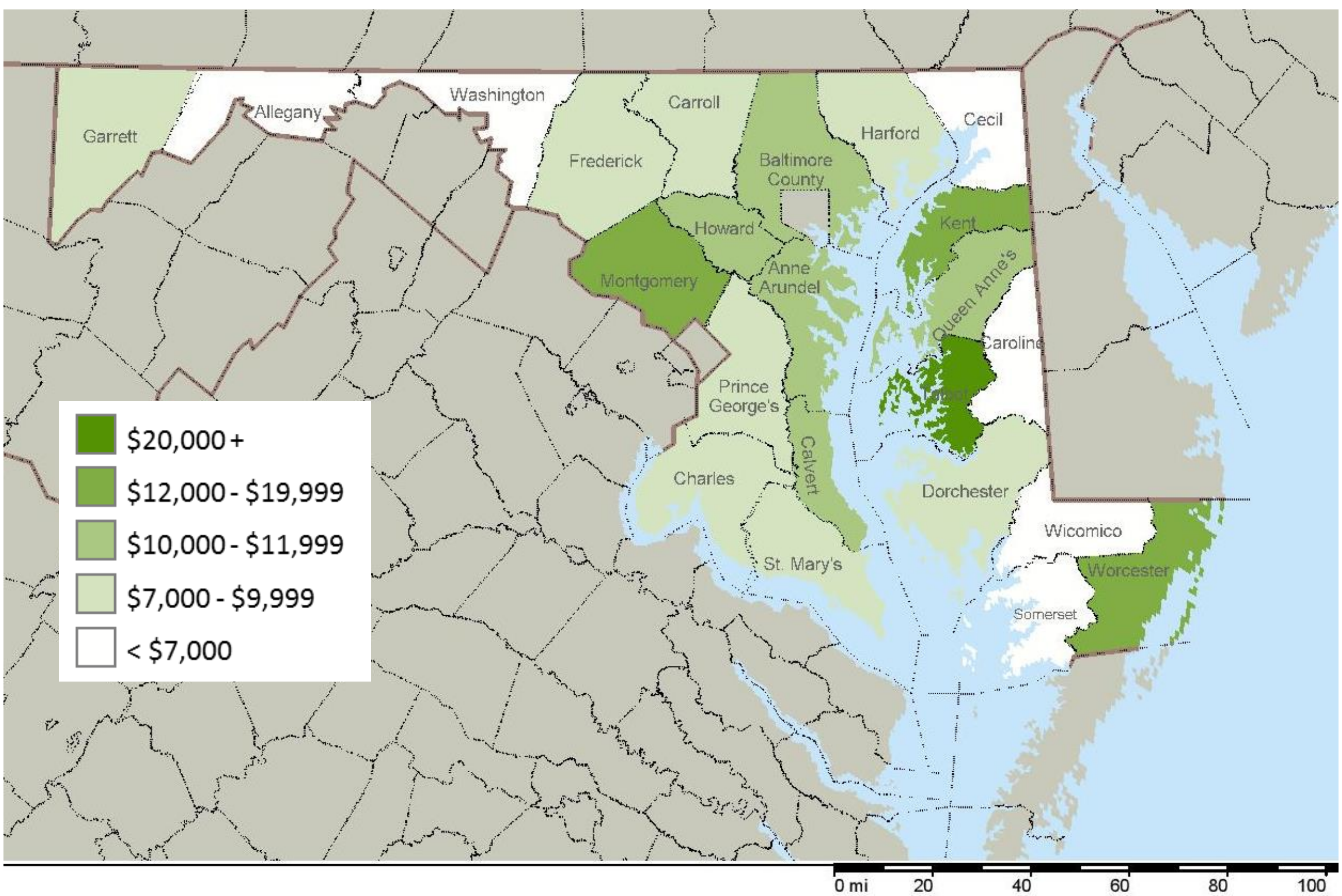


Dividends, Interest and Rent Income

What? Dividends (earnings from stock for example), interest (certificates of deposit related interest for example and rent income (income generated from owning rental properties or farm ground) are valuable indicators of wealth. Royalty income derived from minerals and energy also typically fall into DIR or dividends, interest and rent income.

Why? DIR reflects ownership of assets such as mineral rights, forest lands, farming and ranching operations, rental properties and the like. In communities with relatively high DIR income, overall wealth holdings can be higher than other sources might estimate. For those communities with very high DIR income levels relative to total personal income, we will explore if our base TOW model is fully capturing reflected wealth. It should be noted that a person living in one community might have assets in another community transferring wealth from one location to the next.

Rural Maryland? The following map illustrates for Maryland concentrations of DIR income and potential pockets of deeper wealth and TOW opportunities.



Special Populations

What? Special populations can include Tribal Reservations, Amish and other insular communities, pockets of first generation immigrants and high concentrations of union workers.

Why? Special populations often have unique cultural and socioeconomic characteristics that vary significantly from the general population. For example, Mormon communities are very productive, entrepreneurial and financially successful when compared to American average benchmarks. However, these communities have deep ties to the Church and philanthropy is often predominately focused on Church related or sponsored activities. This tendency in philanthropic behavior may challenge the potential for giving to more secular charities.

Immigrants

Immigrants generally are more entrepreneurial when compared to resident populations. Typically, by the third generation, immigrants have higher incomes and wealth when benchmarked to the overall community.

Rural Maryland? Based on our research and analysis, we have not identified concentrations of special populations sufficient to require adjustments to our base TOW scenarios.

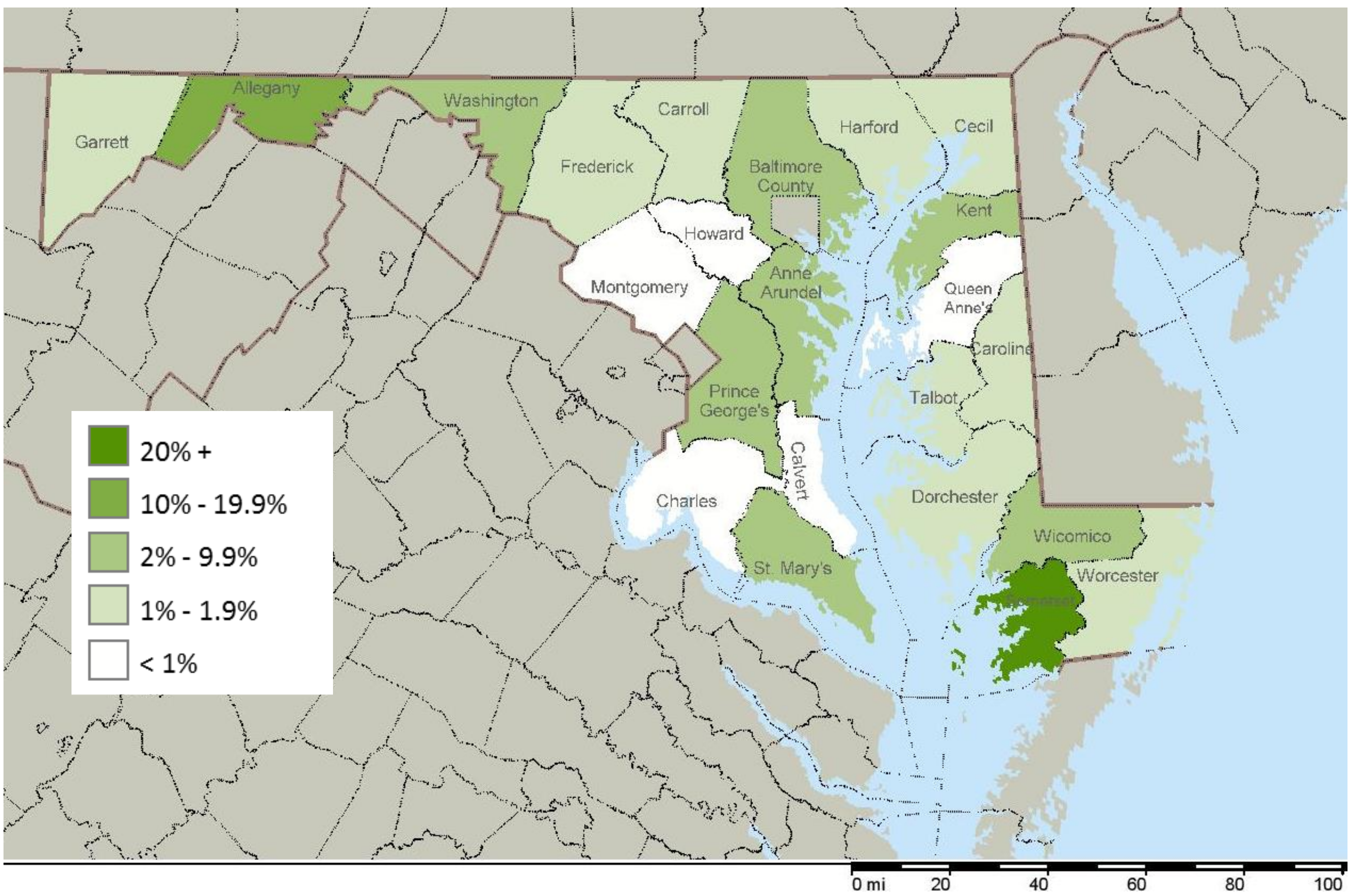
We need input from the TAC members regarding this factor based on area and local knowledge.

Group Quarters

What? The U.S. Census Bureau counts group quarters residents including all institutionalized populations such as persons in correctional facilities (both adults and juveniles) and nursing homes. Also counted in group quarters are non-institutionalized populations such as college and university housing and military quarters.

Why? Large concentrations of group quarters residents can distort both absolute and per household wealth and TOW estimates. Where we find high concentrations of group quarters populations, we adjusted our TOW scenarios to discount these residents. Both institutionalized and non-institutionalized populations have limited incomes and wealth in general.

Rural Maryland? The following map identifies the group quarters concentration levels:



For any county with 10% or higher group quarters population relative to the community's total population we have conducted additional review and made adjustments to ensure that there are not distortions in our TOW scenarios for these communities.

Former Residents

What? Many communities ranging from rural counties in Western Kansas to inner-city neighborhoods in New York produce young adults who leave and succeed financially in life. We call these "former residents," and they can represent a potential donor class not included in our base TOW scenarios.

Former Resident Donors

While our TOW estimates cannot project giving potential by former residents, we know from field experience that connected first generation former residents are prime donor candidates.

Why? For some of these former residents, they continue to have connections to their "hometowns." There may be family, friends or real estate connections that are strong. Some of these first generation former residents continue to come home and follow their hometown's development. Former residents can represent another donor pool for some communities where these connections are strong and being cultivated. Again, our base TOW scenarios do not capture this TOW potential.

Rural Maryland? There are clearly communities in rural Maryland that have exported residents who have become successful in life. However, we do not see a profound pattern of outmigration as might be the case in the Black Belt of the Deep South or the Great Plains where chronic and severe outmigration and depopulation are powerful trends. Based on our research and analysis, we have not made additional adjustments to our base TOW scenarios because of former residents.

Factors Impacting Future Growth

What? Our 50-year scenarios are heroic. Think about the dramatic changes over the last two generations or 50 years in America or Maryland. Profound changes can and do occur over these long periods. Cultural, demographic and economic changes can impact future growth and shape our TOW scenarios. For example as a rural county experiences increasing urbanization, there can be associated increases in congestion, perceptions of safety and rising costs of living and doing business. Rural spaces fill up with urbanization and further urbanization becomes harder and more costly.

Why? A community that grew historically (say 1970 through present) at a rapid 3 to 8 percent annual growth rate eventually urbanizes and the rate of growth is bound to slow down. With slower growth, the rate of new wealth formation moderates and so do the TOW opportunities. These dynamics can impact our TOW scenarios based on places undergoing significant and sustained change.

Rural Maryland? We believe Maryland's State Demographer has done a solid job in capturing these dynamics in their current 2040 projections. Therefore, we are not proposing changes in our base model for factors impacting future growth.

TAC input… County specific growth factors and adjustments here.

The Federal Government and Defense

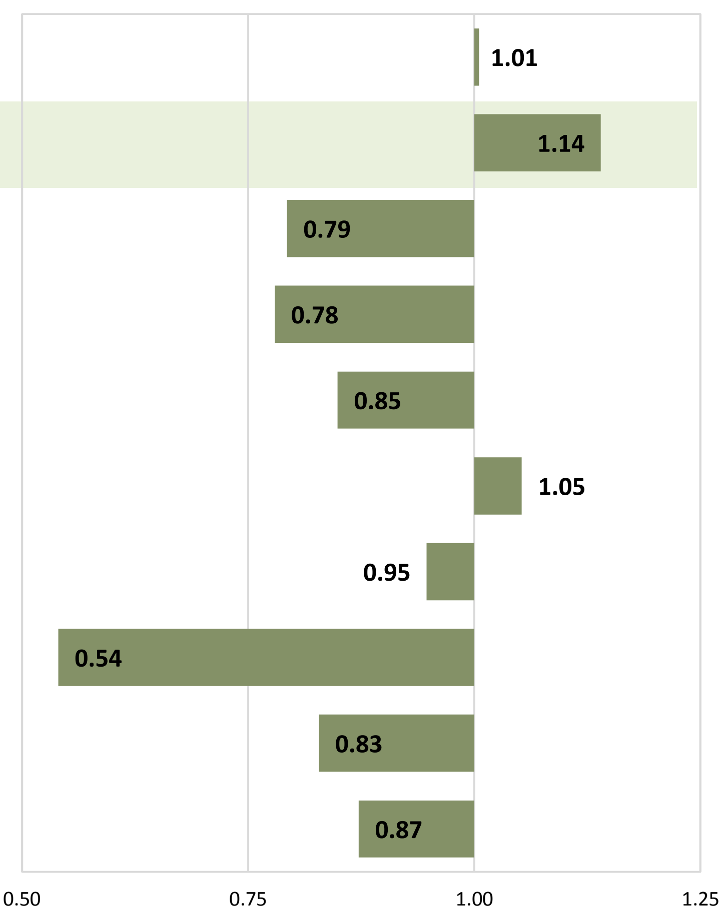
What? Over time, and particularly since World War II and the New Deal, the size of both the Federal Government and Defense has grown significantly.

Why? Concentrations of both government (e.g., federal regional centers, national parks, public lands as in the west, etc.) and concentrations of defense installations and personnel create unique patterns of economic change and wealth formation.

Rural Maryland? Maryland and rural Maryland has significant federal government and defense activities. Compared to the U.S. benchmark for all the states, rural Maryland has 1.14 times more activity (based on per capita earnings in 2015). Where we have concentrations of federal activity (inclusive of defense activities), we have made adjustments in our TOW scenarios. Locations with high concentrations of active duty personnel are captured in our model through our household current net worth and disposable income profiles. We believe that Esri is capturing these patterns within our model. However, where we have concentrations of higher compensated government and military retirees, we have made modest adjustments increasing wealth capacity and TOW potential.

	2015 Earnings (thousands)	Change 2001-2015
Retirees	$23,803,232	52.4%
Government	$11,227,636	44.5%
Health care and social assistance	$5,161,212	53.9%
Professional and technical services	$4,708,799	75.2%
Hardship Related Transfer Payments	$3,890,059	131.1%
Construction	$3,618,880	3.4%
Retail trade	$3,340,339	4.9%
Manufacturing	$3,064,418	-17.2%
Hospitality	$2,216,495	55.5%
Other services, except public admin	$1,904,130	25.8%

2015 Per Capita Values Benchmarked to the US

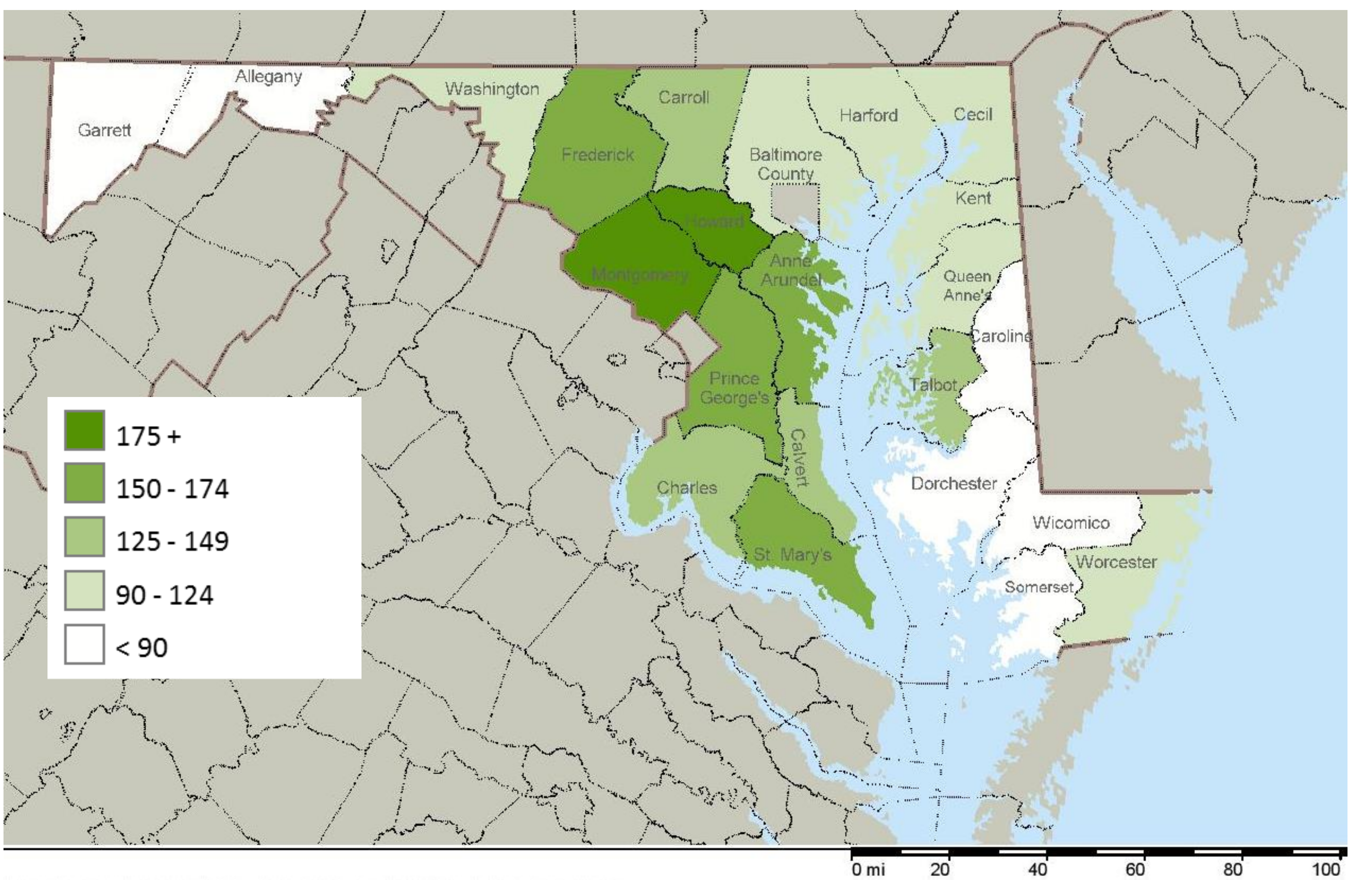


Creative Class, Entrepreneurship and Innovation

What? America's economy is rooted in for-profit and non-profit ventures. Entrepreneurship, or the process of creating and growing ventures, is a critical determinant of economic growth and wealth formation potential. A predictor of higher value entrepreneurship and innovation is the presence of creative class human talent.

Why? Entrepreneurship can impact wealth formation and TOW potential in two fundamental ways. First, it can occur through locally owned business ranging from small manufacturing operations to main street cafes and retail shops. Successful locally owned ventures not only root wealth for the owners but often create enhanced estates with investors (often family members and friends) and key employees. Second, in those communities where successful locally owned ventures reach Stage 2 growth mode and achieve breakout growth, they can generate significant wealth for their owners, investors and key employees along with major area suppliers. In some cases, these ventures "go public" creating a massive wealth event. For these reasons, we are keen to understand entrepreneurship and innovation patterns in our communities. Where rates of entrepreneurship and innovation are higher, we anticipate higher wealth formation rates and TOW potential in the future.

Rural Maryland? The following summarizes our analysis on entrepreneurship and innovation in rural Maryland and its counties:

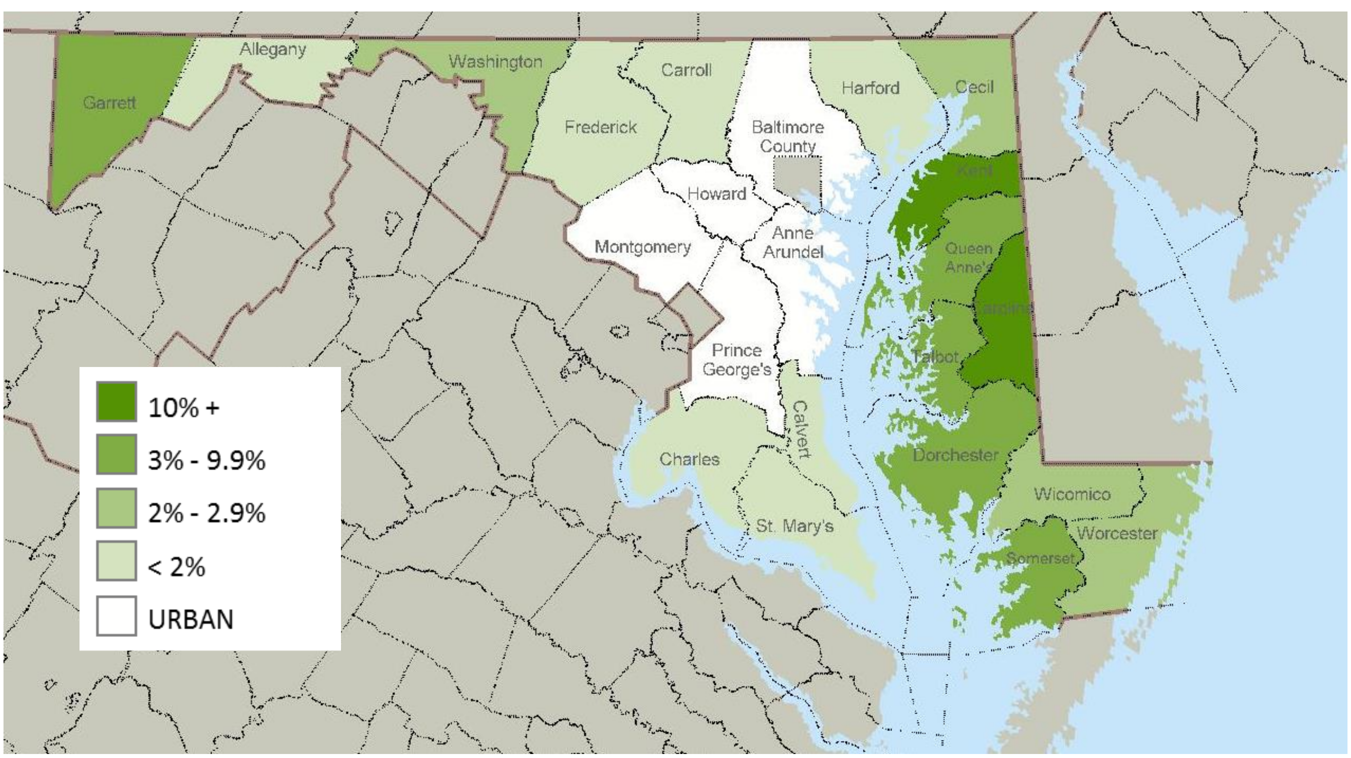


Real Estate and Agricultural Wealth

What? Real estate is a significant asset class within most household estates. The ownership of primary, secondary and vacation homes are a primary asset class we consider in our TOW analysis. These estates can be large if they include closely held commercial, industrial, agricultural, recreational and timber properties.

Why? Our base TOW model captures these assets. However, where there are unique or higher concentrations of these kinds of real estate assets (e.g., higher value vacation homes, second homes or agricultural properties) we often make adjustments to our TOW scenarios. While there is generally strong data about real estate types and their values, there is less robust data regarding ownership and how much of this real estate is free of debt.

Rural Maryland? We have concluded that our base TOW scenarios are doing a good job of capturing household wealth associated with primary residences and closely held commercial and industrial properties (addressing through our entrepreneurship analysis). Second homes and vacation homes are addressed in this paper in a section specific to this topic. While Maryland may not be known as an agriculture state like Iowa or Texas, there is significant agriculture in rural Maryland. The following map highlights the concentration of agricultural land and building wealth as a percentage of total estimated household current net worth or wealth employing the 2012 Census of Agriculture and the 2016 Esri Household Current Net Worth research. Six of rural Maryland's counties have agricultural wealth that is five percent or greater when benchmarked to total estimated household wealth (see map associated map – these counties include Kent at 14.73%, Caroline at 14.39%, Somerset at 9.98%, Dorchester at 8.75%, Garrett at 7.16% and Queen Ann at 5.27%). For these counties, we are making modest adjustments upward in wealth and TOW opportunity.

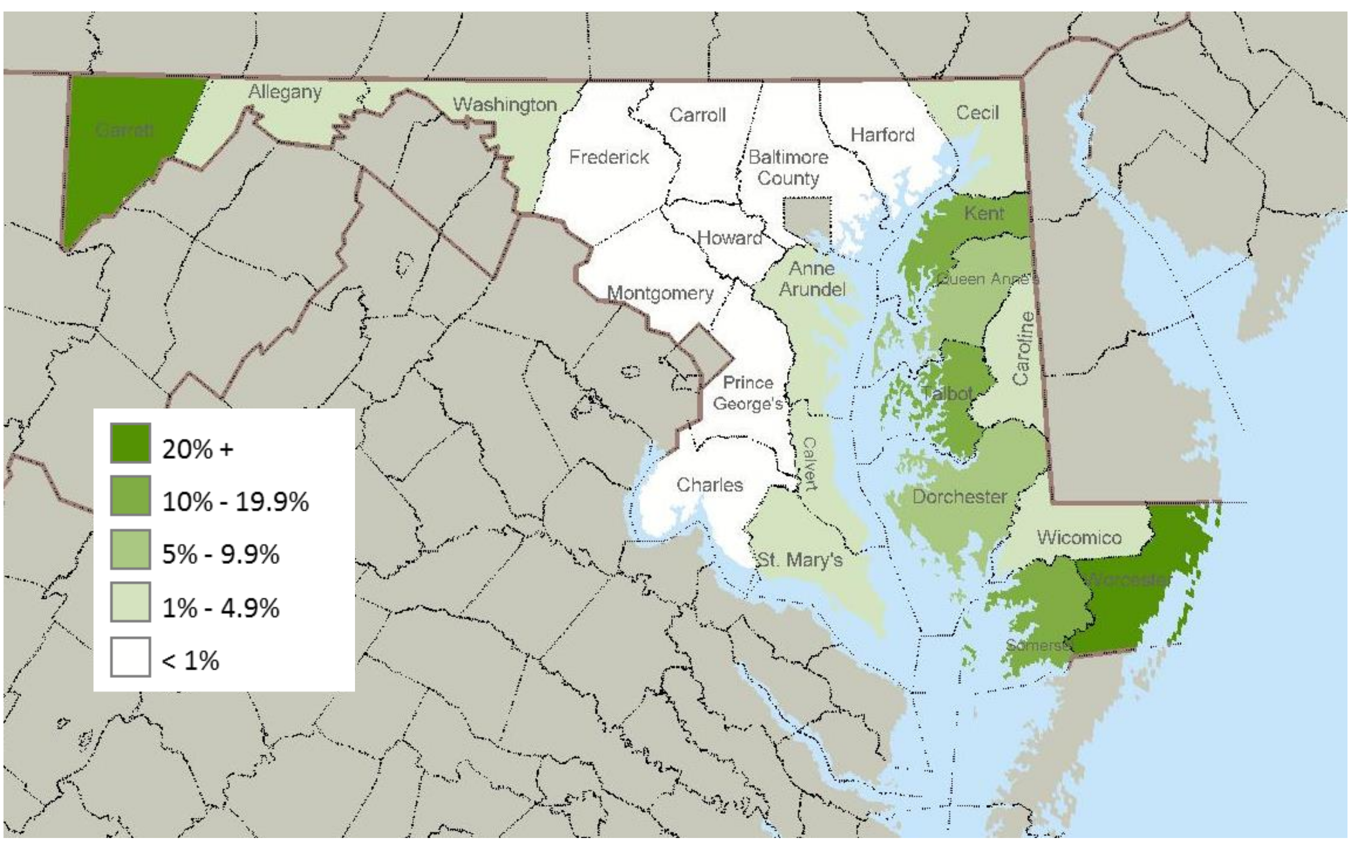


Seasonal and Vacation Homes

What? Communities that offer attractive amenities such as natural amenities (e.g., lakes, seashores and mountains), art venues, recreation opportunities (e.g., hiking, biking, walking, climbing, etc.) and cultural amenities (e.g., historic main streets, festivals, etc.) attract not only tourism but regular seasonal, vacation and second home residents.

Why? Most tourists come and go. Even regular seasonal or vacation visitors may never put down roots. However, the more time someone spends in a community (that is not their primary home) the potential increases that they will develop affinity for that community and may eventually make it a second home and then their primary residence in retirement. As affinity grows and deepens, these non-permanent residents can become donors to their second homes. If they change permanent residence in retirement, the potential grows as these retirees often have higher wealth and capacity to give to where they settle.

Rural Maryland? Rural Maryland is loaded with the kinds of amenities related to seasonal, vacation and second homes. Our base TOW scenarios do not count the wealth associated with these part-time and maybe future full-time residents. The following analysis summarizes where there are concentrations of this kind of activity. For these communities, focusing donor engagement and development activities with these emerging residents could significantly increase the community's TOW opportunity.



Climate Change, Extreme Weather Events and Sea Level Rise

What? Accelerating global climate change resulting in increasing frequencies of extreme weather events and chronic sea level rise can significantly impact communities and their economics. These event range from rising sea levels impacting coastal communities to extreme weather events like tropical storms and hurricanes along the Atlantic and Gulf coasts to wild fire events in the West wiping out wealth.

Why? The potential for increasing natural disasters in both numbers and scale can create significant social and economic crises. Our TOW scenarios are based in part on nearly 50 years of historical trends. History may suggest one or two major events over two generations. If these events are more severe and occur more frequently in the future, the historical patterns become less accurate in helping us predict the future. Increased natural disasters will reduce economic growth, wealth formation and TOW opportunity.

Rural Maryland? Maryland is likely to be impacted by both chronic sea level rises affecting coastal areas and more and large tropical storms and hurricanes. We have factored into our TOW scenarios downward adjustments to account for these likely disruptions and their associated impacts.

Energy and Other Natural Resource Development

What? Energy production (everything from oil to renewables) and other forms of natural resource (ranging from fisheries and timber, minerals and fresh waste supplies) extraction and processing are included in this adjustment factor.

Why? Energy and other natural resource extraction and processing can generate significant household wealth depending upon ownership patterns and royalty arrangements. In states with high land ownership and resident energy and mineral rights ownership, royalty and other types of payments can generate significant wealth. Energy production in Texas for example has created significant numbers of high wealth households.

Rural Maryland? Overall, energy and other natural resources do not require adjustments in our TOW scenarios. We believe our base TOW scenarios are adequately capturing pockets of activity occurring in rural Maryland.

The Center for Rural Entrepreneurship's mission is to help community leaders build a prosperous future by supporting and empowering business, social and civic entrepreneurs. With our roots and hearts in rural America, we help communities of all sizes and interests by bringing *empowering research* together with *effective community engagement* to advance *community-driven strategies* for prosperity. Our solutions empower community leaders to find their own answers to the economic development challenges and opportunities they face.

To learn more about the Center, www.energizingentrepreneurs.org.