Length and Average GDP Growth of the Five Longest Post-WWII Expansions

<table>
<thead>
<tr>
<th>Period</th>
<th>Months of Recovery</th>
<th>Average Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1961Q1-1969Q4</td>
<td>106</td>
<td>4.9%</td>
</tr>
<tr>
<td>1982Q4-1990Q3</td>
<td>92</td>
<td>4.2%</td>
</tr>
<tr>
<td>1991Q1-2001Q1</td>
<td>120</td>
<td>3.5%</td>
</tr>
<tr>
<td>2001Q4-2007Q4</td>
<td>73</td>
<td>2.7%</td>
</tr>
<tr>
<td>2009Q2-present</td>
<td>113</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

Sources: BEA, National Bureau for Economic Research
U.S. Personal Consumption Expenditures
2006Q1-2018Q3, Billions of Chained 2012 Dollars

2018Q3: $13.0 trillion, 4.0 percent

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Source: BEA
Consumer Sentiment Index
Jan. 2006 - Sep. 2018

Source: FRED© Towson University, Division of Strategic Partnerships and Applied Research
Real Median Household Income in the U.S.
2017 Adjusted Dollars, Not Seasonally Adjusted

© Towson University, Division of Strategic Partnerships and Applied Research
Mean Real U.S. Household Income by Quintile
2017 Adjusted Dollars, Not Seasonally Adjusted

© Towson University, Division of Strategic Partnerships and Applied Research

Sources: U.S. Census
Mean Real Household Income for Top 5 Percent of Incomes by Race

2017

© Towson University, Division of Strategic Partnerships and Applied Research
Sources: U.S. Census
U.S. Unemployment and Underemployment
Jan. 2006-Oct. 2018

Source: U.S. Bureau of Labor Statistics

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Source: U.S. Bureau of Labor Statistics
U.S. Unemployment Rate by Race or Ethnicity

Source: U.S. Bureau of Labor Statistics

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U.S. Labor Force Participation Rate
1997-2018 Annual Averages

Participation Rate

Missing workers, 2018:
6.1 million

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Source: BLS
2018: The Retail Apocalypse Continues

NINE WEST

Brookstone

MATTRESSFIRM

sears

Remington Outdoor Company

ROCKPORT

Toys"R"Us

BONTON

Source: Company Websites

© Towson University, Division of Strategic Partnerships and Applied Research
U.S. Gross Private Domestic Investment
2006Q1-2018Q3, Billions of Chained 2012 Dollars

Gross private domestic investment
Percent change from preceding period

Source: BEA

© Towson University, Division of Strategic Partnerships and Applied Research
Government
U.S. Government Spending
2006Q1-2018Q3, Billions of Chained 2012 Dollars

Government consumption expenditures and gross investment

Percent change from preceding period

2018Q3: $3.2 trillion, 3.3 percent

Source: BEA
Net Exports
U.S. Net Exports
2006Q1-2018Q3, Billions of Chained 2012 Dollars

Percent Change from Preceding Period in Exports or Imports

Source: BEA
Protectionist Trade Policy

• Trade War with China:
  • 25% tariff on $50 billion in Chinese goods, 10% tariff on an additional $200 billion
  • 10% tariffs will increase to 25% on January 1, 2019
  • Retaliatory tariffs from China on nearly all of the $130 billion of goods imported from the United States

• Steel and Aluminum Tariffs on U.S. Allies:
  • 25% tariff on imports of steel
  • 10% tariff on imports of aluminum

Sources: Financial Post, Chicago Tribune, Office of the US Trade Representative
Crude Oil Price Per Barrel
Jan. 2006 – Sep. 2018

Price per Barrel

Source: US Energy Information Administration
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“Made in America” Auto Index, 2013 vs 2017
Five Most Popular Cars in United States

Kogod Index

© Towson University, Division of Strategic Partnerships and Applied Research

Sources: Kogod School of Business, USA Today
Maryland Real Gross State Product
Millions of Chained 2009 Dollars, 2006Q1-2018Q1

Source: BEA

© Towson University, Division of Strategic Partnerships and Applied Research
Unemployment Rate for Counties in Central Maryland
Annual Average, 2017

- Howard: 3.1%
- Anne Arundel: 3.6%
- Harford: 3.9%
- Baltimore County: 4.3%
- Baltimore City: 6.1%
Maryland Employment by Sector
In thousands, September 2018

- Government: 500.6
- Health Care and Social Assistance: 382.4
- Retail Trade: 290.4
- Professional, Scientific, and Technical Services: 256.2
- Accommodation and Food Services: 237.4
- Administrative and Support and Waste Management and...: 179.8
- Mining, Logging, and Construction: 163.3
- Financial Activities: 139.0
- Other Services: 114.6
- Transportation and Utilities: 96.2
- Educational Services: 92.4
- Finance and Insurance: 92.3
- Wholesale Trade: 84.1
- Durable Goods: 57.2
- Non-Durable Goods: 51.2
- Real Estate and Rental and Leasing: 46.7
- Arts, Entertainment, and Recreation: 44.9
- Management of Companies and Enterprises: 26.8

© Towson University, Division of Strategic Partnerships and Applied Research
Source: BLS
Current Employment by Sector in Baltimore MSA
In Thousands, September 2018

- Educational & Health Services: 280.9
- Trade, Transportation, & Utilities: 248.2
- Professional & Business Services: 247.5
- Government: 223.0
- Leisure & Hospitality: 145.5
- Financial Activities: 78.9
- Mining, Logging, & Construction: 77.2
- Manufacturing: 55.2
- Other Services: 52.9
- Information: 17.0
Average Annual Pay by County of Work for Central Maryland

2017

Howard: $66,164
Baltimore City: $65,013
Anne Arundel: $57,957
Baltimore County: $54,718
Harford: $51,377

Sources: BLS, QCEW
Median Home Prices for Counties in Central Maryland

August 2018

Howard  $450,000
Anne Arundel  $350,000
Harford  $300,000
Baltimore County  $250,000
Baltimore City  $150,000

State Median Home Price = $299,900
Current Job Openings by Occupation Group
Maryland, October 2018

Computer and Mathematical Occupations
Healthcare Practitioners and Technical Occupations
Management Occupations
Office and Administrative Support
Sales and Related Occupations
Architecture and Engineering
Business and Financial Operations
Transportation and Material Moving
Food Preparation and Serving
Installation, Maintenance, and Repair
Production Occupations
Healthcare Support
Arts, Design, Entertainment, Sports, and Media
Education, Training, and Library
Community and Social Services
Life, Physical, and Social Science
Personal Care and Service
Protective Service
Construction and Extraction
Building, Grounds Cleaning & Maintenance
Legal Occupations
Military
Farming, Fishing, and Forestry

Number of Openings

© Towson University, Division of Strategic Partnerships and Applied Research

Source: Maryland Workforce Exchange
Maryland Education Trust Fund Revenue
FY 2011-FY 2019, Millions of Dollars

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Revenue (in Millions of Dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>$50.1</td>
</tr>
<tr>
<td>2012</td>
<td>$94.3</td>
</tr>
<tr>
<td>2013</td>
<td>$284.3</td>
</tr>
<tr>
<td>2014</td>
<td>$328.4</td>
</tr>
<tr>
<td>2015</td>
<td>$432.4</td>
</tr>
<tr>
<td>2016</td>
<td>$403.8</td>
</tr>
<tr>
<td>2017</td>
<td>$452.9</td>
</tr>
<tr>
<td>2018</td>
<td>$481.6</td>
</tr>
<tr>
<td>2019</td>
<td>$502.9</td>
</tr>
</tbody>
</table>

Source: Maryland Board of Revenue Estimates

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Split HQ2

Source: The Washington Post
Millionaires per Capita
Top Ten States, 2017

1. Maryland - 7.87%
2. New Jersey - 7.86%
3. Connecticut - 7.75%
4. Hawaii - 7.57%
5. Alaska - 7.50%
6. Massachusetts - 7.41%
7. New Hampshire - 7.36%
8. Virginia - 6.98%
9. Delaware - 6.62%
10. California - 6.61%
Difference In Establishment Births vs Establishment Deaths
Maryland, 2008 Q1 to 2017 Q1

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Source: BLS – Business Employment Dynamics
Human Development Index Disparities in Baltimore City

Greater Roland Park/Poplar Hill
HDI: 0.979
Theoretical World Ranking: 1
Closest Comparison: Norway (0.949)

Upton/Druid Heights
HDI: 0.725
Theoretical World Ranking: 97
Closest Comparison: Tunisia (0.725)
Human Development Index Disparities in Baltimore City: Life Expectancy

Cross Country/Cheswolde
Life Expectancy: 87.1

Clifton-Berea
Life Expectancy: 66.9

Pimlico/Arlington/Hilltop
Life Expectancy: 68.2

Fells Point
Life Expectancy: 78.7

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Source: RESI
Human Development Index Disparities in Baltimore City: Mean Years of Schooling

Greater Roland Park / Poplar Hill
Mean Years of Schooling: 17.2

Canton
Mean Years of Schooling: 15.6

Southwest Baltimore
Mean Years of Schooling: 11.0

Brooklyn/Curtis Bay/Hawkins Point
Mean Years of Schooling: 11.3

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Source: RESI
Human Development Index Disparities in Baltimore City:
Income Per Capita

Greater Roland Park / Poplar Hill
Income Per Capita: $73,942

Canton
Income Per Capita: $65,416

Upton/Druid Heights
Income Per Capita: $13,610

Cherry Hill
Income Per Capita: $13,530

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Source: RESI
Median Household Income Disparities in Maryland
By Race, 2016

Baltimore City
- African American or Black: $37,225
- White Non-Hispanic: $72,540

Baltimore County
- African American or Black: $71,575
- White Non-Hispanic: $74,757

Maryland
- African American or Black: $62,919
- White Non-Hispanic: $88,633

Source: U.S. Census Bureau
Forecasted Private Nonfarm Employment
Maryland, 2010-2021

Source: REMI PI+, RESI© Towson University, Division of Strategic Partnerships and Applied Research
Forecasted Total New Job Openings in Maryland by Region
Annual Average, 2019-2021

Source: RESI
Forecasted Total Job Growth in Maryland by Region
Annual Average, 2019-2021

Source: RESI
Forecasted Job Growth By Year

2019-2021

Job Growth

<table>
<thead>
<tr>
<th>Year</th>
<th>Job Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>58,039</td>
</tr>
<tr>
<td>2020</td>
<td>-2,803</td>
</tr>
<tr>
<td>2021</td>
<td>-18,526</td>
</tr>
</tbody>
</table>

Source: RESI

© Towson University, Division of Strategic Partnerships and Applied Research
Forecasted Employment Growth by Sector
2019-2021 Annual Average, Maryland

- Health Care and Social Assistance: 3,707
- Professional, Scientific, and Technical Services: 3,496
- Administrative and Waste Management Services: 2,267
- Construction: 1,483
- Other Services, except Public Administration: 1,223
- Educational Services; Private: 1,144
- Finance and Insurance: 992
- Arts, Entertainment, and Recreation: 482
- Transportation and Warehousing: 442
- Retail Trade: 289
- Accommodation and Food Services: 158
- Management of Companies and Enterprises: 98
- Mining: 31
- Forestry, Fishing, and Hunting: 24
- Real Estate and Rental and Leasing: -15
- Utilities: -82
- Information: -167
- Wholesale Trade: -315
- Manufacturing: -1,187
- Government: -1,690

Average Annual Change in Number of Jobs

Source: RESI© Towson University, Division of Strategic Partnerships and Applied Research
Forecasted Employment Growth By Occupation Group
2019-2021 Annual Average, Maryland

- Personal Care and Service: -1,852 jobs
- Computer and Mathematical: -532 jobs
- Business and Financial Operations: 1,494 jobs
- Education, Training, and Library: 1,262 jobs
- Healthcare Support: 1,188 jobs
- Management: 1,155 jobs
- Building and Grounds Cleaning and Maintenance: 1,155 jobs
- Healthcare Practitioners and Technical: 1,137 jobs
- Construction and Extraction: 1,137 jobs
- Transportation and Material Moving: 1,119 jobs
- Food Preparation and Serving Related: 1,081 jobs
- Installation, Maintenance, and Repair: 1,043 jobs
- Legal: 608 jobs
- Community and Social Service: 558 jobs
- Sales and Related: 438 jobs
- Arts, Design, Entertainment, Sports, and Media: 344 jobs
- Architecture and Engineering: 225 jobs
- Protective Service: 210 jobs
- Life, Physical, and Social Science: 151 jobs
- Healthcare Practitioners and Technical: 112 jobs
- Building and Grounds Cleaning and Maintenance: 96 jobs
- Farming, Fishing, and Forestry: 84 jobs
- Production: -104 jobs
- Office and Administrative Support: -532 jobs

Source: RESI© Towson University, Division of Strategic Partnerships and Applied Research
Forecasted Total Job Growth by Zone
Average, 2019-2021

<table>
<thead>
<tr>
<th>Job Zone</th>
<th>Little or No Preparation</th>
<th>Extensive Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>833</td>
<td>1,451</td>
</tr>
<tr>
<td>2</td>
<td>2,990</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2,611</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4,353</td>
<td></td>
</tr>
</tbody>
</table>

Average Job Growth by Zone
THANK YOU

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