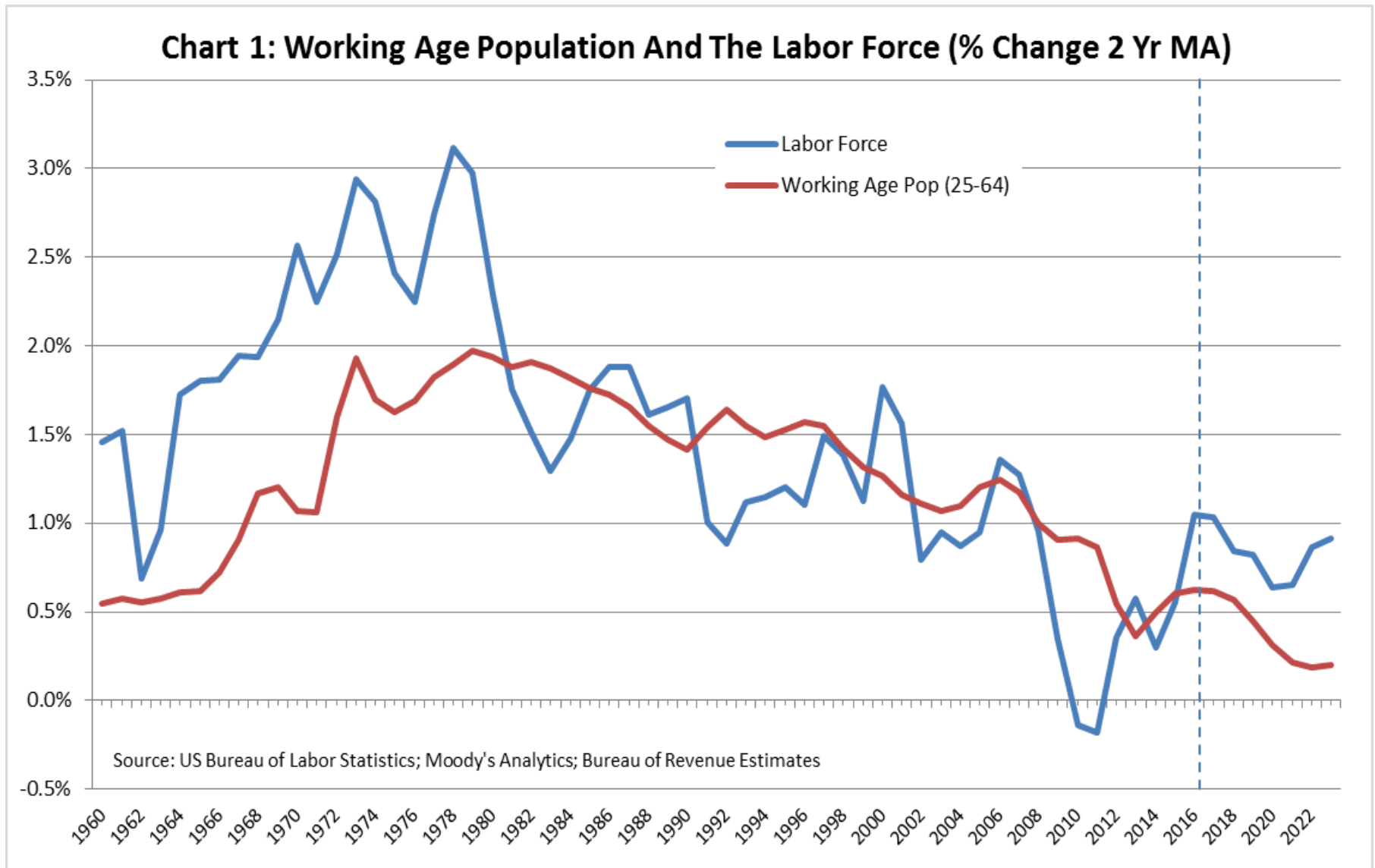


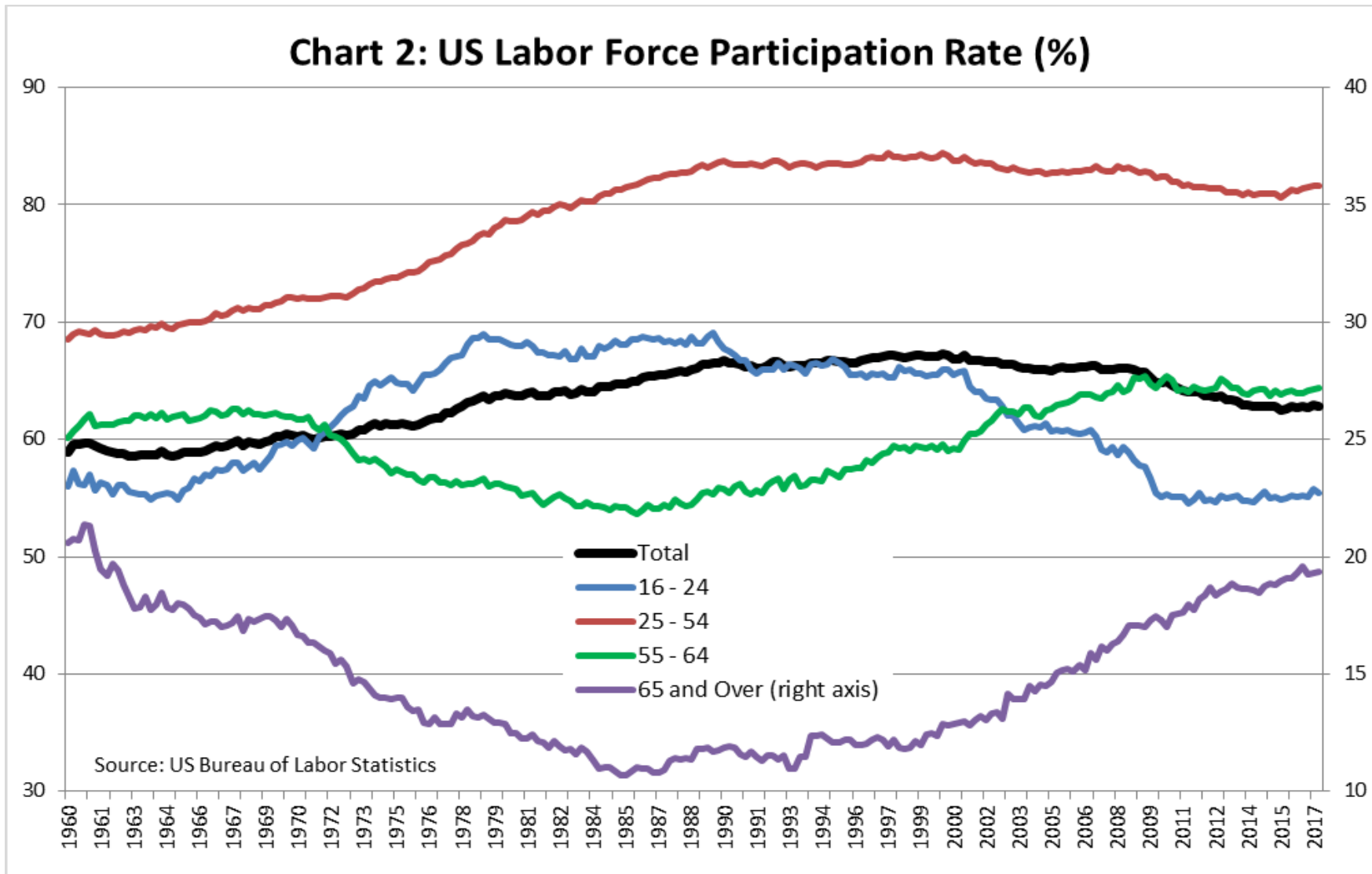
The Impact of Age Demographics on Maryland's Economic and Tax Revenue Outlook

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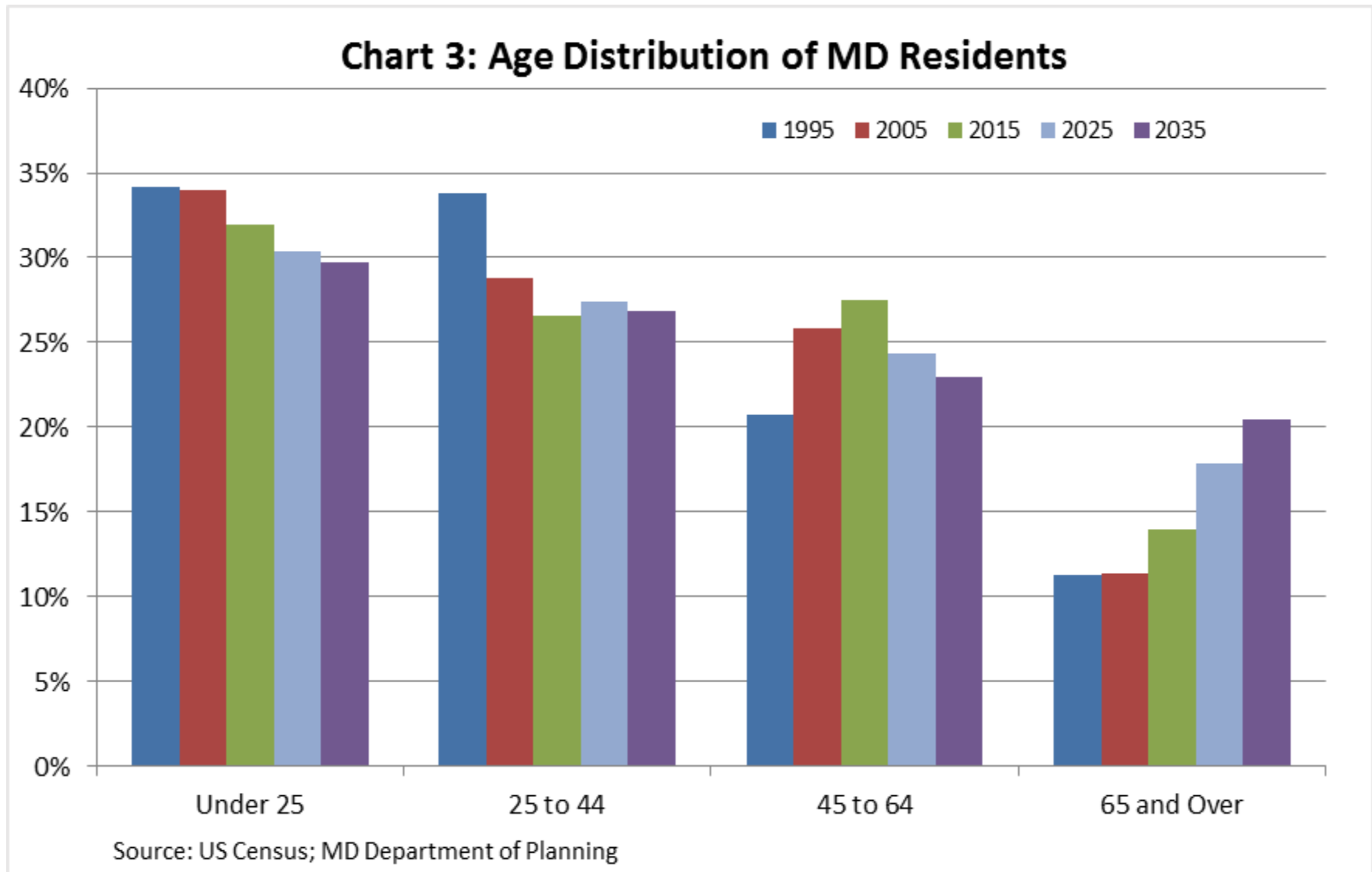
Age Structure and the Labor Force



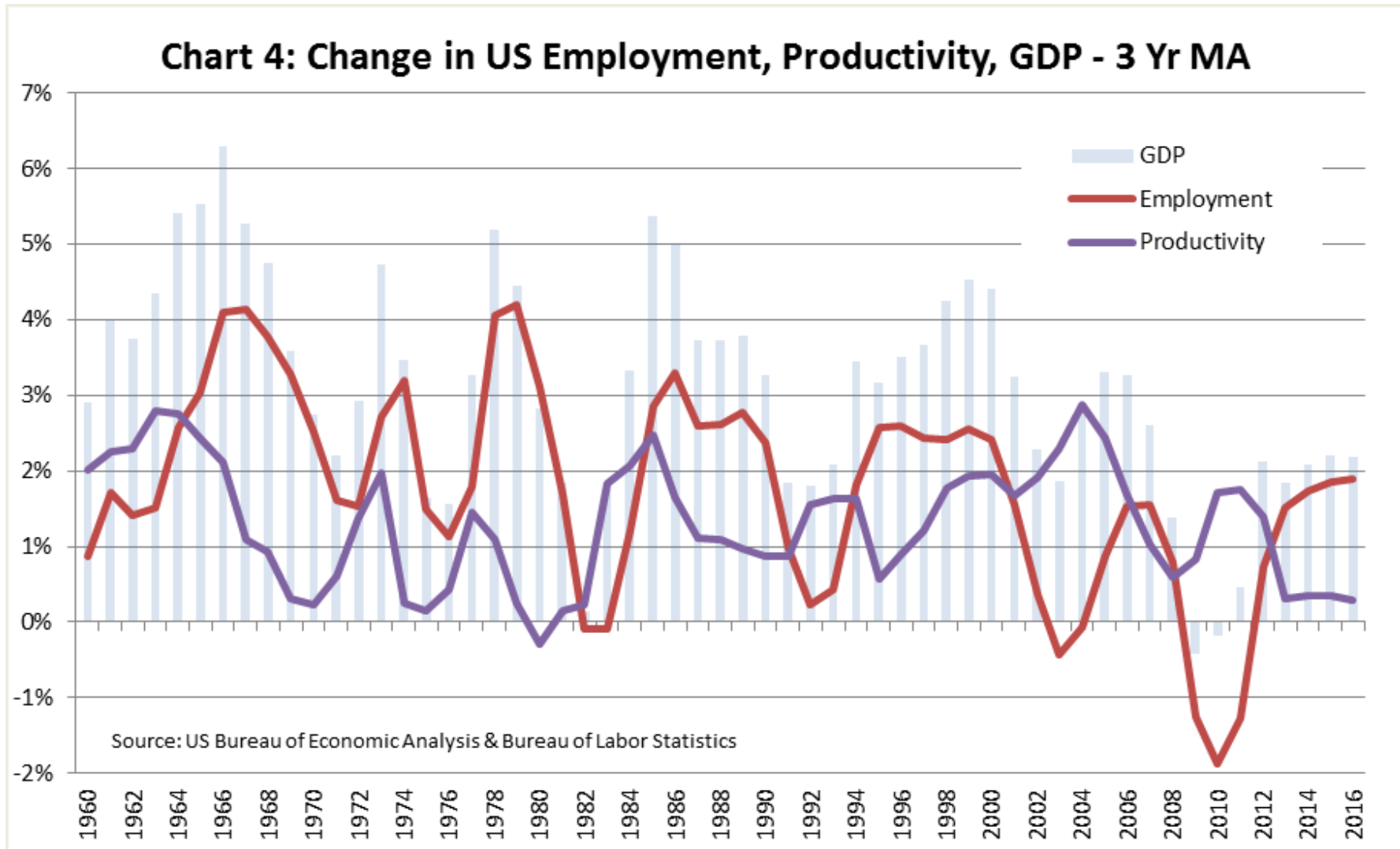
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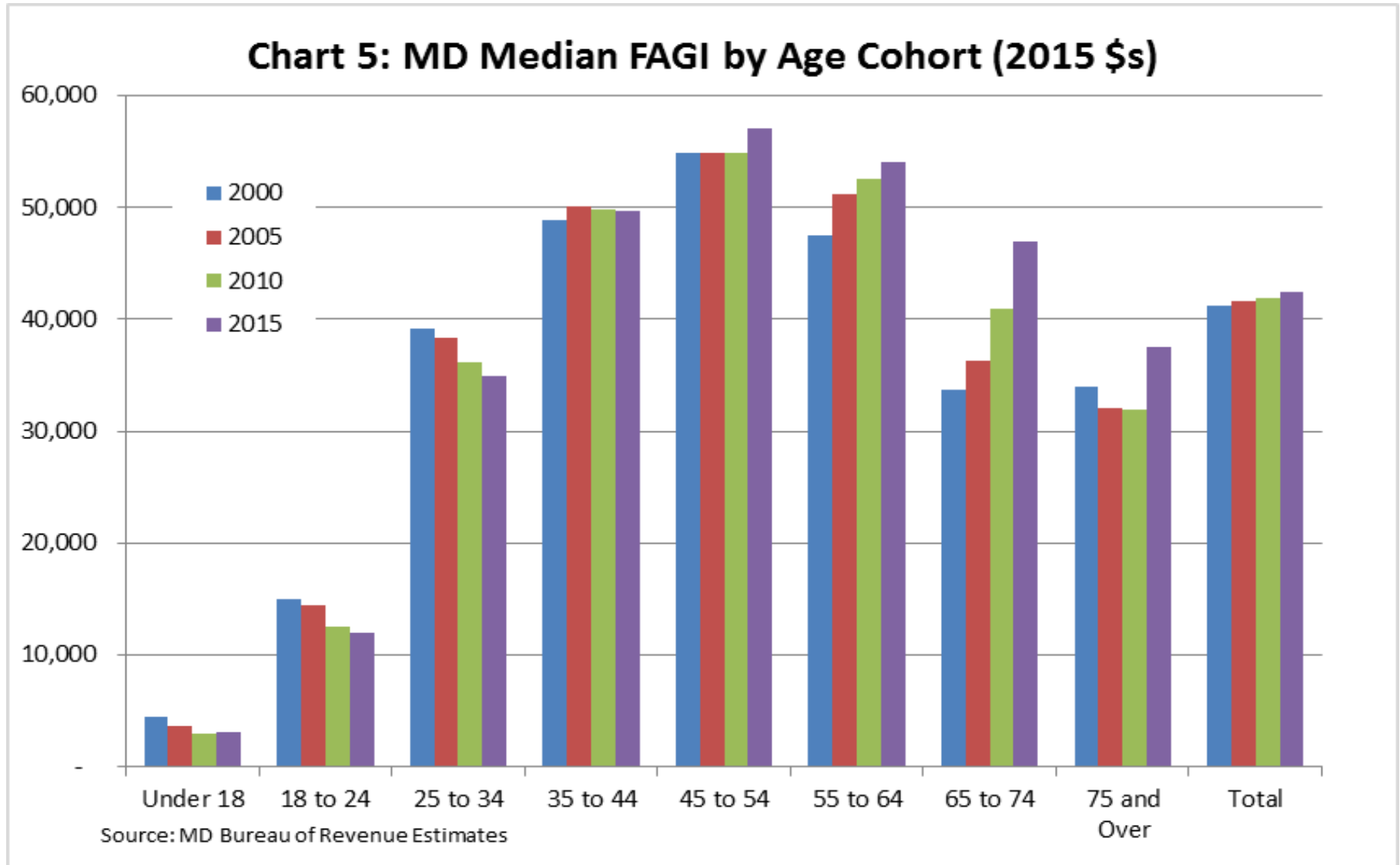
Age Structure and Productivity



Low Employment and Productivity Growth Means Low GDP Growth



Maryland FAGI by Age Cohort



Economic Impacts

- Low productivity and employment growth = low economic growth
- A population at the ends of the age spectrum will earn, consume, save, and invest less than a middle aged population
- Falling real income for younger workers means lower consumption, savings, and delayed household formation

Economic Impacts (cont.)

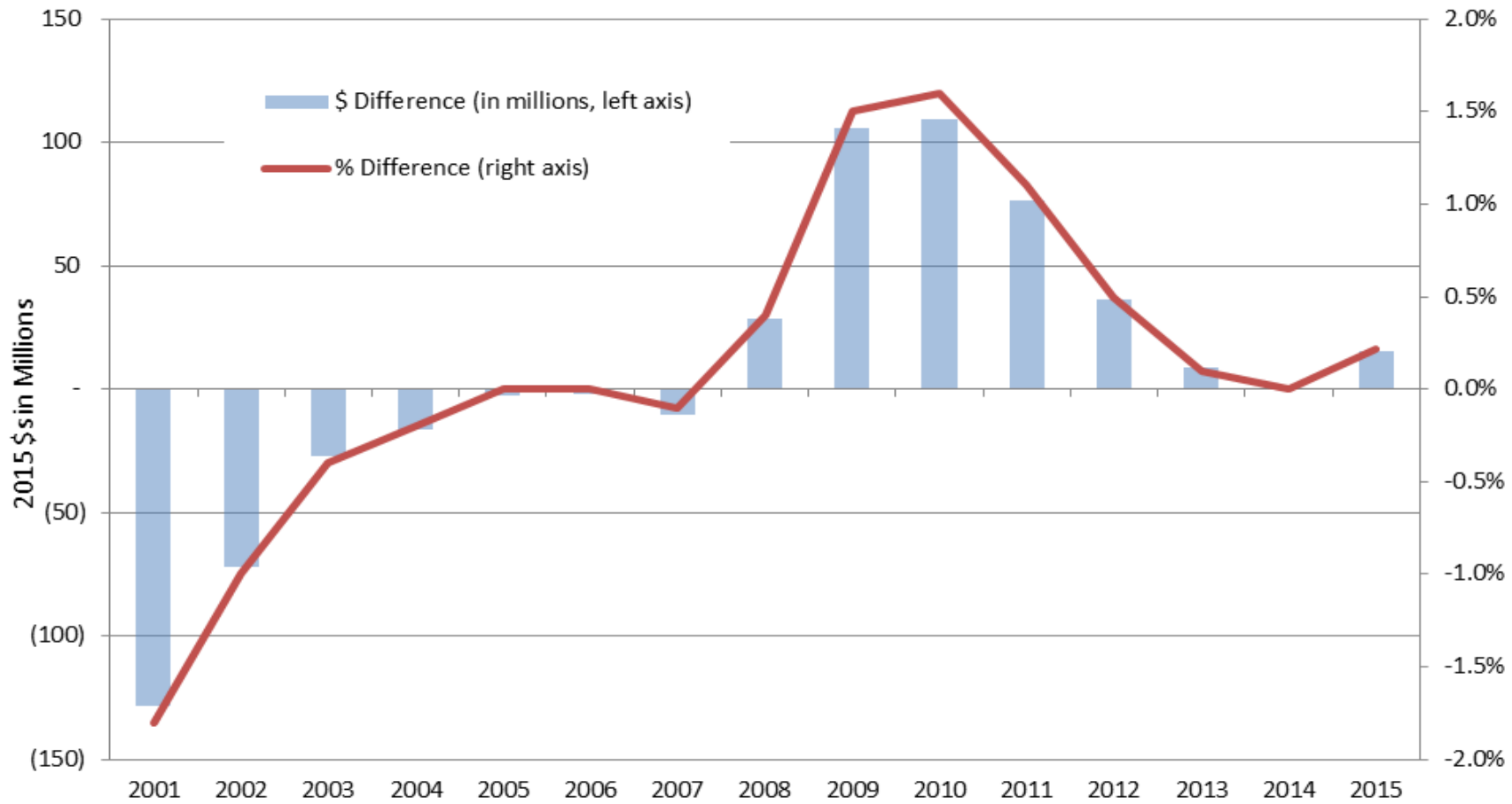
- Federal Reserve economists found changes in demographics:
 - explain nearly all the slowdown in trend growth and decrease in equilibrium real interest rates since the 1980s
 - caused steepest declines after 2000
 - caused US Labor participation to peak in 2000
- Productivity growth will increase as millennials age
- Investments in capital and technology can increase productivity in the long run

Tax Impacts

- Lower nominal GDP growth means lower tax revenue growth
- Older population means lower income and consumption tax revenue growth
 - Preferential tax treatment for older filers
 - Older individuals shift spending to non-taxable services such as out-of-pocket healthcare
- Lower income and consumption tax revenue growth from younger workers

Analysis of Maryland Tax Data

Chart 6: Estimated Change in Tax Revenue if 2014 had Age Structure of X-Axis Year



Source: MD Bureau of Revenue Estimates

Analysis of Maryland Tax Data

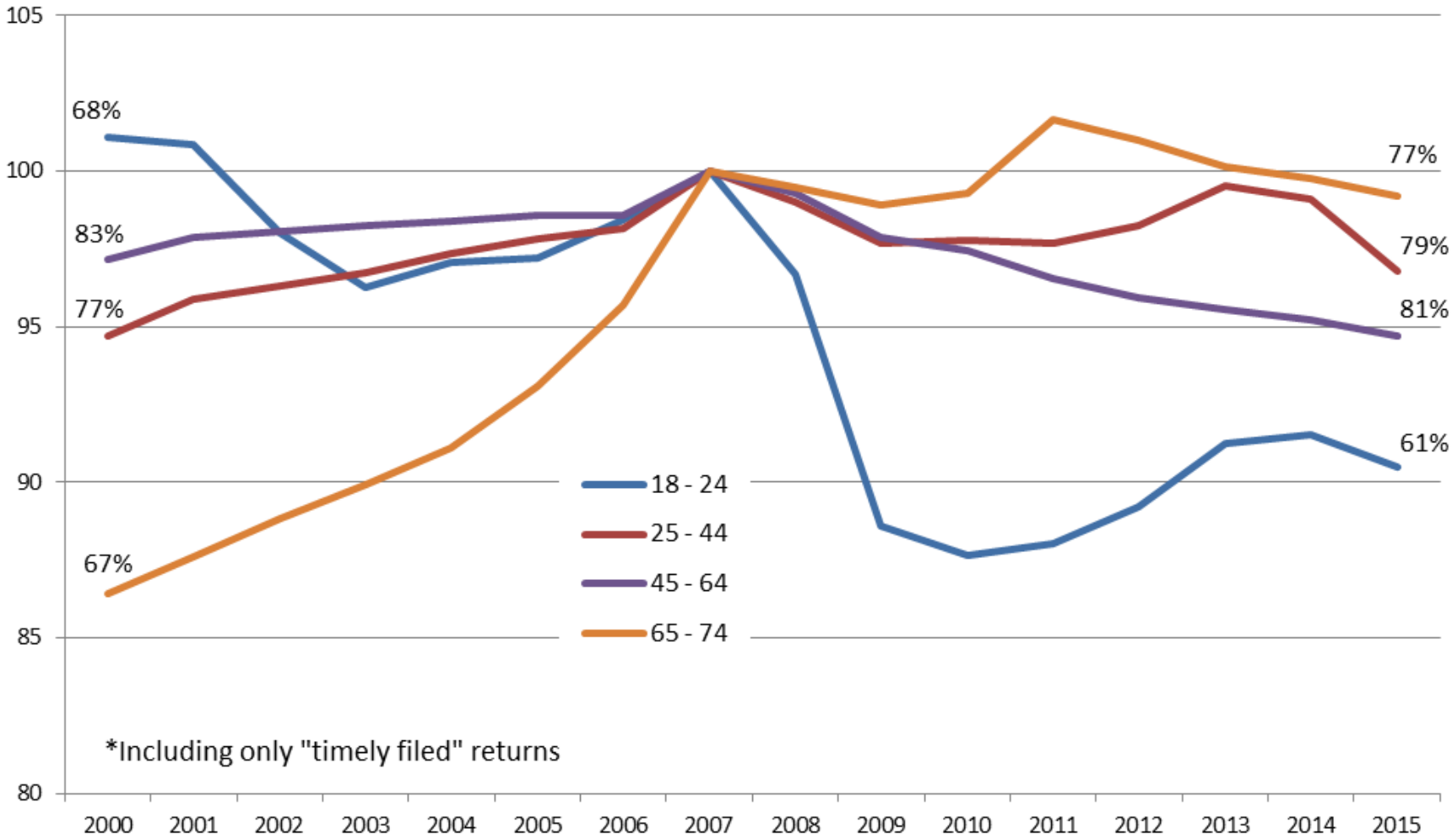
- Holds the 2014 average tax per person in each age cohort and total # of tax payers constant
- Changes the age distribution of that total # of taxpayers
- Allowing for growth in total # of taxpayers, negative impact of age structure will continue to grow through 2040 – peak negative impact in 2035

MD Tax Return Participation Rate

- TRPR = % of the population that files a tax return
 - Includes joint filers. Income of joint filers is evenly divided among both individuals
- Requires combining tax return filing numbers with survey based population estimates

MD Tax Return Participation Rate

Chart 7: Tax Return Participation Rate* (Indexed, 2007 = 100)



*Including only "timely filed" returns

Source: MD Bureau of Revenue Estimates

Immigration

- With no immigration since 1965*:
 - US population in 2015 would be 252 million rather than 324 million
 - Median age 41 rather than 38
- With no immigration after 2015*:
 - US population in 2065 would be 338 million and shrinking rather than 441 million and growing
- From 2000 to 2010, immigrants accounted for 57.1% of MD labor force growth[†]

* Pew Research Center

[†] Maryland Immigration Commission

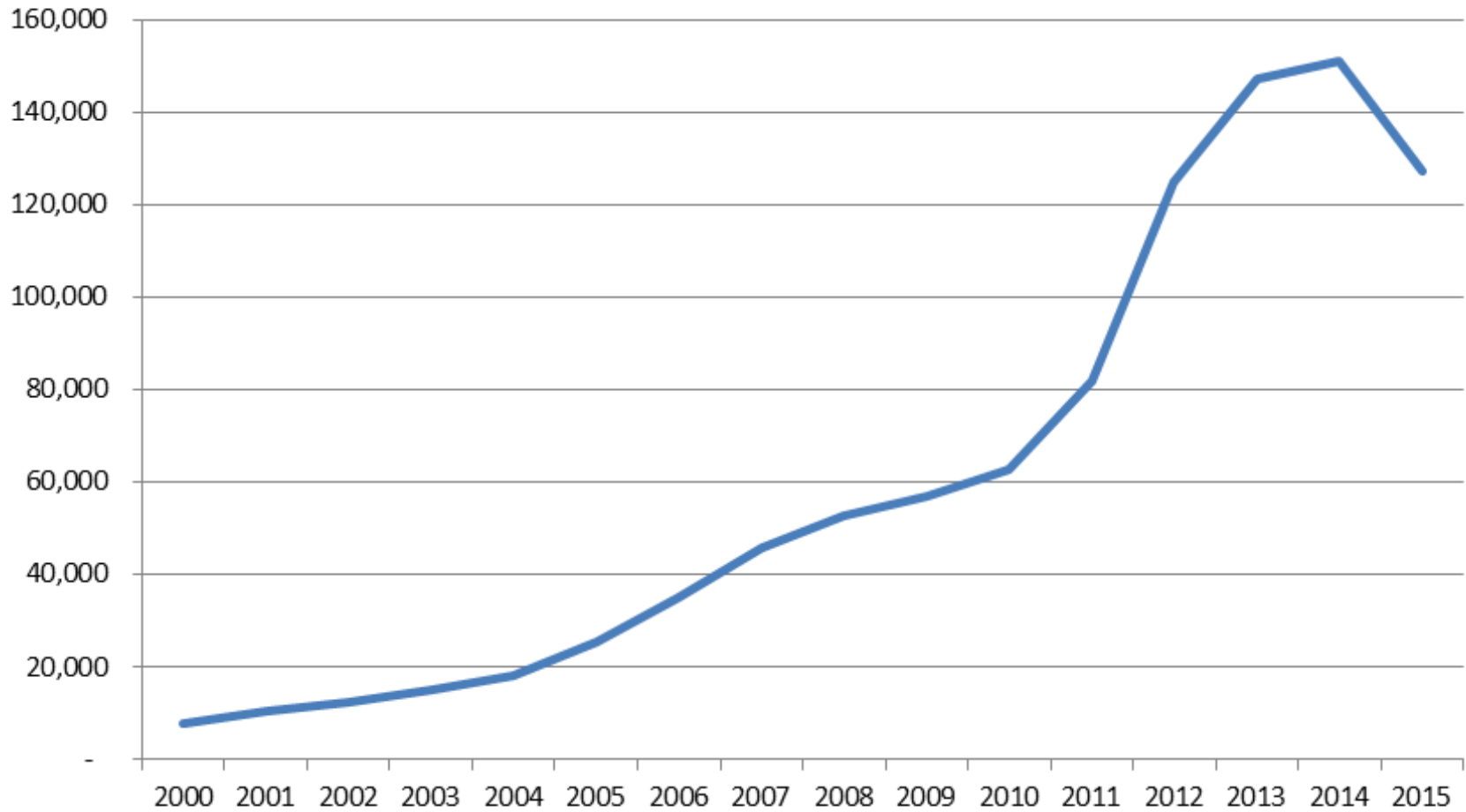
Unauthorized Immigration

- Population in MD around 250,000 – down slightly from pre-recession peak*
- Subject to conditions, unauthorized Immigrants in MD can:
 - Qualify for in-state tuition rates – effective 2013
 - Obtain a driver's license – effective 2014
- Use Individual Taxpayer Identification Numbers (ITINs) to file taxes

* Migration Policy Institute

ITIN Use in Maryland

Chart 8: Number of Maryland Taxpayers Using ITINs



Source: MD Bureau of Revenue Estimates

Thank You