

How Demographics Impact the Pennsylvania Economy

PBC Policy Roundtable

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Today's Presentation

➤ **Demographic Outlook**

- General Trends: past decade and next two.
- Demographic Waves: Baby Boomers and Others.
- Very long term: trends through 2040.

➤ **Economic Implications**

- Labor Force, Income and Jobs Composition, Growth.

➤ **Budget Implications**

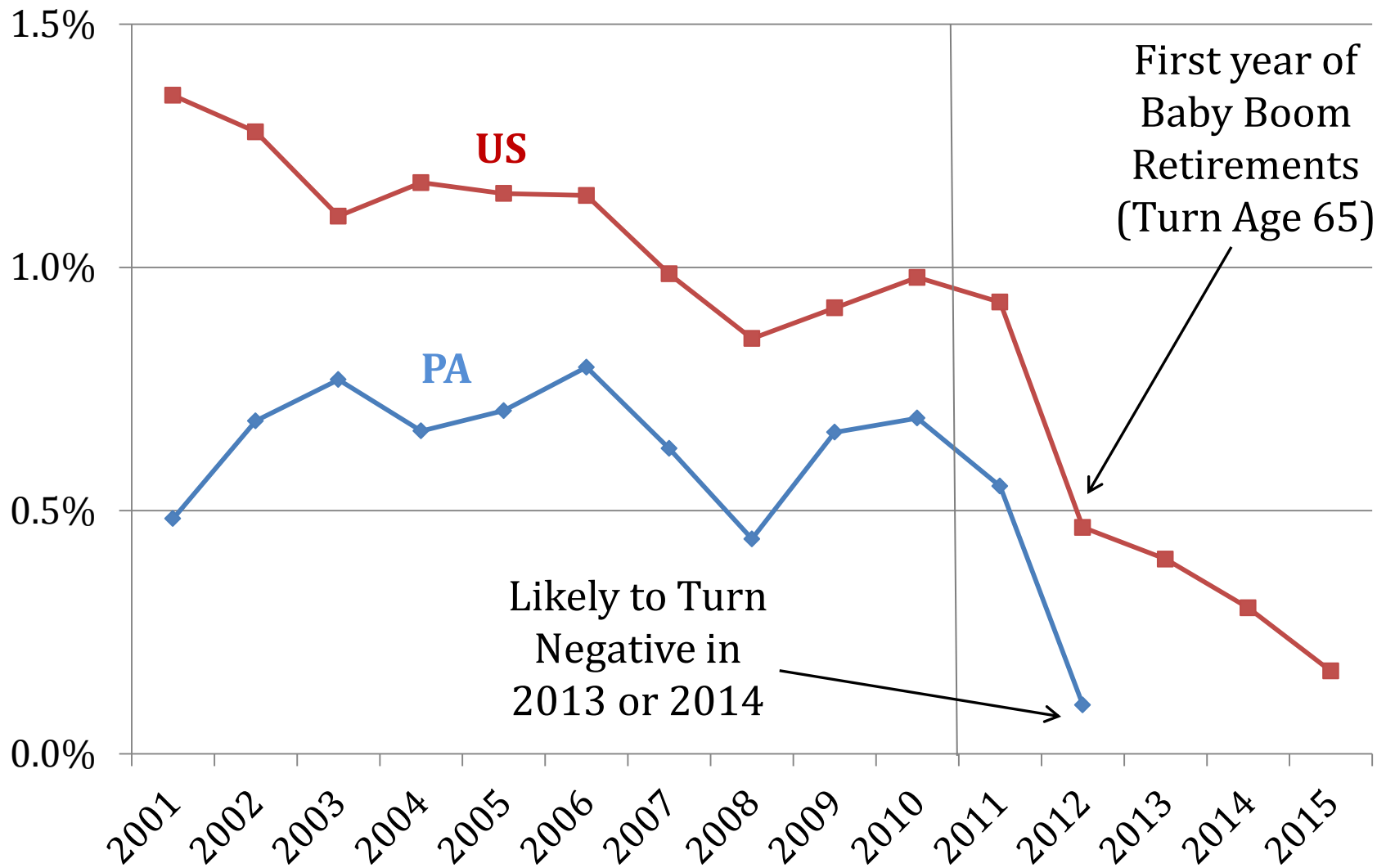
- Persistent tax base erosion due to demographics.

Broad Demographic Trends

	<u>2000</u>	<u>2010</u>		<u>2020</u>		<u>Shares</u>	
	Number	Number	CAGR	Number	CAGR	2000	2020
PA (000s)							
0 – 19	3,271	3,173	-0.3%	3,116	-0.2%	25.6%	23.6%
20 – 64	7,091	7,575	0.7	7,579	0.0	57.7	57.3
<u>>= 65</u>	<u>1,919</u>	<u>1,963</u>	<u>0.2</u>	<u>2,536</u>	<u>2.6</u>	<u>15.6</u>	<u>19.2</u>
Total	12,281	12,711	0.3	13,230	0.4	100.0	100.0
US (millions)							
0 – 19	80.6	83.2	0.3	84.6	0.2	28.6	25.3
20 – 64	166.5	185.7	1.1	193.4	0.4	59.0	57.9
<u>>= 65</u>	<u>35.1</u>	<u>40.4</u>	<u>1.4</u>	<u>56.0</u>	<u>3.3</u>	<u>12.4</u>	<u>16.8</u>
Total	282.2	309.4	0.9	333.9	0.8	100.0	100.0

Note: CAGR is compound annual growth rate. Sources: U.S. Census Bureau and Penn State Data Center.

Annual Growth Rate: Ages 20-64

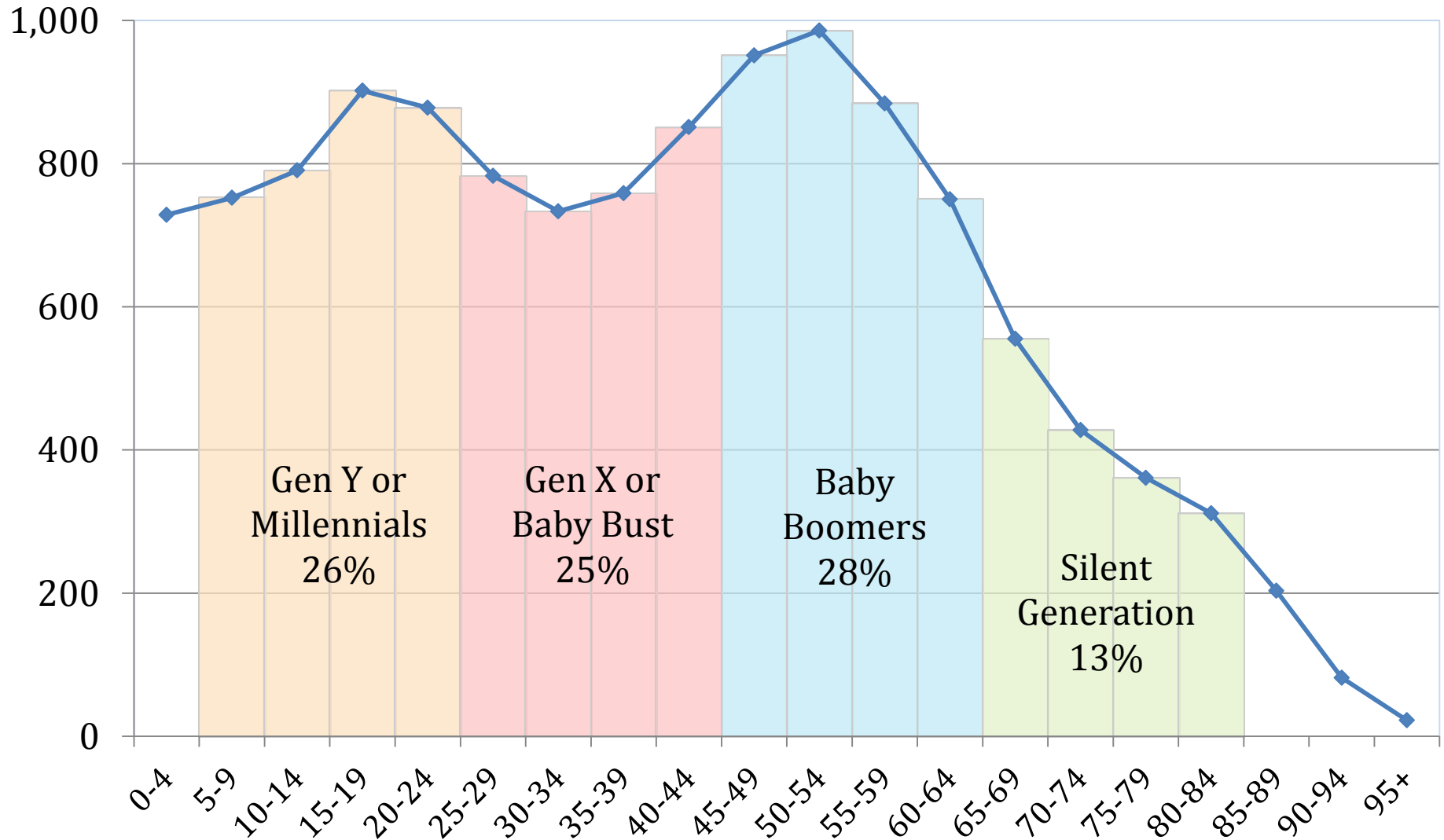


Three Demographic Waves

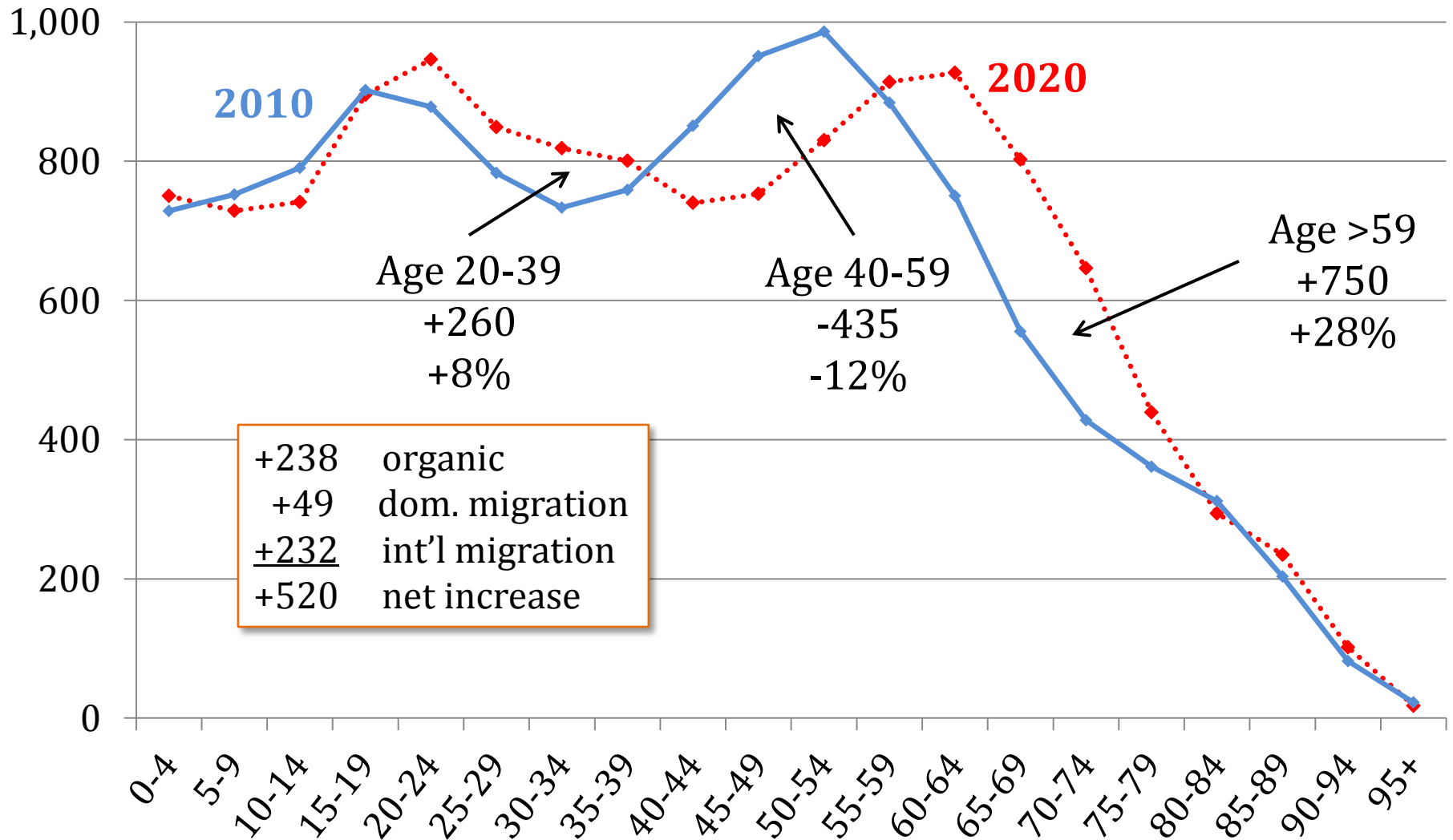
- **Baby Boomers:** Born 1946 to 1964
 - Retirements greatly reduce the potential labor force.
 - Reliance on savings, investment and gov't transfer income.
 - Will savings be sufficient to support longer life spans?
- **Generation X or Baby Bust:** Born 1965 to 1984
 - Unusual exits from labor force.
 - Changing attitude towards home ownership and mortgage debt?
- **Generation Y or Millennials:** Born 1985 to 2004
 - Wave of college-age students: more student loan debt.
 - Does debt cause delays in home purchases, marriage and child bearing, thereby restraining growth?

PA Demographics 2010

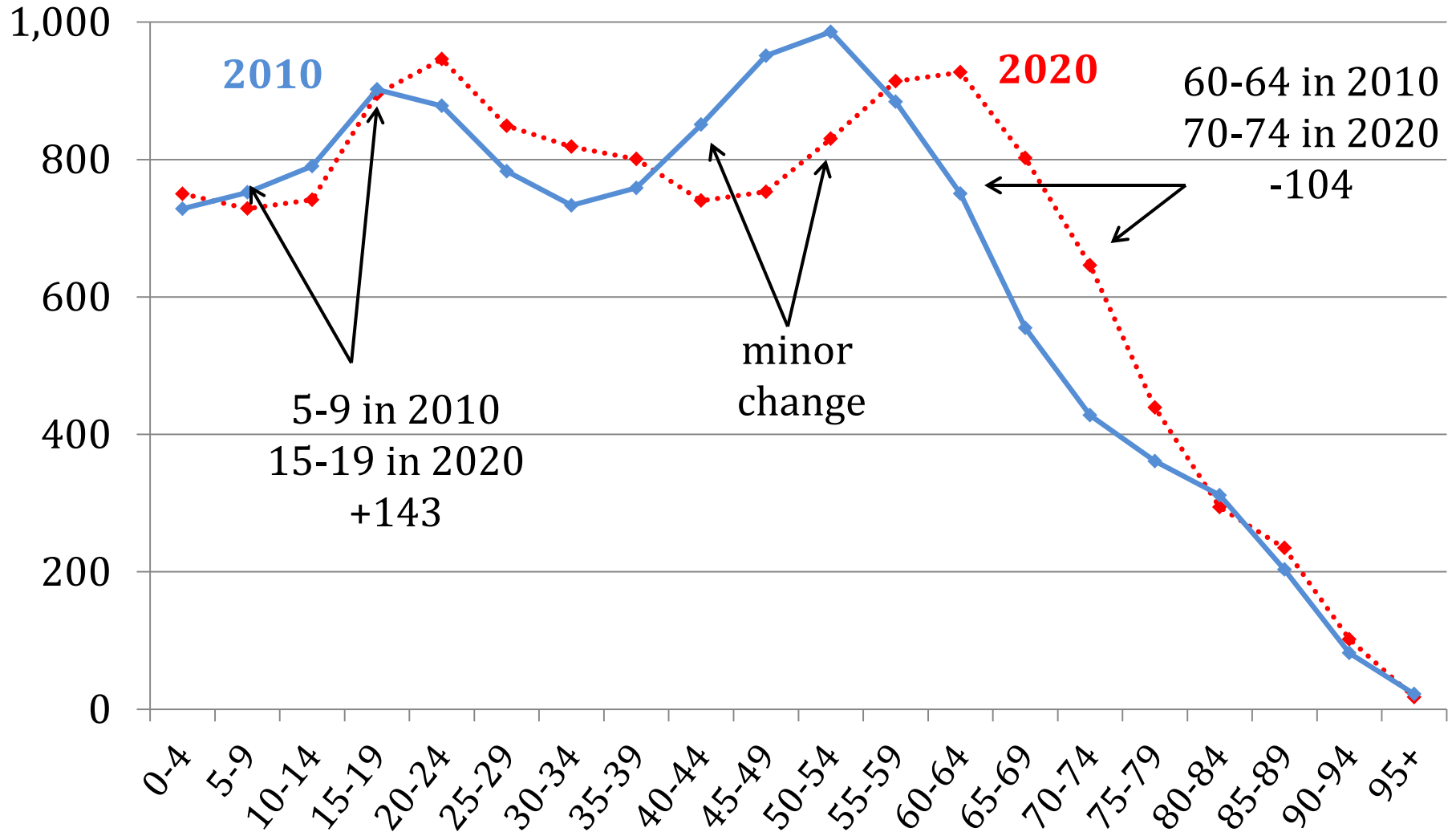
(Data are in thousands. Sources: U.S. Census Bureau and Penn State Data Center)



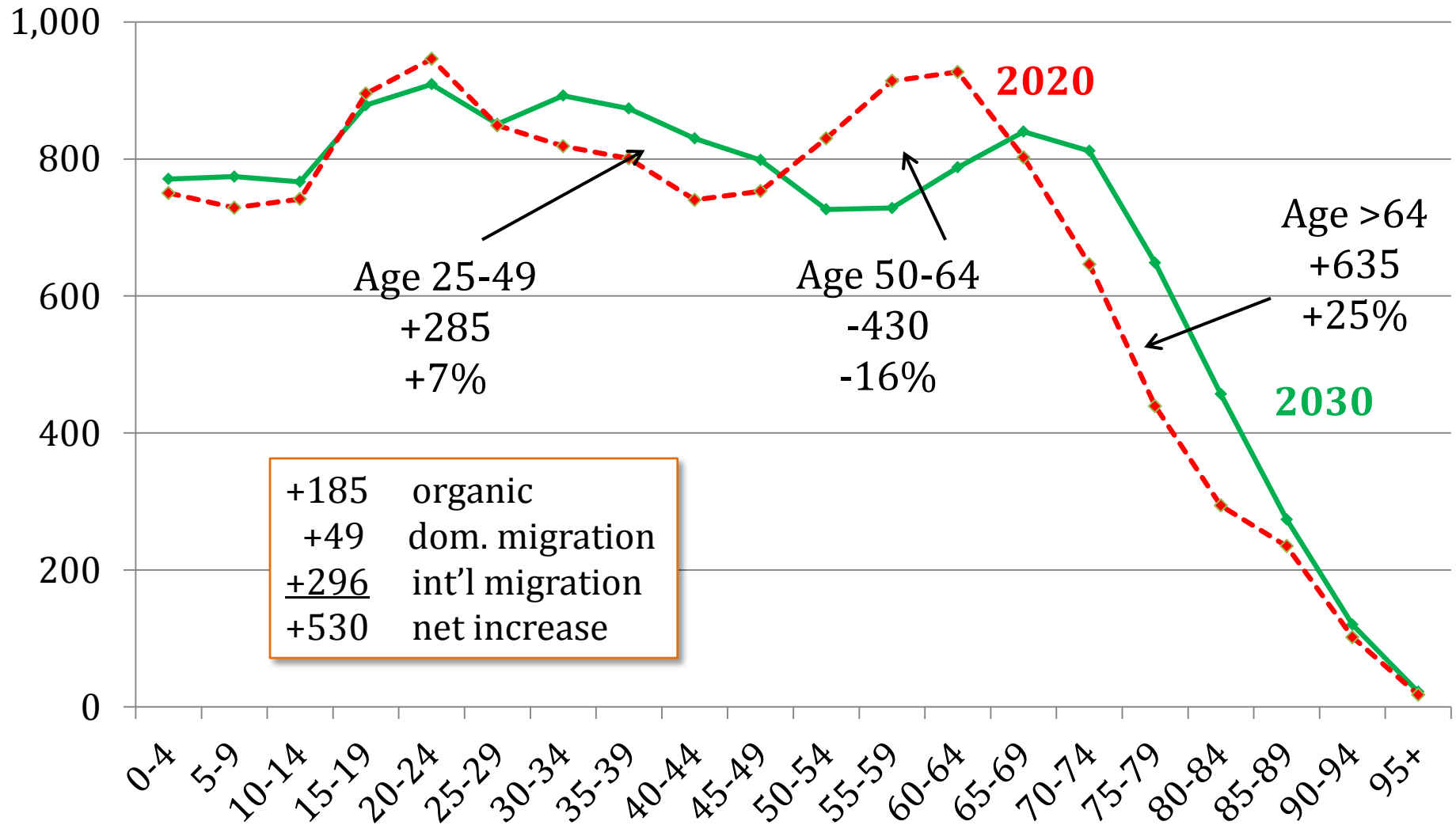
PA Demographics: 2010 to 2020



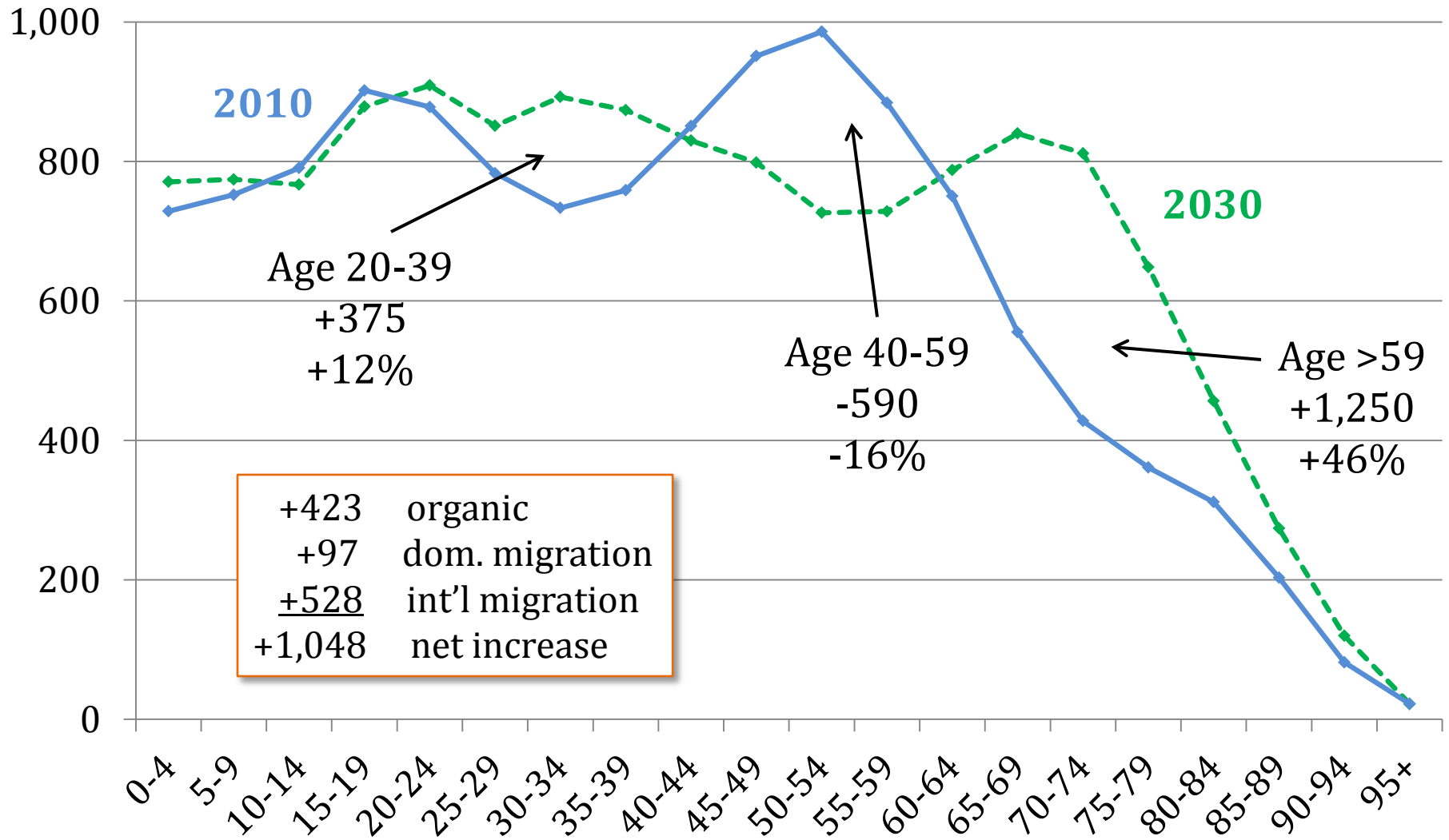
Migration Provides a Bump



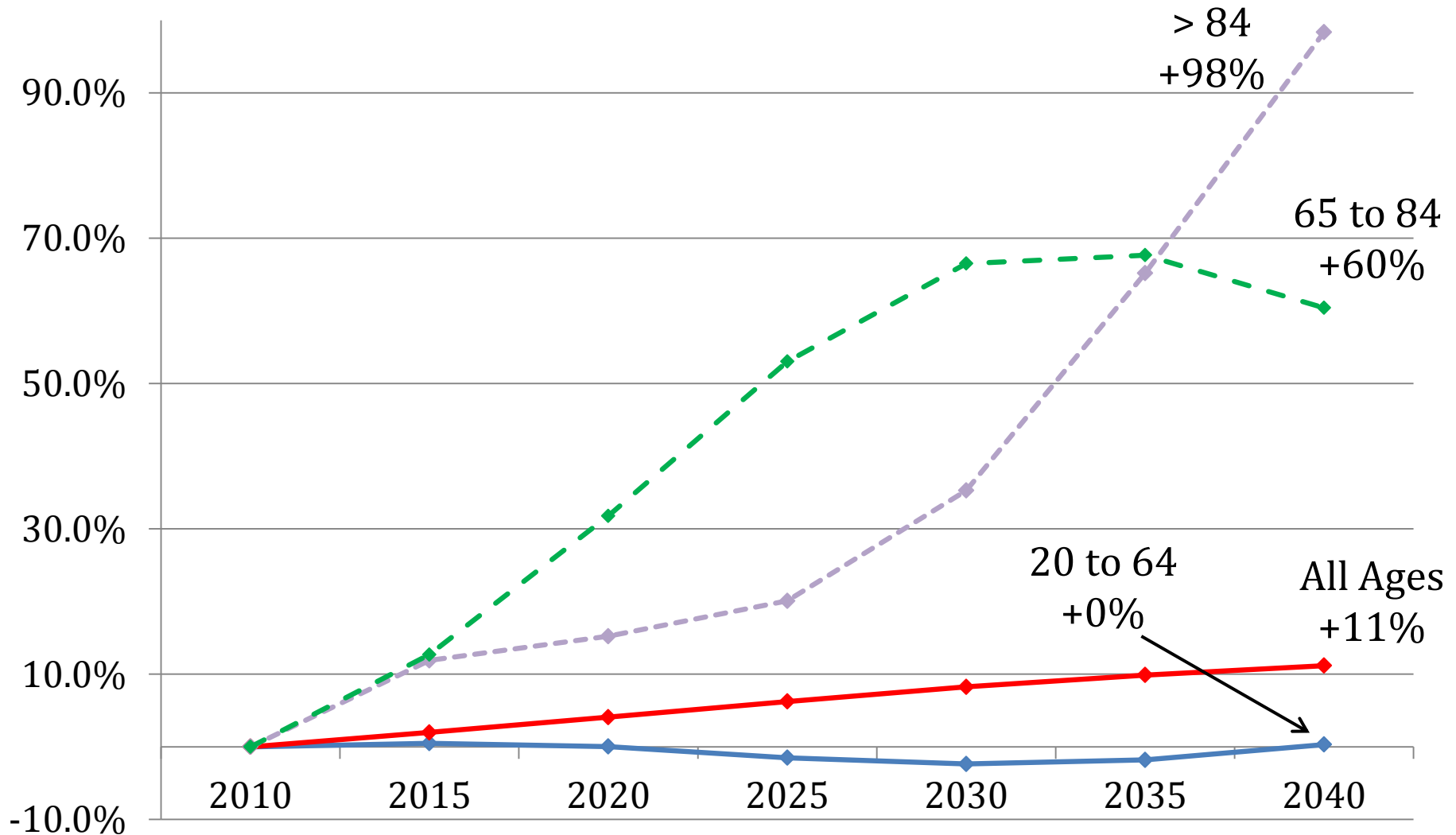
PA Demographics: 2020 vs 2030



PA Demographics: 2010 vs 2030



Cumulative Growth Rates Through 2040



International Migration Fuels Growth

	2010-20	2020-30	2030-40
Start of Decade	12,711	13,206	13,760
Organic Growth	238	185	-9
Domestic Migration	49	49	52
International Migration	<u>232</u>	<u>296</u>	<u>331</u>
End of Decade	13,230	13,760	14,133
Cumulative Growth	4.1%	4.0%	2.7%

Trend: Aging of Workforce

- Median Age of Workforce Increasing
 - **Labor Force Participation Rates increase rapidly** for those 55-64 and >64 years of age.
 - But rates are declining for younger workers.
- Trend Projected to Continue
 - **Baby Boomers continue to work.** Delay retirement.
 - Lost Wealth? But trend starts before recession.
 - Insufficient savings? Longer life spans?
- Possible Skills Gap if Older Workers Comprise Larger Share of Workforce?

PA Labor Force Participation Rates

Age				Change in Participation Rates		
	<u>1997</u>	<u>2007</u>	<u>2013</u>	<u>1997-07</u>	<u>2007-13</u>	<u>1997-13</u>
All	64.5	64.5	63.4	0.0	-1.1	-1.1
20 - 24	75.4	74.0	71.1	-1.4	-2.9	-4.3
25 - 44	84.7	83.2	82.8	-1.5	-0.4	-1.9
45 - 54	82.7	83.2	80.3	0.5	-2.9	-2.4
55 - 64	59.6	62.6	66.1	3.0	3.5	6.5
65+	10.2	15.7	17.6	5.5	1.9	7.4

Sources: Current Population Survey and PA Department of Labor.

Trend: Less Reliance on Wage Income

- +65 Age Cohort Reports Increasing Share of Income
 - Nearly 20% of all income reported on federal tax return.
- Reliance on Pensions, Savings and Social Security
 - Social Security income meant to be “supplemental.”
 - What impact from phase-out of Defined Benefit plans?
 - Are savings and investments sufficient?
- Income less Dependent on Economic Growth

Share of Total Income on Federal Tax Return

By Income Type and Age Cohort

	2007				2011			
	18-34	35-54	55-64	65+	18-34	35-54	55-64	65+
Wages	91.1	74.7	53.2	13.4	90.9	80.2	60.8	17.7
Interest & Divs.	1.4	3.6	6.7	15.5	0.9	2.1	4.5	11.5
Capital Gains	2.3	8.1	11.3	16.2	1.0	3.7	5.1	6.5
IRAs & Estate	0.3	0.6	1.9	5.6	0.3	0.9	2.6	8.4
Pensions	1.1	3.5	14.1	22.9	1.0	3.3	14.5	27.3
Business Income	3.8	8.9	8.8	4.6	4.1	9.1	9.5	5.5
Social Security	0.2	0.4	2.5	17.4	0.3	0.6	3.2	23.1
All Other	-0.2	0.3	1.5	4.4	1.5	0.1	-0.1	0.1

Note: Includes non-taxable social security, interest and pension income. Source: Internal Revenue Service.

Trend: Jobs Shift to Service Sectors

- Large Job Shift to Service Sector Since Recession
 - Healthcare, Professional and Food-Accommodation.
 - Reduction in Manufacturing, Government and Construction.
- For PA, Healthcare & Social Assistance Sector is Vital
 - ~19% of private sector jobs in 2013.
 - ~11% of economic output in 2013.
- Trend Continues due to Aging Demographic
 - Will impact economic growth.

Employment: 2007 vs. 2014

Sector	PA Job Gains (000s)		US Job Gains (000s)	
	Number	Growth	Number	Growth
Manufacturing	-96	-14.5%	-1,699	-12.2%
Construction	-27	-10.4%	-1,580	-20.7%
Government	-43	-5.6%	-403	-1.8%
Finance & Insurance	-12	-4.5%	-269	-4.4%
All Other*	-6	-0.3%	277	0.5%
Food-Accommodation	37	8.8%	996	8.7%
Healthcare	90	10.5%	2,307	14.7%
Professional Services	49	11.6%	946	9.9%
Total	-8	-0.1%	575	0.4%

* Includes: transportation, administration and support, education, wholesale-retail and other services.

Note: calendar years, change in average annual levels. 2014 figures are forecast from 2013 preliminary data.

Source: U.S Bureau of Labor Statistics and IFO (forecast).

Trend: Debt Restrains Growth

- **Student Loan** debt up dramatically.
 - Debt burden reduces ability to purchase homes and cars.
 - Less discretionary income, lower credit scores.
 - No reason to abate in near term.
- Large **Wave of Mortgage Refinancing** Since Recession.
 - Take advantage of lower rates.
 - For recent years, ~ 35-40% shift from 30 to 15-20 yr mortgage.
 - Shock from housing bust?
 - May increase monthly payment by \$200-\$400.
 - Temporary hit to economy. But, longer-term benefit.
- Impact on potential (Gen Y) and current (Gen X) homeowners.

PA Homeownership and Marriage Rates

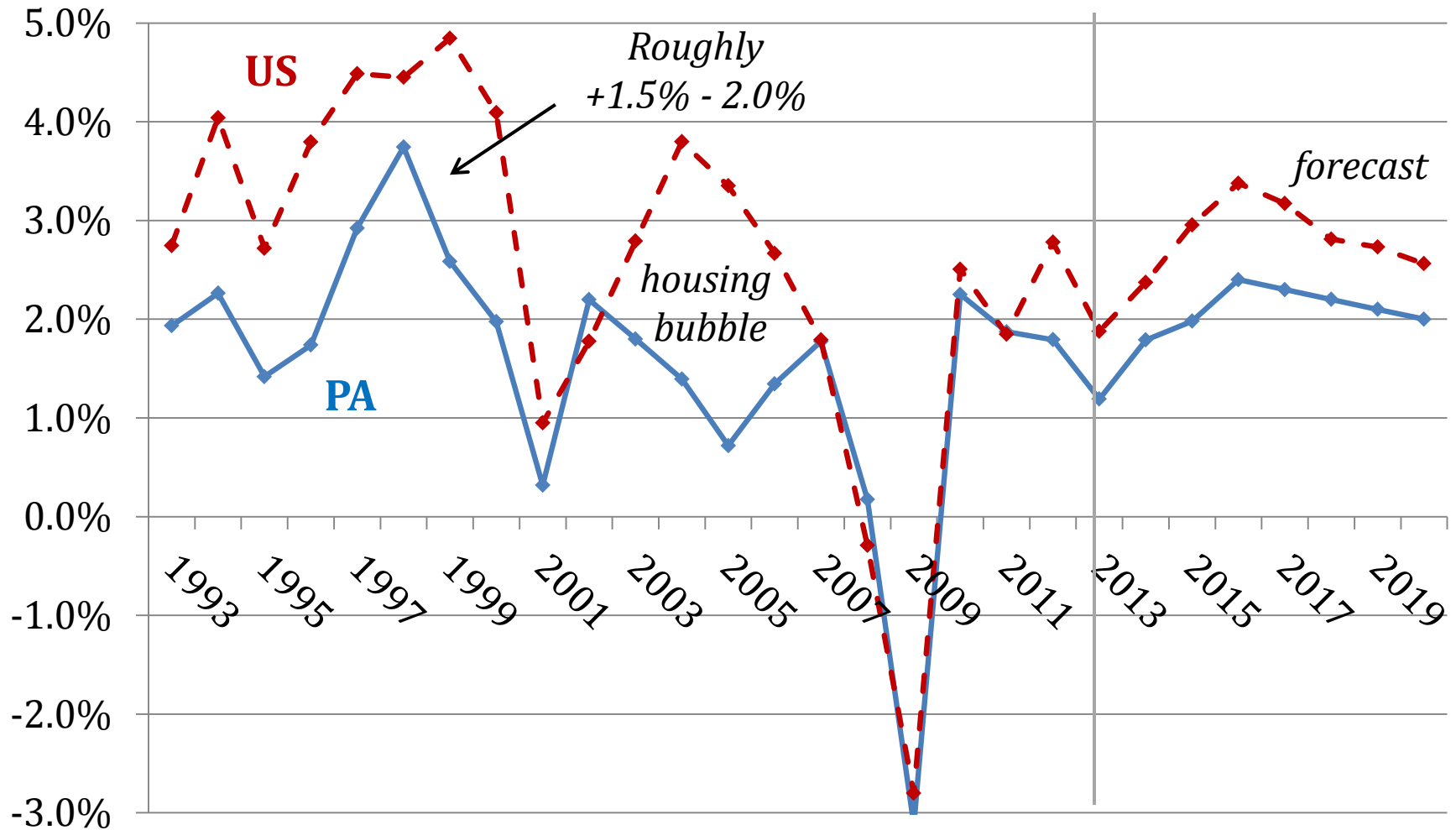
	2006	2009	2012	Change
Homeownership Rate				
25 – 44	62.0	58.7	55.3	-6.7
45 – 64	80.3	79.6	77.7	-2.6
>= 65	78.2	77.9	77.5	-0.7
Marriage Rate				
25 – 34	46.4	43.0	40.8	-5.6
35 – 44	63.2	62.5	61.2	-2.0
45 – 54	66.4	65.6	63.8	-2.6
55 – 64	66.6	68.3	66.2	-0.4
>= 65	51.8	52.0	53.4	1.6

Source: U.S. Census Bureau, American Community Survey.

Trend: Economic Growth Moderates

- Larger Share of Economy Dedicated to Residents
 - Share of private-sector jobs:
 - Healthcare & SA: 1990 (12.9%), 2000 (14.6%), 2013 (18.6%).
 - Manufacturing: 1990 (21.2%), 2000 (17.4%), 2013 (11.2%).
- Growth Driven by Demographics and Labor Productivity
 - Low demographic growth.
 - Productivity gains much harder for service providers due to labor intensity.
- Maturation of Economy - Lower Growth, Lower Volatility

PA and U.S. Real Economic Growth



Source: U.S. Bureau of Economic Analysis.

Trend: Persistent Tax Base Erosion

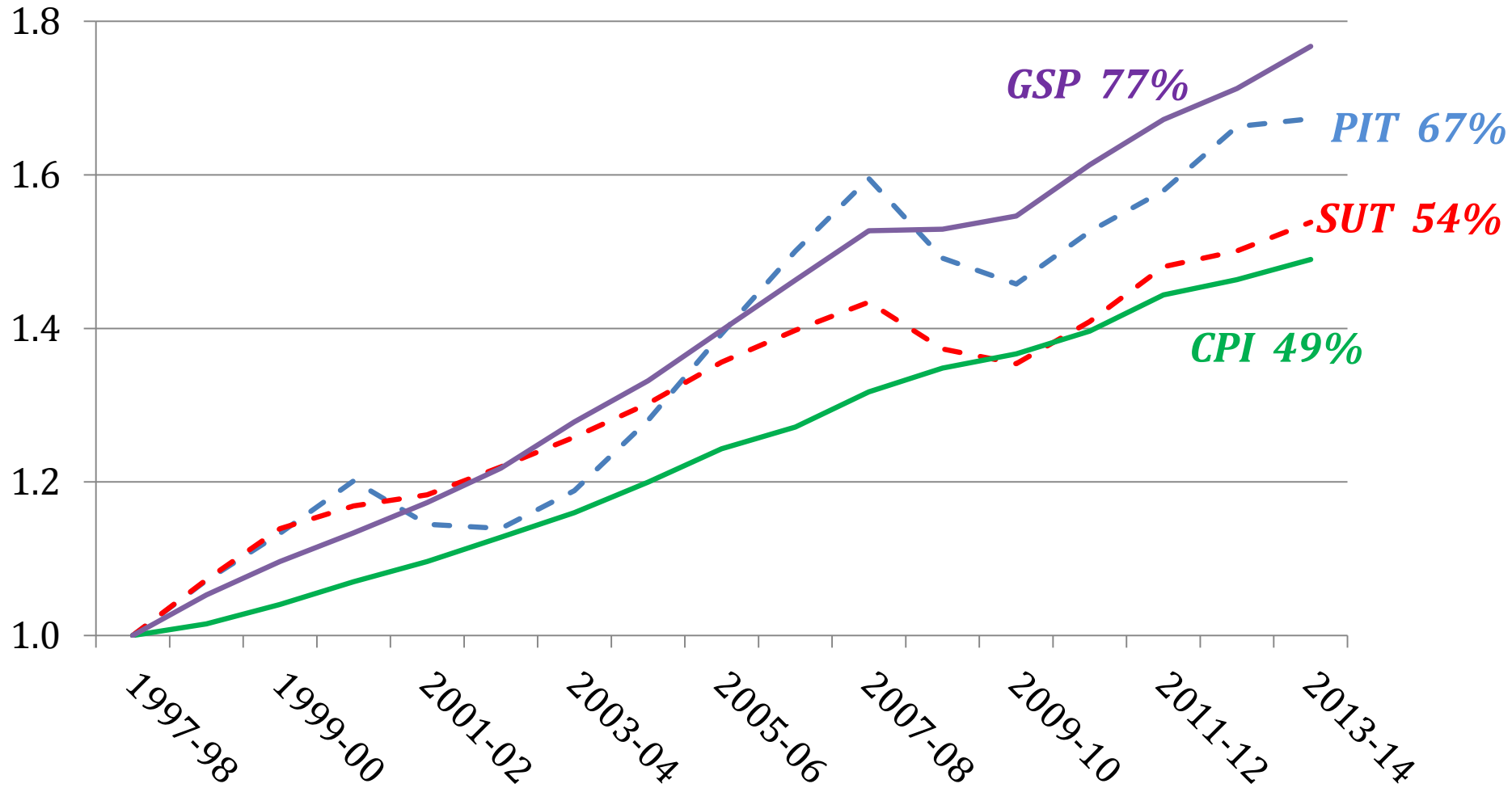
➤ Sales and Use Tax

- Elderly buy fewer durable goods that are taxable.
Significant purchases of healthcare and medications.
- Student loan debt crimps taxable purchases.

➤ Personal Income Tax

- Larger share of income not subject to tax.
- Wage income less important.
- Non-taxable income: Social Security, Pensions, IRAs.

Cumulative Growth Rates



Note: PIT is adjusted for tax rate increase in 2004.

Wrap Up

- Long Term Challenges ahead for PA Budget
 - Moderate economic growth.
 - Lagging tax collections.
 - Increased demand for healthcare.
 - Pension contributions.

- Can States Escape Demographic Constraints?
 - Export based industries.
 - Attraction of non-residents: education, tourism, healthcare.
 - Encourage high value-added industries.

Questions/Discussion

Thank you

Presentation to be
Posted at IFO website
www.ifo.state.pa.us