

MIDDLE-INCOME JOB DECLINE IN PENNSYLVANIA

Update 2001-13: Business-Cycle, Great Recession and Recovery



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EXECUTIVE SUMMARY

Total employment in Pennsylvania expanded only 0.1% during 2001-13. Job gains during the 2001-07 business-cycle and recovery 2009-13, were offset by losses in the Great Recession 2007-09.

Embedded in the cyclical changes in total employment during 2001-13 were a wide range of job gains and losses among major industries – notably between above average and below average wage industries.

This report tracks job change in 17 major industries in Pennsylvania during 2001-13. The industries are grouped from High wage to Low wage by industry “Annual Average Weekly Wage” (AAWW) as a percent of AAWW for total employment statewide:

Industry Wage Group	Number of Industries	Industry AAWW % of AAWW Total Employment	Job Change 2001-13	% Change AAWW 2001-13
High	4	150 & over	97,320	56.9
High-Middle	6	100-149	-324,130	40.3
Low-Middle	6	50-99	197,792	37.3
Los	1	under 50	58,328	31.6

IMPACTS OF JOB CHANGE: INDUSTRY WAGE GROUPS, 2001-13

On Employment:

During 2001-13 High-Middle wage industries - due mainly to a steep decline in manufacturing - lost 324,130 jobs. In contrast, Low-Middle wage industries - powered by growth in Health Care & Social Assistance - added 197,792 jobs. High wage industries added 97,320 jobs, and Low wage industries 58,328 jobs over the 12 years.

Bottom-line: There was a significant job shift from above-average to below-average wage industries during 2001-13.

On Annual Average Weekly Wage (AAWW):

The AAWW of all industries in the four wage groups increased during 2001-13, but dollar and percent change in AAWW decreased from High- to Low industry wage groups. Average dollar increase in AAWW during 2001-13 ranged from \$611 for High wage to \$75 for Low wage, and average percent change in AAWW decreased from 56.9% for High wage to only 31.6 percent for Low wage industries.

Bottom-line: Lower wage industries did not keep pace with higher wage industries in weekly wage increases during 2001-13.

On Total Wages:

Total wages increased \$26.5 billion for Low-Middle and Low wage groups combined, and only \$17 billion for High-Middle wage industries during 2001-13. This reduced High-Middle industries share of total wages (for all industries) from 48.4 to 40.7%, and increased Low-Middle and Low industries share from 30.5 to 33.7% over the 12 years.

Bottom-Line: Pennsylvania's regressive state income and local wage taxes suggests the shift in total wages from High-Middle to Low-Middle and Low wage industries during 2001-13 also resulted in some shift in tax burden to workers in the lower wage industries.

SUMMING UP: WHERE TO?

The job shift from High-Middle to Low-Middle wage industries during 2001-13 is a current and likely future problem for Pennsylvania. Action options include:

- 1) Job retraining for workers losing jobs in High-Middle wage industries,
- 2) Supporting viable efforts to slow/reverse job loss in manufacturing.
- 3) Promoting expansion of “growth” industries.
- 4) Investing in infrastructure to promote economic growth.

TRACKING MIDDLE-INCOME JOBS IN PENNSYLVANIA

This report explores middle-income job trends by tracking employment in 17 major industries in Pennsylvania during 2001-13. Industries are grouped by Annual Average Weekly Wage (AAWW) as percent of AAWW for total employment statewide.

Industry & Wage Group Wage Group: Percent of State AAWW	Industry 2001	AAWW (\$) 2013
High Wage: 150% and over		
Management of Companies & Enterprises	1,241	2,211
Utilities	1,193	1,672
Professional & Technical Services	1,080	1,585
Finance & Insurance	1,015	1,544
High-Middle Wage: 100-149%		
Wholesale Trade	898	1,393
Information	929	1,311
Manufacturing	797	1,091
Construction	771	1,085
Public Administration	714	1,034
Educational Services	703	973
State Average		
Total Employment – Public & Private	673	944
Low-Middle Wage: 50-99%		
Health Care & Social Assistance	625	872
Administrative & Waste Services	482	623
Agriculture, Forestry, Fishing & Hunting	420	593
Arts, Entertainment & Recreation	423	578
Other Services (except Public Administration)	411	565
Retail Trade	407	496
Low Wage: Under 50%		
Accommodation & Food Services	237	312

NOTE: Three industries – comprising about six percent of total employment statewide – changed wage group during 2001-13 and are not included in the analysis.

Industry	Wage Group		Employment		Employment Change 2001-13	
	2001	2013	2001	2013	Number	Percent
Mining, Quarrying & Oil & Gas Extraction	Hi-Mid	High	18,476	35,180	16,704	90.4
Transportation & Warehousing	Hi-Mid	Lo-Mid	247,036	259,107	12,701	4.9
Real Estate, Rental & Leasing	Lo-Mid	Hi-Mid	69,512	59,059	-10,453	-15.0
Total			335,024	353,346	18,322	5.5

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Data Sources:

Employment and Wages: “Quarterly Census of Employment and Wages”(QCEW) – Pennsylvania Department of Labor & Industry

Unemployment: “Labor Force, Employment, and Unemployment” (LAUS) -Pennsylvania Department of Labor & Industry

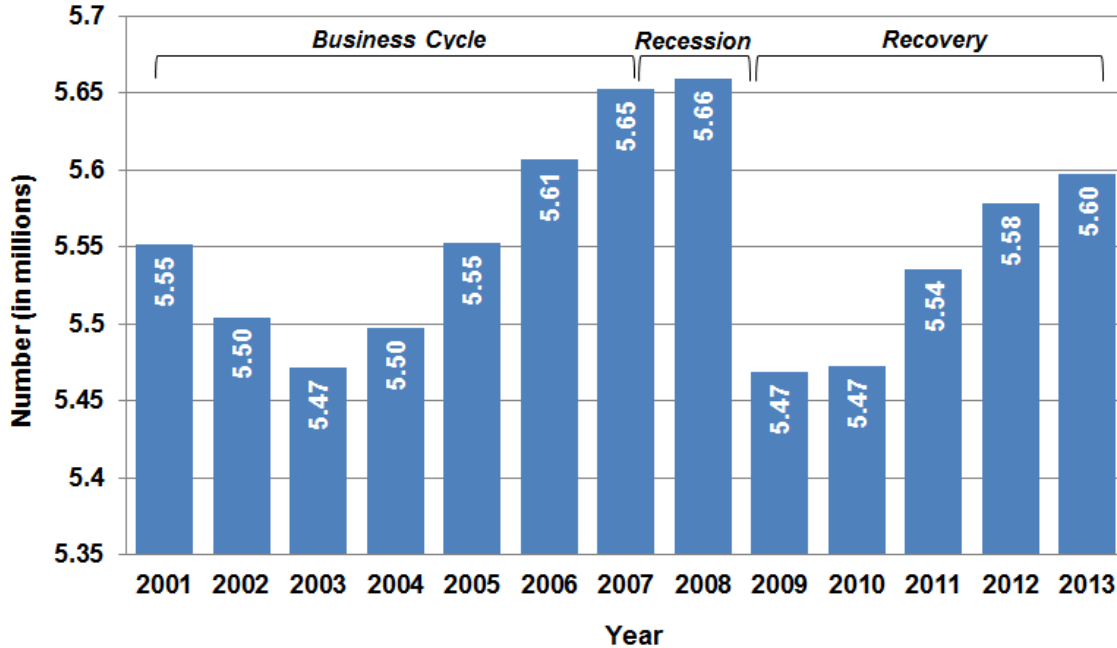
Gross Domestic Product (GDP): National Bureau of Economic Research.

THE PENNSYLVANIA ECONOMY: BIG PICTURE 2001-13

Total Employment

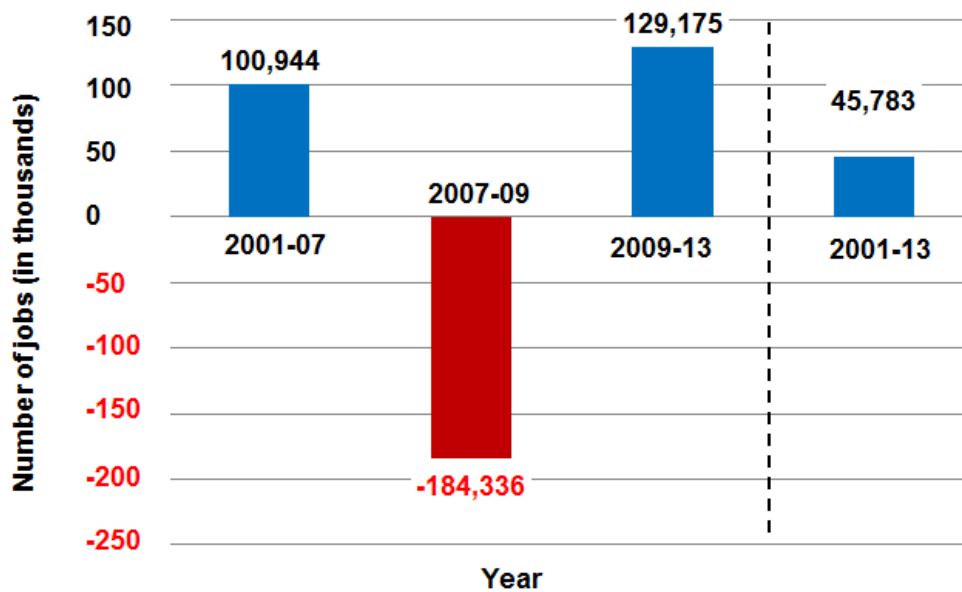
- Total employment in Pennsylvania fluctuated from decline to growth twice during 2001-13, as the state weathered two recessions (Fig. 1).

Figure 1. Total Employment in Pennsylvania: Annual 2001-13



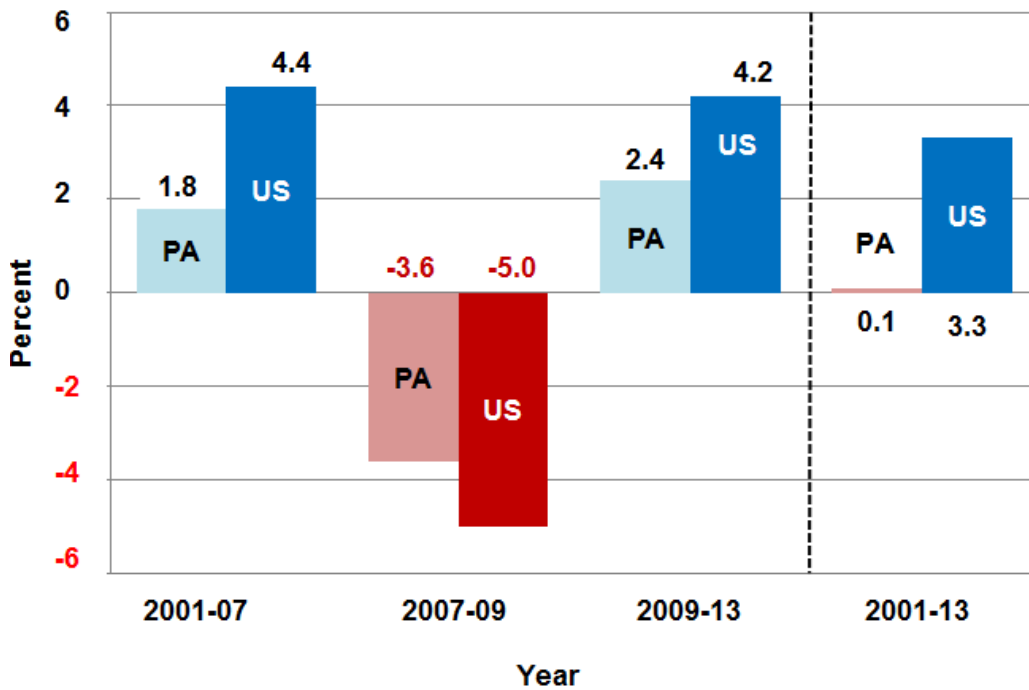
- Pennsylvania had a net gain of only 45,783 jobs (0.1%) during 2001-13. Job gains in the business cycle 2001-07 and recession recovery 2009-13 were nearly offset by jobs lost in the Great Recession (Fig. 2).

Figure 2. Number Change in Total Employment: Pennsylvania, 2001-13



- Pennsylvania's job growth (0.1%) lagged the U.S. (3.3%) during 2001-13. Job loss (-3.6%) was less than the U.S. (-5.0%) in the Great Recession, but job growth lagged the nation during the business cycle 2001-07, and recovery 2009-13 (Fig. 3)

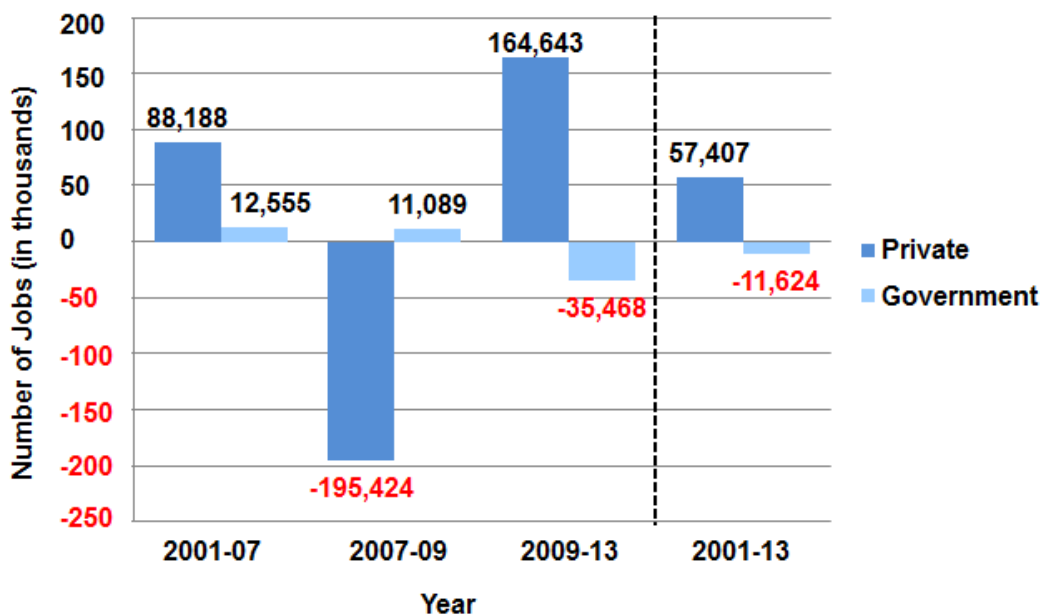
Figure 3. Percent Change in Total Employment: Pennsylvania and the U.S., 2001-13



Sector Employment: Private and Public

- During 2001-13 the private sector in Pennsylvania gained 57,407 jobs. The public sector – Federal, state, and local – lost 11,624 jobs (Fig 4).

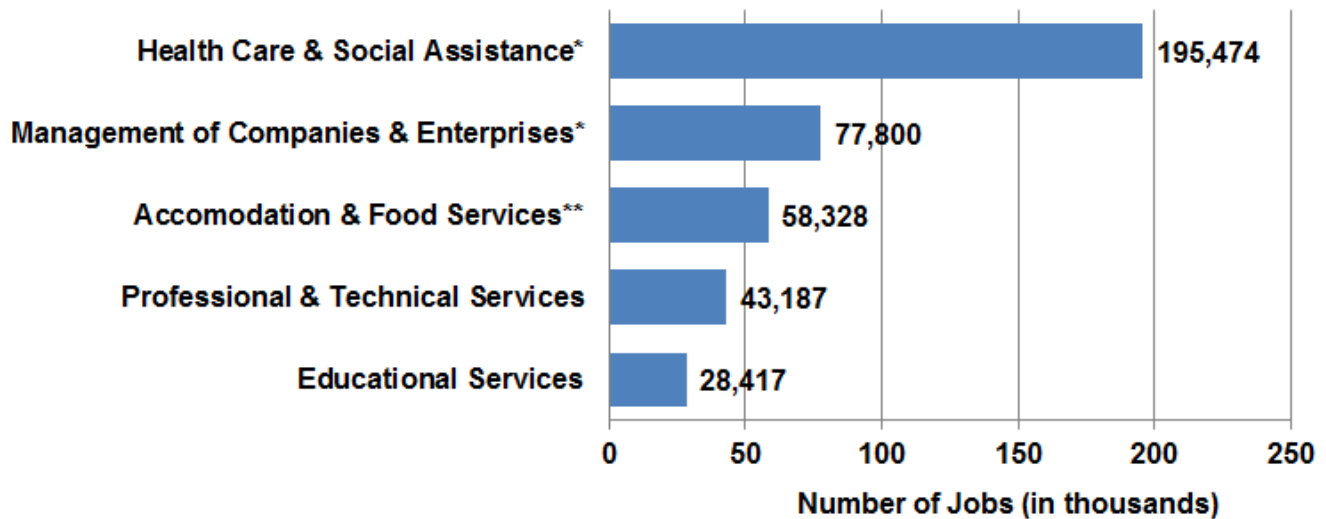
Figure 4. Private & Government Sectors: Number Change in Employment, 2001-13



Employment – Growth and Declining Industries

- Health Care & Social Assistance topped all industries in job growth (195,474) during 2001-13. Management of Companies & Enterprises (77,800) and Accommodation & Food Services (58,328) also had significant job growth (Fig. 5).

Figure 5. Top 5 Growth Industries in Pennsylvania: Change in Number Employed, 2001-13

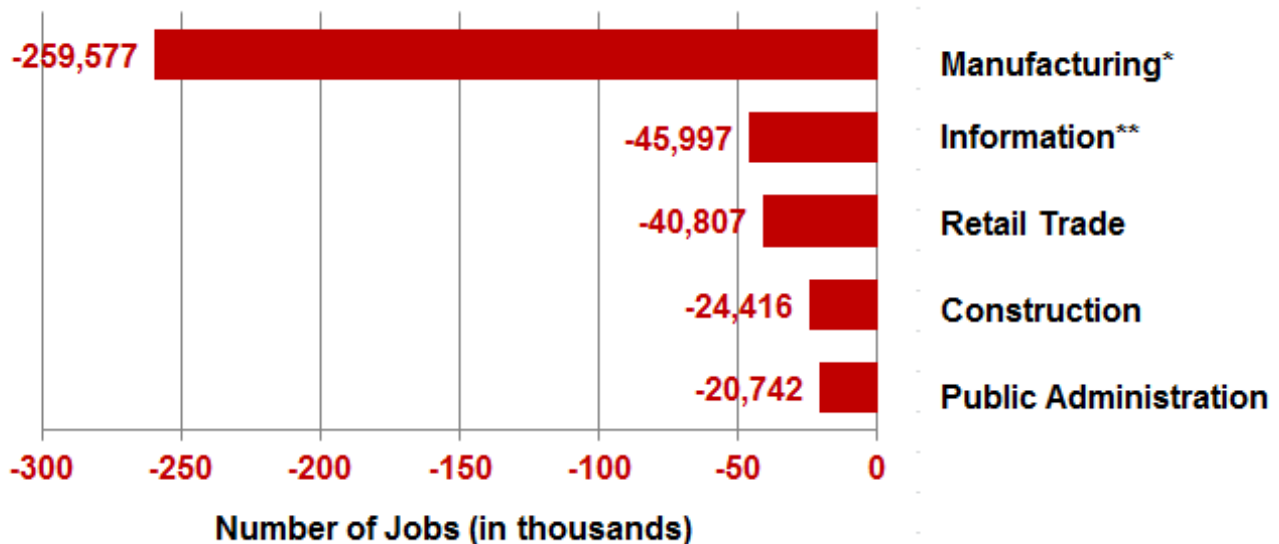


*Job growth annually 2001-13

**Job growth annually 2001-13, except recession year 2008-09

- Manufacturing topped all industries in job loss (-259,577) during 2001-13. Information (-45,997) and retail trade (-40,807) also had significant job loss.

Figure 6. Top 5 Declining Industries: Change in Number Employed. 2001-13



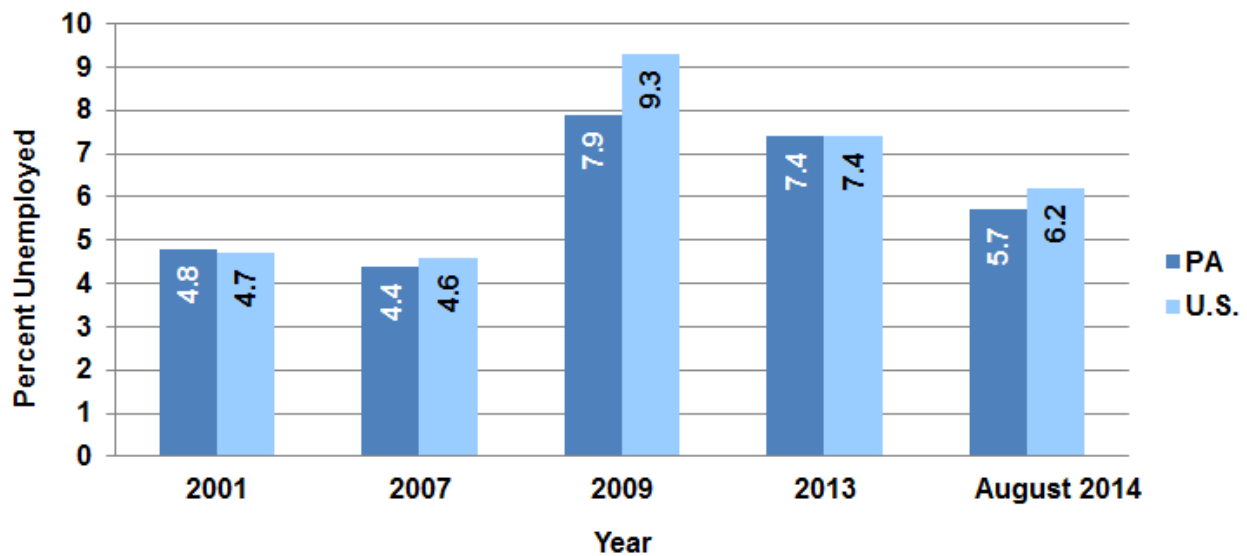
*Job loss annually 2001-10; job gain of 1.1% 2010-12; job loss 2012-13

**Job loss annually 2001-13

Unemployment: Pennsylvania and the U.S.

- Pennsylvania lagged the U.S. in job growth, but generally kept pace with the nation in percent unemployed during 2001-13 (Fig. 7).

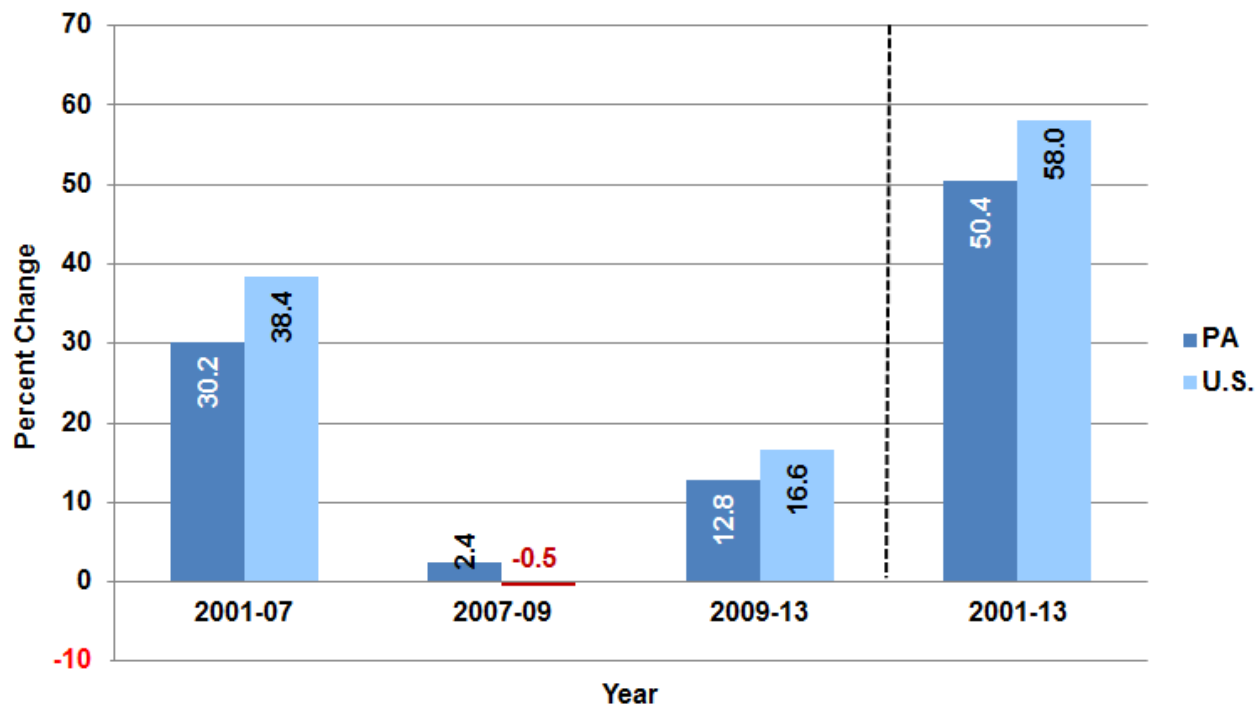
Figure 7. Percent Unemployed: Pennsylvania & the U.S., 2001-13



Gross Domestic Product (GDP): Pennsylvania and the U.S., 2001-13

- Pennsylvania's GDP grew 50.4% from 2001-13, nearly keeping pace with the U.S. (58.0%) (Fig. 8).

Figure 8. Percent Change in Gross Domestic Product (GDP): Pennsylvania & the U.S., 2001-13



MIDDLE-INCOME JOB DECLINE IN PENNSYLVANIA, 2001-13

Overview:

Pennsylvania had a net gain of only 45,783 jobs (0.1%) from 2001 to 2013. The state's rate of job growth was slow relative to the nation during the 2001-07 business cycle, and 2009-13 recovery.

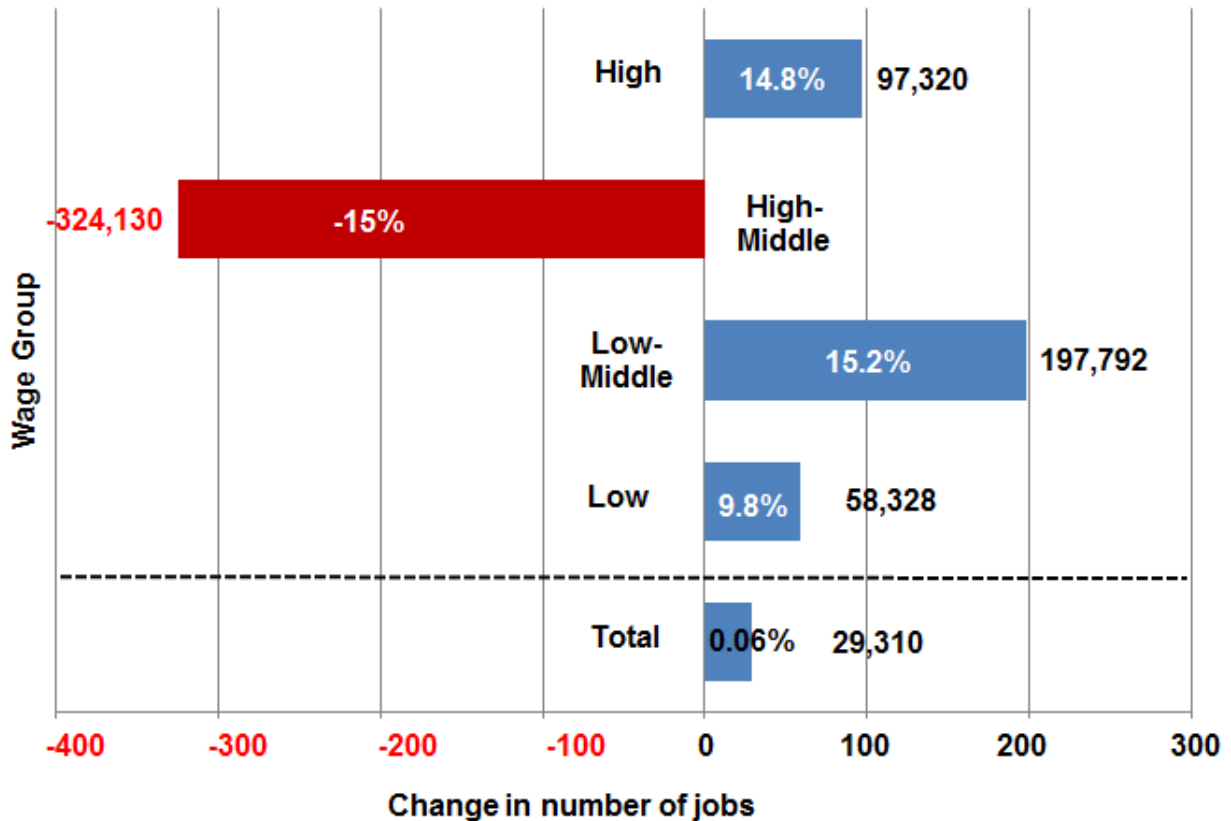
Pennsylvania's minimal net gain in total employment 2001-13 suggests a stagnant job picture over the 12 years. However, the reality was a mix of job gains and losses among major industries, as 10 industries added jobs and 10 lost jobs during 2001-13. Also, the job gains and losses of major industries were unevenly distributed among four industry wage groups – High, High-Middle, Low-Middle, and Low – during 2001-13.

EMPLOYMENT: INDUSTRY WAGE GROUPS 2001-13

Change in Number Employed: Industry Wage Groups, 2001-13

- Industries in the High-Middle wage group had a net loss of 324,130 jobs during 2001-13. Industries in the Low-Middle wage group had a net gain of 197,792 jobs. The High and Low wage groups also added jobs (Fig. 9).

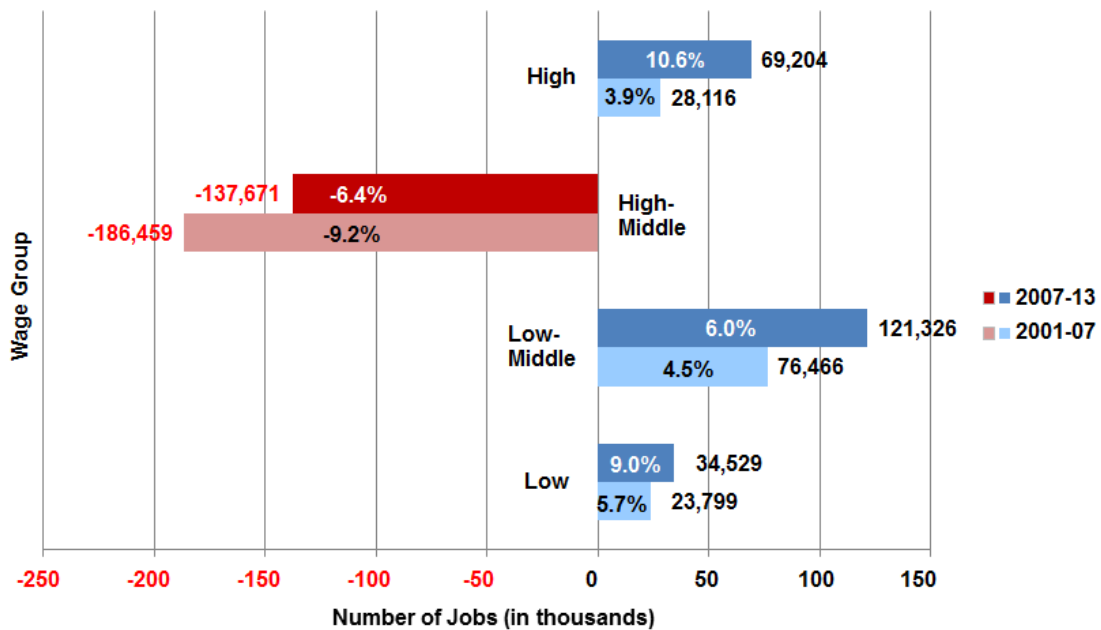
Figure 9. Change in Number Employed: Industry Wage Groups, 2001-13



Employment Change: Industry Wage Groups, 2001-07 and 2007-13

- Industries in the High-Middle wage group had a net job loss both during the 2001-07 business cycle, and from 2007-13 including the Great Recession and 2009-13 recovery (Fig. 10).

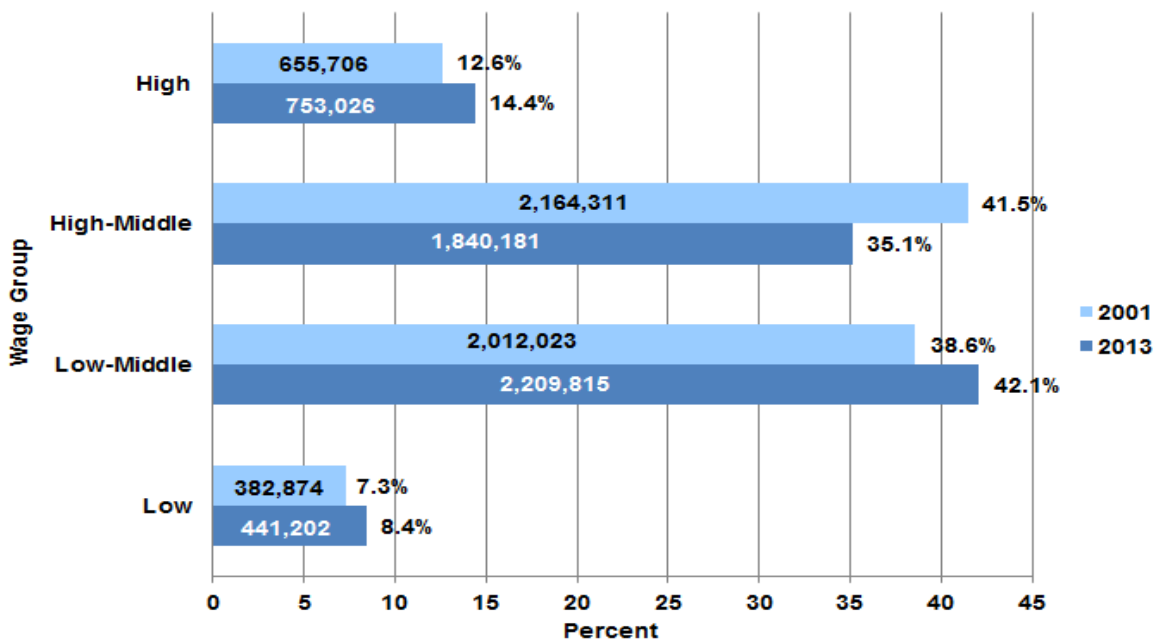
Figure 10. Change in Number Employed: Industry Wage Groups, 2001-07 and 2007-13



Distribution of Employment: Industry Wage Groups, 2001 and 2013

- The loss of 324,130 jobs in the High-Middle wage group during 2001-13 reduced its share of total employment from 41.5% in 2001 to 35.1% in 2013. The other three wage groups with job gains 2001-13 increased their share of total employment (Fig 11).

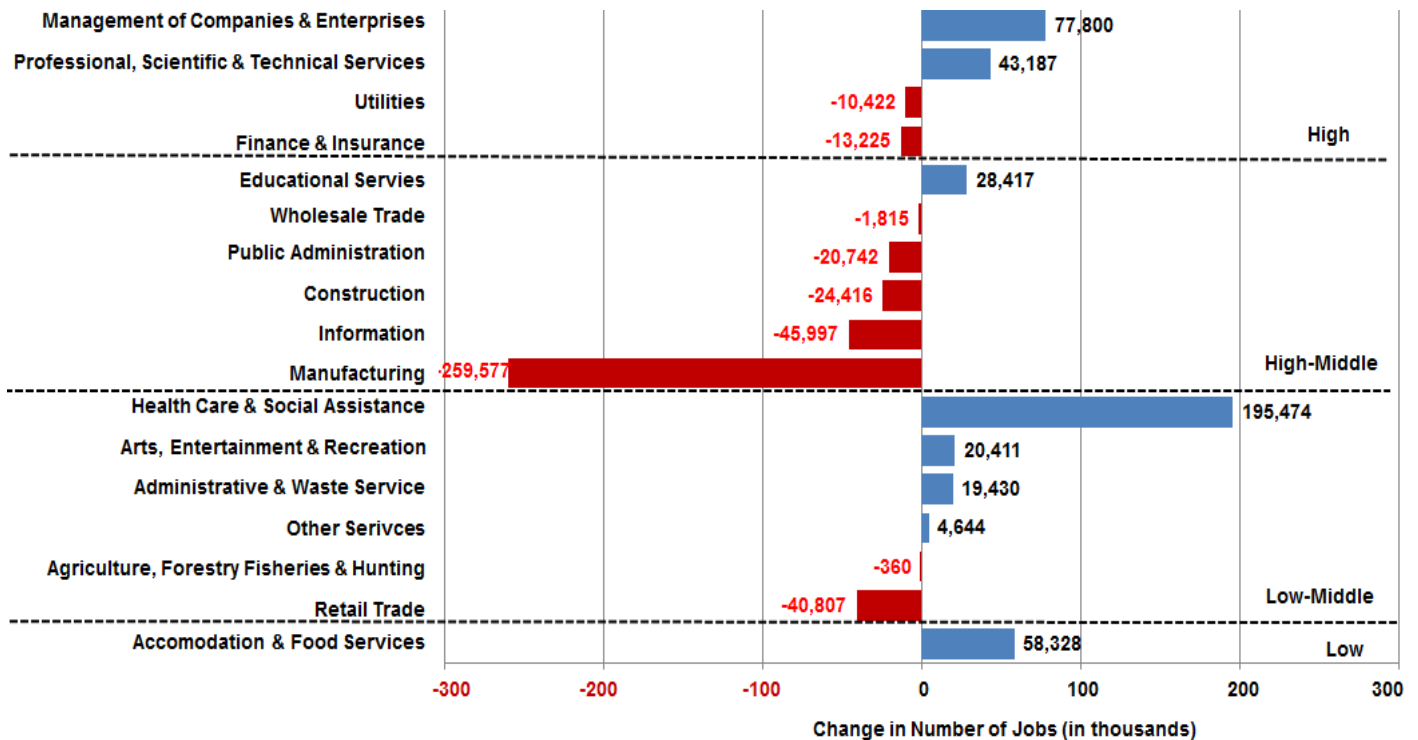
Figure 11. Number Employed & Percent of Total Employment: Industry Wage Group, 2001 & 2013



Employment Change: Industries in Wage Groups, 2001-13

- High Wage: Two industries had a combined gain of 119,987 jobs and two industries a combined loss of 23,667 jobs.
- High-Middle Wage: Five industries, led by Manufacturing, had a combined loss of 352,547 jobs. One industry gained 28,417 jobs.
- Low-Middle Wage: Four industries, led by Health Care & Social Services, had a combined gain of 239,959 jobs, and two industries a combined loss of 41,167 jobs.
- Low Wage: The one industry, Accommodation & Food Services, added 58,328 jobs.

Figure 12. Number Change in Employment: Industries in Wage Groups, 2001-13

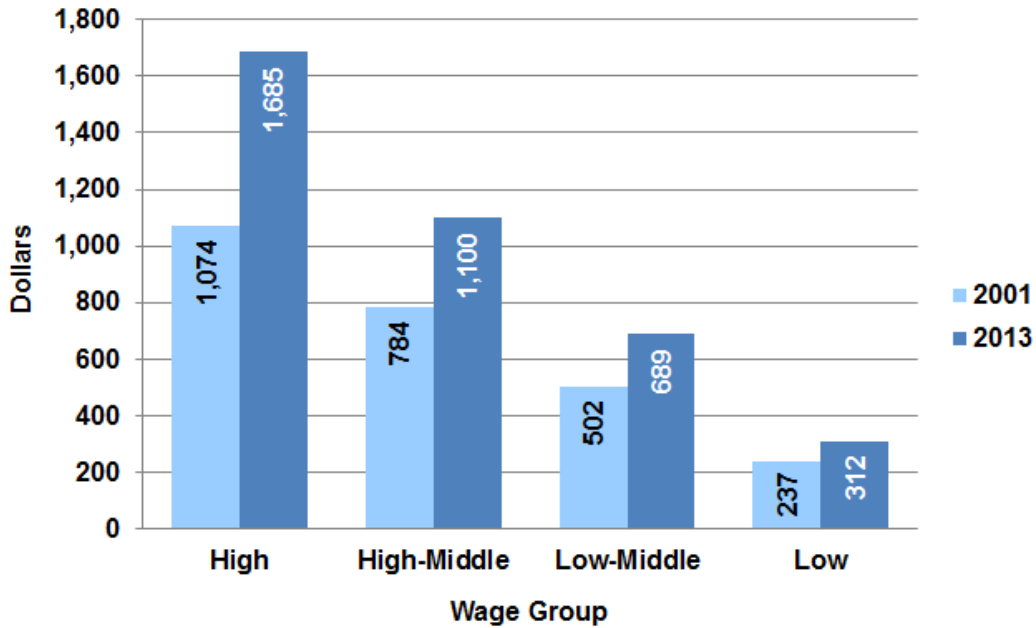


AVERAGE ANNUAL WEEKLY WAGE (AAWW): INDUSTRY WAGE GROUPS

Average Annual Weekly Wage: Industry Wage Groups, 2001 & 2013

- AAWW ranged from \$1,074 in High wage group to \$237 in Low wage in 2001 and from \$1,685 in High wage to \$312 in Low wage in 2013 (Fig 13)

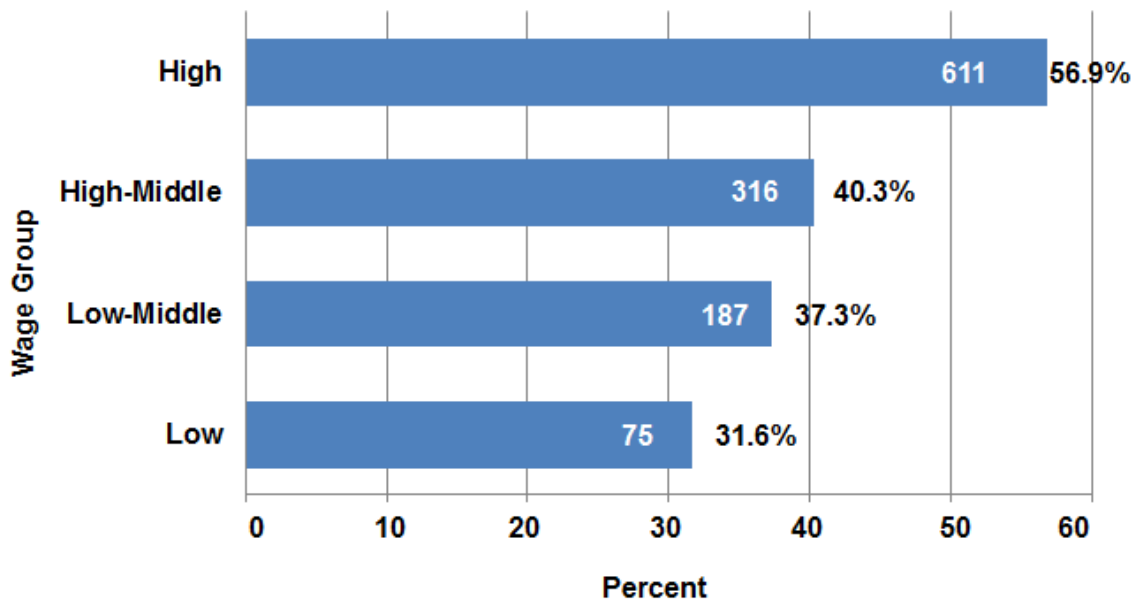
Figure 13. Annual Average Weekly Wage: Industry Wage Groups, 2001& 2013



Change in Average Annual Weekly Wage: Industry Wage Groups, 2001-13

- Increases in AAWW during 2001-13 ranged from \$611 in the High wage to \$75 in the Low wage group. Percent increases in AAWW 2001-13 ranged from 56.9% in the High wage to only 31.6% in the Low wage group (Fig 14)

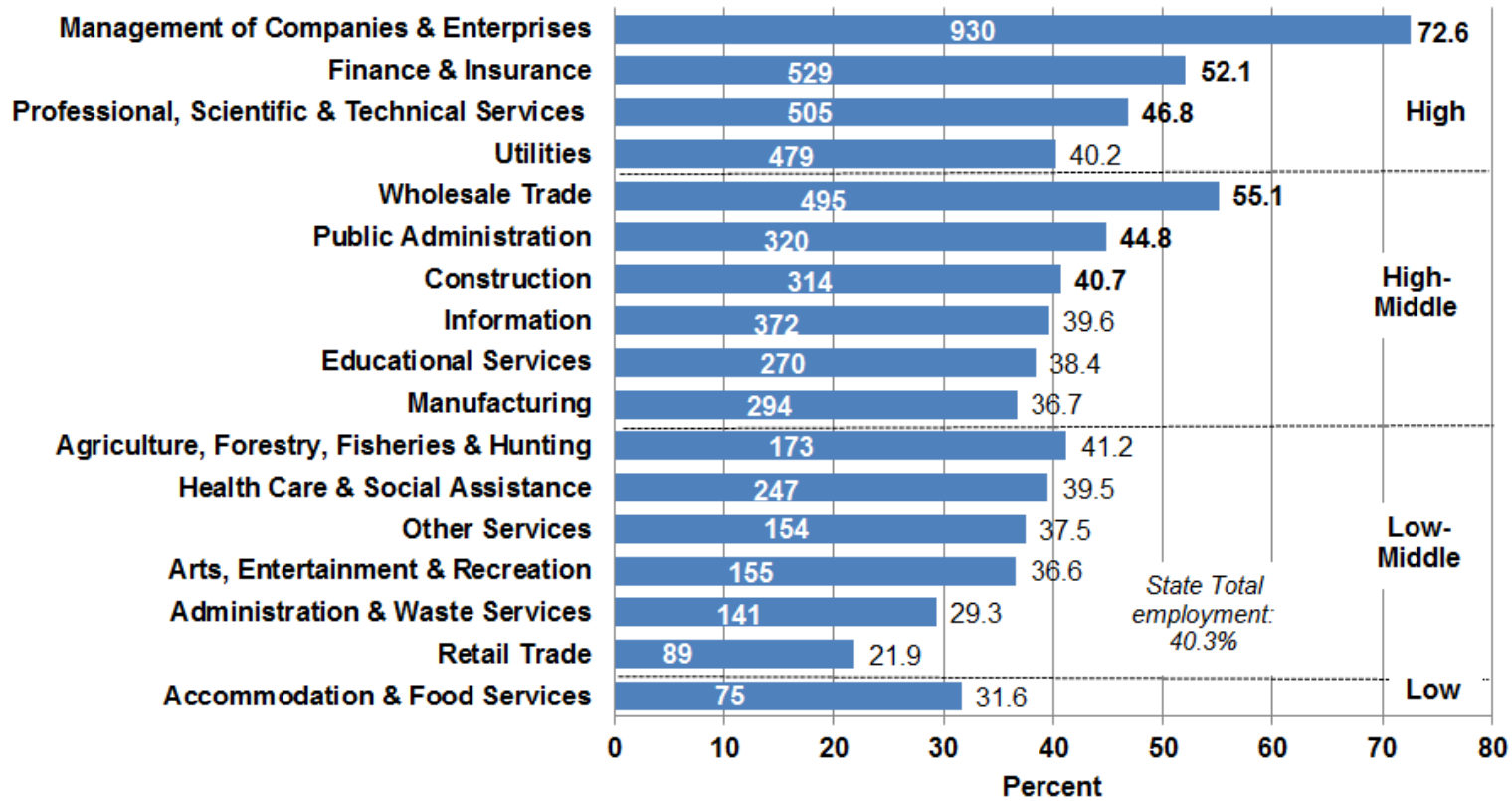
Figure 14. Dollar & Percent Change in Annual Average Weekly Wage: Industry Wage Groups, 2001-13



Change in Average Annual Weekly Wage: Industries in Wage Groups, 2001-13

- Individual industry dollar and percent changes in AAWW generally declined from High to Low wage groups 2001-13. Three of four High wage industries had percent gains greater than the state average (40.3%). Only one of six High-Middle, and one of six Low-middle industries had percent gains in AAWW above the state average (Fig 15).

Figure 15. Dollar & Percent Change in AAWW: Industries by Wage Group, 2001-13

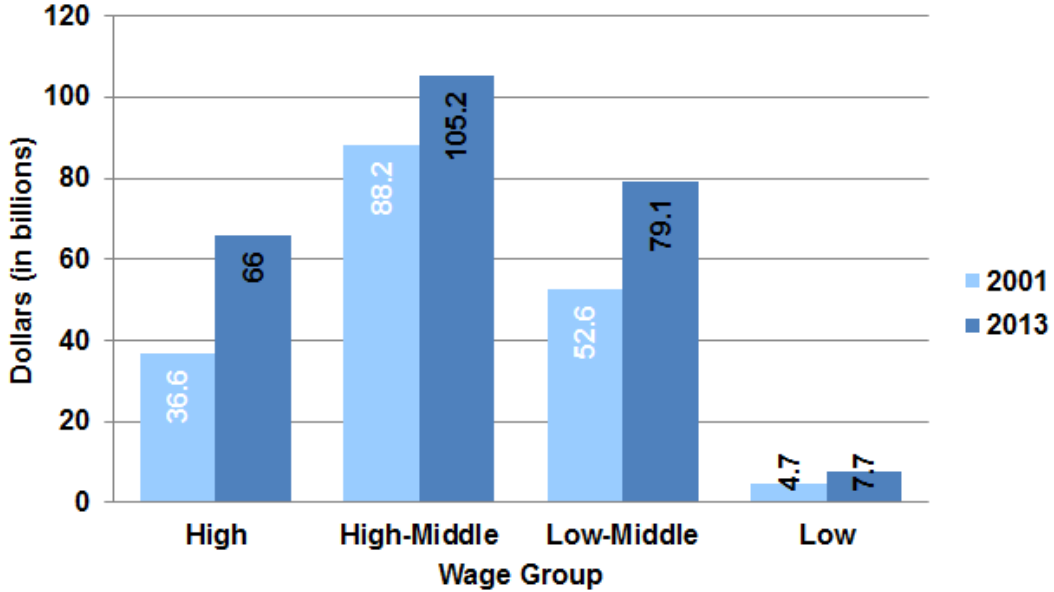


TOTAL WAGES: INDUSTRY WAGE GROUPS

Distribution of Total Wages: Industry Wage Groups, 2001 and 2013

- The distribution of total wages among industry wage groups was roughly similar in 2001 and 2013. Total wages in each wage group increased during 2001-13 (Fig 16).

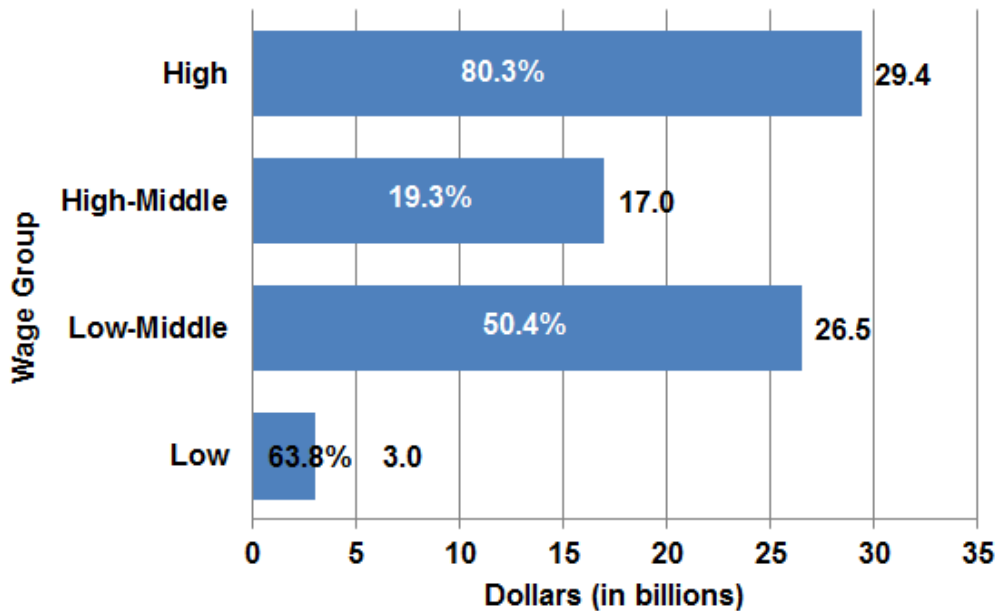
Figure 16. Total Wages by Wage Group: 2001 & 2013



Dollar and Percent Change in Total Wages: Industry Wage Groups, 2001-13

- There were wide variations in both dollar and percent change in total wages among industry wage groups during 2001-13. The High-Middle industry wage group lagged both the High and Low-Middle groups in dollar and percent change in total wages (Fig 17)

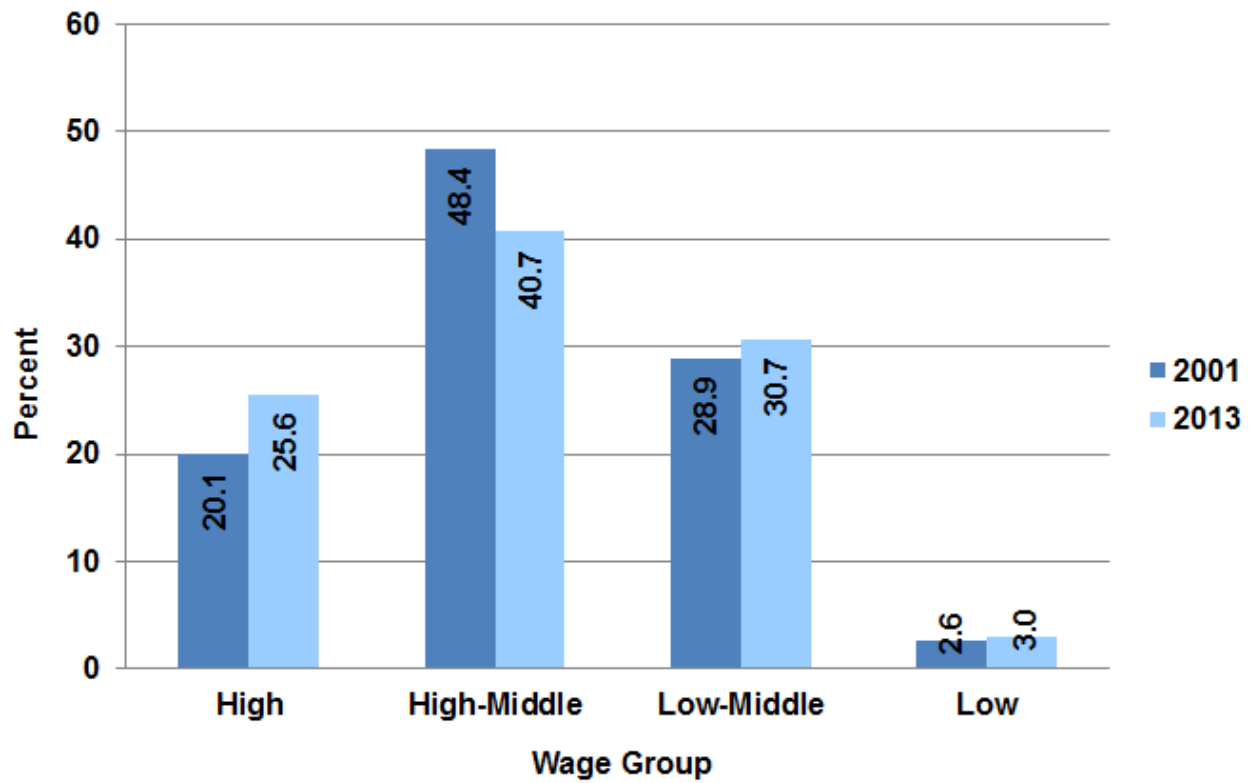
Figure 17. Dollar & Percent Change in Total Wages: Wage Groups, 2001-13



Distribution of Total Wages: Industry Wage Groups, 2001-13

- As a result of the job loss the High-Middle wage group's share of total wages declined from 48.4% in 2001 to 40.7% in 2013. The other three wage groups increased their share of total wages 2001-13 (Fig 18).

Figure 18. Percent of Total Wages: Wage Groups, 2001 & 2013



SUMMING UP TRENDS – IMPACTS – WHERE TO?

THE PENNSYLVANIA ECONOMY, 2001-13

In Brief:

During 2001-13 Pennsylvania had minimal net job gain. The state trailed the U.S. in rate of job growth during both the business-cycle 2001-07, and the 2009-13 recovery from the Great Recession. In contrast, the state matched the nation's low unemployment rates during the business-cycle, and had lower rates during both the recession and recovery. Also during 2001-13 Pennsylvania's GDP grew at near the nation rate.

Bottom-line: Pennsylvania's combo of negligible job growth, relatively low unemployment, and near U.S. average GDP growth during 2001-13 suggests an economy with few serious problems.

However, embedded in the state's minimal growth in total employment 2001-13 were wide industry variations in job change. Ten major industries gained, and ten lost jobs during 2001-13. Significantly, the industries with gains and those with losses were unevenly distributed among four industry wage groups – High, High-Middle, Low-Middle and Low wage.

HIGH-MIDDLE WAGE JOB LOSS: PENNSYLVANIA, 2001-13

EMPLOYMENT: INDUSTRY WAGE GROUPS

Trends:

In Pennsylvania, during 2001-13, industries in the High-Middle wage group – powered by job decline in manufacturing - had a net loss of 324,130 jobs. In contrast, industries in the Low-Middle wage group – powered by job growth in Health & Social Assistance - had a net gain of 197,792 jobs. The net result was a marked job shift from above-average to below-average wage industries in Pennsylvania from 2001 to 2013.

Impacts:

This report does not track what happened to the many working in industries in the High-Middle wage group losing jobs during 2001-13. However, one can assume that, outside of those able to retire, the options were limited to 1) finding full or part-time employment in a Low-Middle or Low wage industry or 2) dropping out of the labor force when the unemployment insurance ran out. In short, to the many losing jobs in High-Middle wage industries during 2001-13 adjustment must have been difficult..

AVERAGE ANNUAL WEEKLY WAGE (AAWW): INDUSTRY WAGE GROUPS

Trends:

The AAWW of industry wage groups decreased markedly from High to Low wage groups both in 2001-13. Also, dollar increases in AAWW decreased from High to Low wage groups during 2001-13. Significantly, percent increases in AAWW also decreased from High- to Low wage groups over the 12 years.

Impacts:

The decline in dollar and percent increases in AAWW from High to Low wage groups during 2001-13, indicates a widening wage gap between those employed in higher versus lower wage industries.

TOTAL WAGES: INDUSTRY WAGE GROUPS

Trends:

During 2001-13 total wages for High-Middle wage industries increased by 17.0 billions of dollars compared to a 26.5 billion increase for Low-Middle and Low wage industries. The High-Middle wage group's share of total wages for all wage groups fell from 48.4% in 2001 to 40.7% in 2013, while the combined Low-Middle and Low wage groups share of total wages increased from 30.5% to 33.7%.

Impacts:

Possible impacts of the shift in percent of total wages from High-Middle to Low-Middle and Low wage groups are twofold. First, Pennsylvania's regressive state and local tax structure suggests that those employed in Low-Middle and Low wage industries had their share of total tax burden increase from 2001-13. Second, it is likely that the shift in total wages caused shifts in the mix of consumer spending in the state – i.e. those employed in Low-Middle and Low wage industries likely purchase a somewhat different “market basket” of good and services than those employed in High-Middle wage industries.

HIGH-MIDDLE WAGE JOB LOSS: WHERE TO?

For several decades both the U.S. and Pennsylvania economies have been impacted by two powerful forces - globalization and technology change. Both forces have reduced the demand for labor in major industries. In Pennsylvania during 2001-13, reductions in the demand for labor has hit High-Middle wage industries – like manufacturing – the hardest.

The large job loss in High-Middle wage industries during 2001-13 raises the question of “Where to? - What to do? Two broad actions are suggested:

Short-run: Retrain workers losing jobs in High-Middle wage industries, for current and future job opening in growth industries.

Long-run: Promote viable opportunities for slowing/reversing job loss in industries such as Manufacturing, and the expansion of “growth industries” – e.g. Health Care & Social Assistance and Professional, Scientific & Technical Services.

Make investments in Pennsylvania's infrastructure that will promote economic growth.