Inflation Eroding Real Wages and Pension Benefits

Independent Fiscal Office | Research Brief | October 2021

Many recent articles have noted the negative impact that high rates of inflation are having on the real earnings of U.S. workers.[1] The latest monthly earnings release by the U.S. Bureau of Labor Statistics (BLS) confirms that finding. The release found that real average hourly earnings (i.e., wages) for all U.S. workers declined 0.8% in September 2021 from the prior year.[2] Despite strong nominal wage gains, the real value of those gains has been eliminated by economy-wide inflation as measured by the U.S. Consumer Price Index (CPI-U).

To examine this issue for Pennsylvania workers, **Table 1** reproduces the methodology used by the BLS using Pennsylvania earnings and CPI-U data. The earnings data use average hourly earnings for private sector employees. Those amounts are deflated by the Philadelphia metro region CPI-U and compared to the same ratio from the prior year. As shown by the table, real average hourly earnings declined in each of the latest four months due to unusually high inflation. For August, average hourly earnings increased by 4.4%, while the CPI-U grew by 4.6%, yielding a 0.2% reduction in real average hourly earnings. That outcome implies workers have less purchasing power. The data show that the decline in real hourly earnings decelerated during the summer. These data do not reflect the expiration of federal unemployment compensation benefits, which ended the first week of September. That expiration could alleviate some pressures in the labor market and reduce nominal wage growth.

The table also shows detail for four sectors. For the leisure and hospitality sector, which tends to employ lower-wage workers, real average hourly earnings increased 2.1% for August. That outcome likely reflects the impact of the current labor shortage which caused wages to be bid up. Real average hourly earnings in the construction sector also increased (1.5%), due to similar pressures. By contrast, real average hourly earnings fell for the manufacturing (-0.8%) and the professional and business service (-1.7%, e.g., lawyers, accountants and building maintenance services) sectors.

Table 1
Growth of Pennsylvania Real Average Hourly Earnings

	May	June	July	August
All Private Workers	**-1.7%**	**-1.5%**	**-0.7%**	**-0.2%**
Leisure and Hospitality	-4.1%	0.4%	2.6%	2.1%
Construction	0.0%	0.0%	1.7%	1.5%
Manufacturing	-0.1%	-0.1%	-1.1%	-0.8%
Professional-Business Services	-2.8%	-4.3%	-3.6%	-1.7%

Note: Growth rate is year-over-year. Average hourly earnings is deflated by Philadelphia CPI-U. Excludes self-employed.
Source: U.S. Bureau of Labor Statistics (data and methodology).

[1] For example, an analysis by Furman and Powell found that current worker earnings are lower than 2019 due to inflation. See "US workers are getting larger raises, but not enough to keep up with higher inflation," Peterson Institute for International Economics (July 30, 2021) at https://www.piie.com/blogs/realtime-economic-issues-watch/us-workers-are-getting-large-raises-not-enough-keep-higher.

[2] Payroll workers only. Excludes self-employed. See https://www.bls.gov/news.release/realer.htm#re_table1.f.1.

Higher rates of inflation also have important implications for public pensions. **Table 2** illustrates the impact for the average SERS or PSERS beneficiary who was retired in 2020 after achieving full benefits. The average annual benefit earned was $30,050 for SERS and $29,600 for PSERS.[3] The analysis uses an average benefit amount ($29,820) for the two systems. The table displays nominal payments over the next 15 years at five-year increments and outcomes under two inflation scenarios. The first scenario assumes inflation of 2.0% per annum, which reflects the Federal Reserve's original target rate. The second scenario uses higher inflation for 2021 (5.0%), 2022 (3.5%) and 2023 (2.5%), prior to reversion to a long-run annual rate of 2.0%.

Constant inflation of 2.0% per annum erodes the real value of annual pension benefits by $2,810 for 2025 (-9.4%), $7,660 (-25.7%) for 2035 and $64,100 (-14.3%) over the entire 15-year period. Under the second (higher) inflation scenario, the erosion increases to $4,090 for 2025 (-13.7%), $8,710 for 2035 (-29.2%), and total erosion increases to $81,550 (-18.2%) over the entire 15-year period. The difference between the two scenarios is $17,450 of reduced purchasing power (27.2% higher) over the entire 15-year period, or -$1,160 per annum on average. The beneficiary loses purchasing power due to higher inflation during 2021 to 2023. The impact is the same as a $17,450 lump sum tax on benefits because the payments are fixed and not indexed to inflation.

Table 2
Higher Inflation Erodes Real Value of Public Pensions

					Total 2021-35	
	2020	2025	2030	2035	Dollar	Percent
Real Value of Average Benefit						
No Inflation	$29,820	$29,820	$29,820	$29,820	$447,300	n.a.
With 2% Inflation	$29,820	$27,010	$24,470	$22,160	$383,200	n.a.
With Higher Inflation	$29,820	$25,730	$23,310	$21,110	$365,750	n.a.
Reduction in Real Value						
No Inflation vs 2% Inflation	$0	-$2,810	-$5,350	-$7,660	-$64,100	-14.3%
No Inflation vs Higher Inflation	$0	-$4,090	-$6,510	-$8,710	-$81,550	-18.2%
Difference: Additional Erosion	$0	-$1,280	-$1,160	-$1,050	-$17,450	n.a.

Note: Higher Inflation scenario assumes 5.0% inflation in 2021, 3.5% in 2022, 2.5% in 2023 and 2.0% in all future years.

The analysis assumes that higher prices are permanent, and do not reverse in the future, which generally holds for most price increases, but not all. Under those circumstances, higher inflation permanently eliminates a portion of fixed wealth, such as fixed pension benefits. Assets such as stocks or homes will generally increase in nominal value if inflation accelerates, effectively offsetting some, most or all of the inflationary impact.

[3] These figures reflect an average beneficiary who achieves superannuation (i.e., maximum benefits). Upon retirement, most members (70% to 80%) withdraw their employee contributions to use for investment or other purposes. The figures represent a weighted average for a member who withdraws and does not withdraw employee contributions.