The End of the Keynesian Consensus and US Wage Growth: An Empirical Study

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Abstract: Macroeconomics treats wage growth as primarily driven by price and productivity growth, and debates the impact of business cycles on real-wage growth. This paper argues that the breakdown of the Keynesian Consensus that framed many postwar macroeconomic institutions (unemployment compensation, welfare, the institutions affecting unions and collective bargaining) has affected those macroeconomic relationships, and added others. It provides evidence that declining union density, and the expanding War on Drugs, reduced both nominal and real wage growth. Intensified cyclical downturns did as well, and there is no longer evidence that productivity growth benefits wages.

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We can think about wage growth from two points of view: employers', and workers'. From the employer perspective, all that matters is actual wages paid, as that immediately impacts profitability. Labor is fungible: it does not matter to whom the wage is paid, whether work is continuous, interrupted, or sporadic, what matters is how much is paid.

From labor's perspective, wage work provides their livelihood. The job options available to them constrain wage prospects and earning capacity, even if they are not currently employed. Recent work by Jeanette Lim-Wicks (2024) takes this latter approach, and shows that the wage prospects of those with irregular work or long unemployment spells are quite low, which reduces average imputed wages significantly.

This paper will adopt the former approach, tracking wages actually paid, since this directly affects profitability and therefore the macroeconomy. Other work (Naples, 2023; Naples 2024; Reich and Prins 2020; Seligman and Nam-Sonenstein 2024) has identified the vast reserve pool of potential workers hidden among the incarcerated and those on probation or parole. This paper will explore empirically their impact on both nominal and real wage growth.

The Keynesian Consensus

The Keynesian Consensus following WWII featured several institutional features that were abrogated in the neoliberal period after the Vietnam War. By the 1950s, historic union gains were accepted, while Taft-Hartley and red-baiting in unions limited further expansion. Automatic stabilizers like unemployment compensation, food stamps and welfare became normative, and most families made ends meet with one income earner. The productivity bargain in highly unionized manufacturing elicited worker cooperation with workplace adjustments to raise the intensity or contributions resulting from their labor. These conditions supported wage growth.

Beginning in the late 1970s, the political consensus shifted to less income replacement – declining unemployment recipiency and higher taxes on benefits, limits on access to welfare and food stamps and work requirements for both. Reduced automatic stabilizers led to wider swings in unemployment in the postwar period than had previously been the case. In addition, a politically motivated War on Drugs vastly expanded arrests and imprisonment and exacerbated income insecurity for low-wage workers, undermining wage pressures. The tolerance for unions gave way to runaway shops, fired striking PATCO workers, and decertification elections more likely to succeed under an anti-labor NLRB (Milkman and Luce 2017). This combination of factors contributed to declining union density (see Naples, 2024). It may also have broken the link between productivity growth and wage growth, as will be shown.

This study traces these developments empirically. It explores the evidence for their impact on wage growth of production and nonsupervisory workers, in both nominal and real terms. Paul Davidson (1978) emphasizes that all contracts in capitalism are nominal, so workers receive and employers set nominal rather than real wages. Nevertheless, most economists recognize that workers care about their real earnings, and behave accordingly. Then we can also assess real-wage outcomes over time and the impacts of causal variables.

Model

The focus is on production and nonsupervisory workers' wages. The study explores wage growth (change in the log of the wage rate, W•) and its dependence on macroeconomic determinants. First, in light of the postwar productivity bargain, productivity growth will be measured for production and nonsupervisory worker-hours (APL•). The change in the log of CPI (CPI•) will be entered to assess the extent to which wages keep up with inflation. It is anticipated

that nominal wages do not keep pace with inflation. Put differently, the rate of growth of real wages will be reduced by current inflation. This result can be called the "Keynes effect," since Keynes (1964) was an adamant advocate of central-bank promotion of inflation as a less conflict-generating device to reduce the real wage than wage cuts.

The time-series patterns of nominal and real wages and CPI inflation are illustrated in figure 1. The inverse patterns in real wages and inflation are fairly evident. Overall, nominal wages are more positively correlated with inflation.

(figure 1 goes about here)

So far, the nominal model to be explored is

1) $W\bullet = \beta_o + \beta_1 APL\bullet + \beta_2 CPI\bullet$.

Changes in the levels of additional causal variables would be seen as affecting the growth of wages, controlling for productivity growth and inflation. Since W•, APL• and CPI• are all measured as changes in logs, other explanatory variables are logged for consistency.

The unemployment rate, by undermining workers' leverage on the job, would be expected to hamper wage growth. Both strikes and quit rates are understood to vary procyclically. Both increase workers' bargaining power, so wage growth would increase as unemployment fell.

Because unions provide an institutional voice for workers (Freeman and Medoff 1984), their declining numbers since the 1970s would be expected to contribute to slower wage growth. Their positive association with wage growth for members is well-established (see Macpherson and Hirsch 2021). Hirsch et al. (2024) provide union membership data for the period under study. They also provide a measure of unions' employment share relative to all employees. However, only nonsupervisory employees are permitted to join unions; anyone with managerial

responsibilities is prohibited. For this study, union membership relative to production and nonsupervisory employment is calculated as the UnionShare measure (its simple correlation with membership relative to all employees is .98) and entered in log form.

Finally, a War on Drugs was initiated by President Nixon and fueled by conservative Congresses and presidents, reaching peak levels of incarceration by the Great Recession. While purportedly directed at both hippies and Black people, in practice it vehemently targeted poor Black urban communities (Hinton et al. 2018). Mass incarceration of Black men was about five times as high as for white men (Nellis 2016:17). Where the Keynesian Consensus promoted job training and income replacement for the unemployed, the War on Drugs shifted resources towards promoting economic insecurity and the use of force against the low-income population, wrapped in the rhetoric of "fighting drugs."

About one-third of the US population uses drugs, but only a fraction has a substance-abuse issue (Surgeon General of the US 2015). In the context of the Drug War, buying enough marijuana to host friends at a party would make someone liable as a drug seller, and if their party were within 1000 feet of a school, their arrest could lead to mandatory prison sentences. Arguably the ensuing environment of racial harassment in poor neighborhoods and racial profiling in daily life (walking or driving while Black, see Harris 2020) promoted fear and uncertainty. At any time, people could be arrested, subject to suspicion of drugs or other illegal activity even without evidence, and held in jail either without bail or with prohibitive bail until trial. Police were given such *carte blanche* that even deaths in custody under restraint were treated as the victim's fault (see discussion of "excited delirium" in Da Silva Bhatia et al. 2022), and very rarely were police officers found guilty of murder until Derek Chauvin's knee on his

neck very publicly caused George Floyd's death in 2020, as videotaped on phones (Berman 2021).

This harassment and incarceration caused serious economic disruption for Black families, impaired children's education, created mental-health challenges, and intensified the fear of unemployment for those who succeeded in holding their jobs (see Gibson et al., 2023). Economic security was further undermined by the threat of constitutionally suspect random drug tests on the job.

The salient measure of the War on Drug's impact is the 6-fold increase in jail and prison populations from 1970 to the 2008 peak. To incorporate it in our model as a trigger for economic insecurity, it is treated in a way parallel to the unemployment rate: the ratio of the number of people in jail and prison relative is taken relative to the sum of the official labor force plus the number of those incarcerated. The measure then is logged (IncarcLRate). The union share of production and nonsupervisory employees in the private business sector and the incarceration labor rate clearly move inversely (see figure 2). Clearly, collinearity may have to be addressed.

(figure 2 goes about here)

The full model becomes

2) $W\bullet = \beta_o + \beta_1\ APL\bullet + \beta_2\ CPI\bullet + \beta_3\ U + \beta_4 UnionShare + \beta_5\ IncarcLRate.$

The real-wage (Wreal•) equation would be the same. Allowing wages not to keep up fully with inflation, CPI• will be included in this model as well.

3) $Wreal\bullet = \beta_o + \beta_1\ APL\bullet + \beta_2\ CPI\bullet + \beta_3\ U + \beta_4\ UnionShare + \beta_5\ IncarcLRate.$

Because a consistent data series for union membership is available only since 1973 (Hirsch et al. 2024), this constrains the empirical work to begin then.

Results

It turns out there were some autocorrelation issues in the estimates, so the regressions reported do control for serial correlation; nevertheless, both the growth of nominal and real wages were stationary, allowing for lags. The analysis begins with the standard macroeconomic measures of inflation, productivity growth and unemployment. For both the nominal wage and real wage, inflation is a crucial significant influence on wage growth, strongly positive for the nominal and strongly negative for the real wage. Although this is annual data, and business cycles are often most evident using quarterly data, the unemployment rate is significant as well, and is strictly negative. Only productivity growth shows no significant relationship with wage growth. Experiments with all-employee productivity and with value-added instead of output as the productivity numerator did not give different results. There is no empirical evidence that nominal or real wage growth reflects productivity growth over the period.

Figure 3 illustrates the disconnect. Sometimes productivity growth leads the real wage, sometimes the real wage leads productivity growth, often there is no clear common movement.

(figure 3 goes about here)

While the equations are statistically significant, the overall explanatory power of the nominal-wage equation is evidently much lower than for real wages. The finding of a significant negative impact of inflation on real wages is striking. The coefficient of CPI• in the real-wage equation is more than 80 percent, which emphatically exposes the negative impact on the working class of company pricing practices.

The model is then extended to incorporate the union share of production and non-supervisory employment. When both UnionShare and IncarcLRate are included, neither is

significant, but the explanatory power of the nominal-wage model increases by about two-thirds. To illustrate the underlying significance and signs of these regressors, each is entered alone.[1]

For the real-wage model, the same pattern emerges when IncarcLRate and UnionShare are included, either together or separately. In fact, the coefficient estimates and t-statistics are virtually the same in corresponding nominal- and real-wage equations. The inclusion of either or both of these explanatory variables does not appreciably change the coefficients or statistical significance of other explanatory variables in the model.

Conclusion

There are several takeaways from this study of the impact of the end of the Keynesian Consensus. First, the strong negative impact of inflation on real wage growth highlights how class-biased not only inflation is, but inflation policy as well. Inflation is always redistributive, it cannot create new value, only reallocate whatever real income there is. When inflation accelerates, the Fed intervenes to slow economic activity. This prevents workers harmed from higher consumer prices from passing it on as higher nominal wages, *de facto* protecting the interests of profit. When the Fed initially allowed price increases it attributed to the supply chain, and then tightened credit conditions, it prevented a wage-price spiral by making wages bear the burden of higher costs. As Senator Katie Porter (2022) and Mike Konczal showed, the initial inflation from 2020:quarter 2 to 2021:quarter 4 predominantly increased profits, very little was accounted for by wage or cost changes. If working people come to recognize the class nature of inflation policy, they may call for more accountability for the Fed, an outcome not on Keynes's horizon when he proposed expansionary monetary policy to facilitate this redistributive process.

As Sachs (1979:271) observed in a Brookings conversation, labor institutions can, e.g., through centralized bargaining as in Europe, prevent inflation policy from reducing real wages.

Second, productivity growth is clearly not being passed on in higher wages. From 1973-2019, the average change in nominal wages was 1.6%, in real wages was -.02% and in productivity growth was .7%. This is borne out by the insignificance of that variable across all versions of the model. Future research might fruitfully explore the extent to which productivity on the aggregate was ever associated with real-wage growth on an annual basis.

Third, despite debates on the question (see summary in Bils 1985), the evidence presented here shows that unemployment impacts not only nominal wages, but real wages as well. And it is not the only measure mediating labor leverage. It has long been understood that unions benefit workers' nominal and real wages. By extension, it is not surprising that the decline in union density would impair average wage growth in nominal and real terms.

However, part of what has undermined labor's bargaining position in recent years is the War on Drugs (see Naples 2024). That massive policy initiative, in terms of dollars spent, had no impact on drug use (Murray 2021). It vilified Black people as criminogenic drug fiends, and promoted a dramatic increase in arrests, police, and warehousing people in jails and prisons who would otherwise be seeking work (see Gibson et al. 2023). Consequently, when there was social activism, such as Black Lives Matter in 2020, those police stood ready to intervene, sometimes brutally (Oladipo 2023). As many urban residents concluded, it was a "War on me" (Davis, 2021). The findings presented here suggest that wage growth will benefit from dismantling the War on Drugs and its racially hostile and divisive impacts.

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Table 1

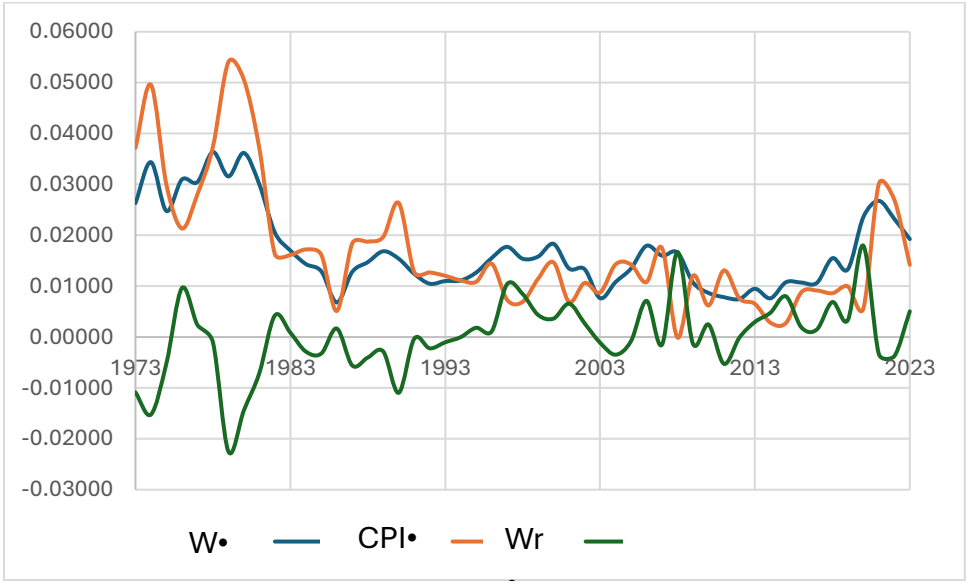
Results for Nominal and Real Wage Growth, Private Business, Production and Non-Supervisory Workers, 1973-2019^

Nominal W•		CPI•	APL•	U	IncarcLRrate	UnionShare	Constant	F-stat	R^2	Adjusted R^2	Transformed DW
	1	0.176684	-0.03566	-0.01766			0.02750	9.01***	0.3861	0.3432	1.97206
		2.68***	-0.6	-1.93**			3.53***				
	2	0.17315	-0.02084	-0.01818	-0.00721	0.0181	0.04392	12.06***	0.5952	0.5458	2.37888
		2.41***	-0.34	-2.27**	-0.36	0.89	2.12**				
	3	0.169196	-0.0277	-0.01738	-0.02366		0.02662	14.55***	0.5808	0.5409	2.34675
		2.37**	-0.46	-2.18**	-3.29***		4.10***				
	4	0.177354	-0.01928	-0.01827		0.0251	0.05043	15.09***	0.5896	0.5505	2.40212
		2.57***	-0.32	-2.29**		3.43***	4.57***				
Real W•											
	5	-0.82327	-0.03554	-0.01769			0.02752	52.73***	0.7863	0.7714	2.49839
		-12.51***	-0.59	-1.94***			3.53***				
	6	-0.82677	-0.02076	-0.01819	-0.00723	0.018082	0.04391	29.94***	0.785	0.7588	2.37850
		-11.54***	-0.34	-2.27**	-0.36	0.88	2.12**				
	7	-0.83074	-0.02762	-0.01739	-0.02366		0.02663	37.71***	0.7822	0.7614	2.34652
		-11.66***	-0.46	-2.18**	-3.29***		4.10***				
	8	-0.82255	-0.01919	-0.01828		0.025098	0.05044	38.36***	0.7851	0.7646	2.40176
		-11.92***	-0.32	-2.29**		3.43***	4.57***				

^Coefficient estimates, t-statistics are below estimates; significant at 1 percent (***), 5 percent (**) or 10% (*) level; n=47

Figure 1

The Percent Change in Nominal and Real Wages of Private Business Production and Nonsupervisory Workers, and CPI inflation



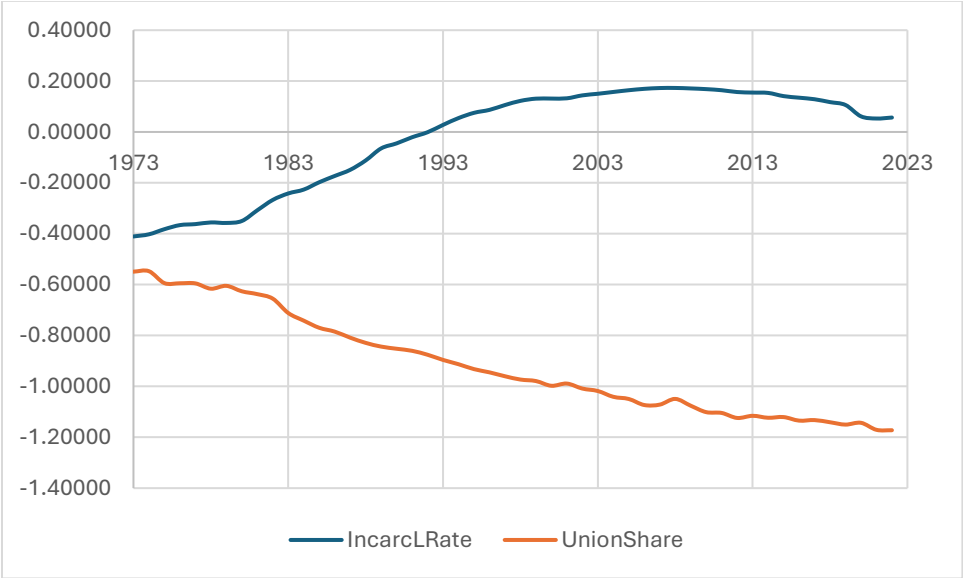
Source: US Bureau of Labor Statistics for both wage rate and consumer price index.

Posted on St. Louis Federal Reserve FRED

Figure 2

The Incarceration Labor Rate and

Union Members' Share of Private Business Production and Nonsupervisory Employment



Source: Jail and Prison data from Department of Justice, Bureau of Justice Statistics

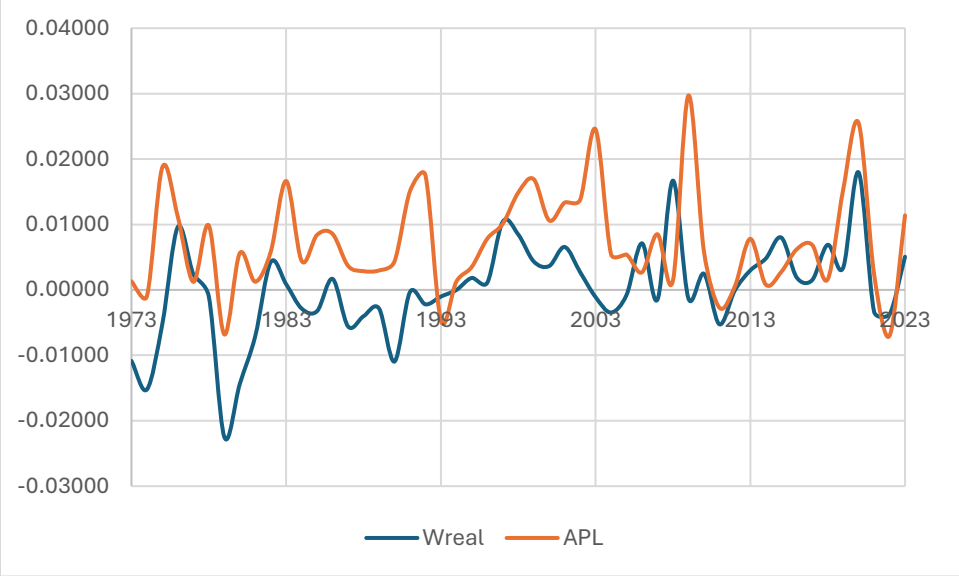
Employment Data from US Bureau of Labor Statistics

Union Members from Hirsch et al. 2024

Figure 3

The Growth of the Real Wage and Labor Productivity Growth

for Production and Nonsupervisory Employees, Private Business Sector



Source: Wage rate and Consumer Price Index are from US Bureau of Labor Statistics

Labor Productivity for the Nonfarm Business Sector is from US Bureau of Labor Statistics, adjusted by multiplying by the ratio of all-employee hours to production and nonsupervisory worker hours to get worker productivity