University of Kentucky

Gatton College of Business and Economics

Institute for the Study of Free Enterprise

The Federal-Private Wage Differential: How Has It Evolved

- **It is found that federal workers were consistently paid more than comparable private-sector workers throughout the 1995 to 2017 time period**

- **Moreover, federal works had higher pension and health insurance coverage**

- **For 2017, it is estimated that federal workers were paid 12.5% more**

- **If policymakers were able to save 12.5% on federal worker compensation, this translates into roughly %35 billion; approximately the same as the entire budget of the Department of Justice or Department of State**

There is long-standing interest in labor economics about the compensation of government workers relative to their private-sector counterparts. The modern, human capital/Mincerian wage equation approach to this topic was pioneered in a series of papers by Smith (1976a,b,1977). There has been recent revival of interest in the issue, with Congressional Budget Office (2012, 2017), Bradley (2012), and Biggs and Richwine (2011) examining the federal-private compensation differential, Gittleman and Pierce (2012), Munnell (2011), and Allegretto and Keefe (2010) studying state and local government pay, and Bewerunge and Rosen (2012) investigating all levels of government compensation. We suspect this increased attention is to the surge in federal deficits and the squeeze on state and local government budgets in the aftermath of the Great Recession. Presumably, any overcompensation of public employees presents potential for government cost savings.

Though the current wage and compensation difference of public and private employees is of interest, this paper produces and examines a time series of the pay differential between federal and private-sector employees. This enables us to determine not only the current pay differential but also if it has changed over time. We study the time period from 1995 to 2017. For wages and salaries, we use the CPS Merged Outgoing Rotation Group (CPS MORG). There are well

documented differences in federal and private fringe benefits as well and we examine these using the March Current Population Survey (CPS). For this analysis, we estimate the probabilities that private sector and federal sector workers receive health insurance and pension benefits from their employers.

We find that, over this time period, the federal-private wage differential is always positive but varies from a low of 3.4 percent to a high of 17.7 percent. This differential fell through the late 1990s, rose steadily in the 2000s until 2013, then tended to decrease. An analysis of these differentials suggest some evidence that they grow as federal spending as a share of GDP grows but, once this is accounted for, they are unrelated to the business cycle. Also, federal workers have much higher probabilities of receiving employer-sponsored pension plans and health insurance, though time patterns in these differentials are not as clear.

In our analysis of wages, we deal with unobserved heterogeneity by using control function methods. Naturally, systematic unobserved differences in the abilities of federal and private workers can bias estimates of the wage differentials. The control function approach we adopt allows ability to be two-dimensional rather than one-dimensional. This is consistent with a Roy model, where some workers' unobserved traits make them more suited to one sector and not another. One-dimensional ability is a special case that we test for and reject for many of the years in our data. One-dimensional unobserved ability may be dealt with by instrumental variable (IV) or fixed effects (FE) methods, but because this is frequently rejected in the data, we do not use these methods. Moreover, though the selectivity bias we find is statistically significant in many cases, its magnitude is very small and estimates are nearly identical to those from OLS.

The remainder of this paper proceeds as follows. Section 2.1 briefly reviews the past literature on public-private wage differentials and section 2.2 provides an overview of federal rules on compensation. Section 3 describes the main dataset, the CPS MORG, and presents summary statistics for the main variables. Section 4 presents the results from the OLS wage equations. The handling of the unobservables and the findings are discussed in Section 5. Section 6 examines how the probability of pension plan and health insurance coverage differ between federal and private workers. In Section 7, we examine how the time path of the federal-private wage differential depends on federal spending, the business cycle, and presidential administration.