The Journal of Private Enterprise 37(4), 2022, 1-20

The Distribution of Transfers and Taxes: Incentives and Implications for the US Deficit and Debt

Jody W. Lipford*
Francis Marion University
United States of America

Abstract
The United States, like many Western democracies, faces high and rising public debt that may be unsustainable in the long run. This US fiscal condition is the inevitable outcome of a political system that redistributes transfer payments broadly across citizen-voters and that restricts taxation narrowly across citizen-voters. US data since 1979 show exactly this pattern. These trends, often supported by vote-seeking politicians, pressures from citizen-voters, and political narratives, are commensurate with the country's rising ratio of government debt to gross domestic product.

JEL Codes: H22, H53, H63
Keywords: transfer payments; taxes; government debt

I. Introduction

Chronic budget deficits and mounting public debt have been the norm for US fiscal policy for decades. Although macroeconomic conditions matter, the long-term upward trend of fiscal debt, with the exception of the prosperous mid- to late 1990s, indicates that short-term economic crises, whether born of a virus, as in the COVID-19 pandemic, or of a financial meltdown, as in the Great Recession, are inadequate to explain fully the country's fiscal woes (Merrifield and Poulson, 2020). Many factors, social, economic, and political, are at play in a public budgetary process that has made deficits the norm, but the persistence of fiscal deficits and ever-rising debt suggests that some forces born of incentives inherent to the budgetary process are behind this long-term trend.

Two policies that yield incentives to increase spending and lower taxes so that expenditures outstrip revenues routinely are a wider distribution of transfer payments and a correspondingly narrower

* I thank David J. Hebert, the editor of this journal, and an anonymous reviewer for helpful comments on earlier drafts of this paper.

distribution of taxes. These trends have been endemic to US budget policy for decades. As an ever-larger share of the populace receives transfer payments that are paid for by an ever-smaller share of the populace that pays taxes, political support for increasing government spending rises, and this growing spending must, at some point, reach the limit of the taxes that can be raised to fund it. This paper advances the hypothesis that a driving force behind rising public debt in the US over time is the widening distribution of transfer payments combined with the narrowing distribution of tax payments. Understanding the incentives that lead to higher public deficits and debt is critical because of the consequences that fiscal profligacy may bring, from reduced private sector spending, to higher government interest payments, to fewer policy options in a recession, to, in the worst case, a fiscal crisis.

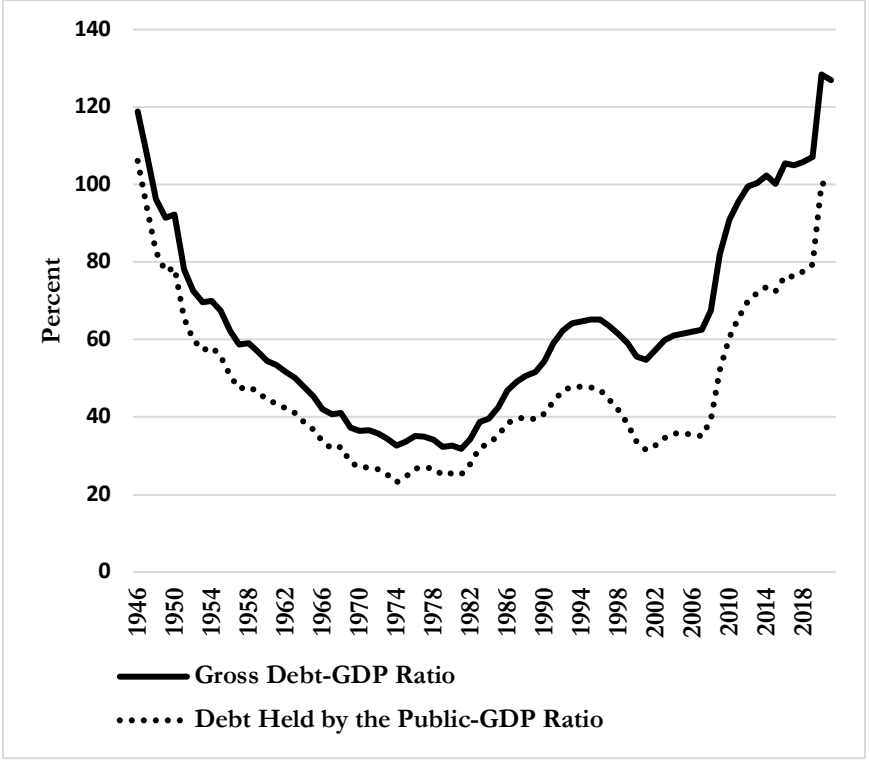
The following section provides a brief look at the US fiscal condition over recent decades. The third section reviews related literature on the public budgeting process, the political rhetoric that surrounds it, and polling data that reflect public attitudes toward it. The fourth section reviews relevant literature on transfers and taxes, documents trends in the distributions of US transfers and taxes, and presents the results of simple empirical tests of the correlation between the distributions of transfers and taxes and the ratio of government debt to gross domestic product (GDP). Implications are drawn in the conclusion.

II. A Brief Review of the US Fiscal Condition and Recent Budgetary Policy

The public debt of the US, scaled by the size of the economy, has followed a roughly U-shaped pattern through the post–World War II period, as shown in figure 1. Gross federal debt reached a postwar low of 31.8 percent of GDP in 1981 and reached highs of 106.8 percent of GDP in 2019 and 128.1 percent of GDP in 2020. These figures are comparable only to the postwar-transition years of 1946 and 1947, when the ratios of gross debt to GDP stood at 118.9 percent and 107.6 percent, respectively. Similarly, debt held by the public bottomed out at 23.2 percent of GDP in 1974 and reached 79.2 percent in 2019 and 100.1 percent in 2020, figures that are again

comparable only to the postwar-transition years 1946, 1947, and 1948, when the debt-to-GDP ratios stood at 106.1, 93.9, and 82.6 percent.[1]

Figure 1. US Debt–GDP Ratios, 1946–2021



Source: Office of Management and Budget, Historical Tables, Table 7.1, "The Federal Debt at the End of the Year: 1940-2027."

Political will to reduce these ratios is clearly lacking, and recent budgets and legislation support this claim.[2] Before the pandemic, the Congressional Budget Office estimated that the Tax Cuts and Jobs Act of 2017 would raise debt held by the public by over $1.7 trillion over ten years and increase the ratio of debt held by the public to GDP from a baseline estimate of 91.2 percent to 97.3 percent by 2027

[1] See Office of Management and Budget, Historical Tables, Table 7.1, "The Federal Debt at the End of the Year: 1940–2027."

[2] See, for example, Davidson and Hilsenrath (2019), who argue that Republicans' desire for tax cuts and Democrats' desire for spending increases have combined with low interest rates to eviscerate concern over deficits and debt. In a similar vein, Phaup (2020) describes modern budgeting as a process lacking an effective constraint.

(Congressional Budget Office, 2017). More recently, but also before the pandemic, the Bipartisan Budget Act of 2019 was estimated to raise discretionary spending for 2020 and 2021 by $320 billion above the sequestration caps set in 2011 and extended the debt limit through July 2021.[3] The Committee for a Responsible Federal Budget estimated that this deal would add $1.7 trillion to the debt and raise the ratio of debt held by the public to GDP from 92 percent to 97 percent by 2029 (Committee for a Responsible Federal Budget, 2019). Similarly, in its long-term forecast, the Congressional Budget Office projected widening gaps between federal government revenues and expenditures so that debt held by the public would reach 144 percent of GDP by 2049 (Congressional Budget Office, 2019).

The COVID-19 pandemic, however, unleashed unprecedented spending and debt in response to the economic havoc that the virus, and policy responses to it, wrought. The Coronavirus Aid, Relief, and Economic Security Act, the Payment Protection Program and Healthcare Enhancement Act, the Consolidated Appropriations Act, and the American Rescue Plan, among other legislative and executive initiatives, resulted in approximately $6 trillion in spending to support the unemployed, state and local governments, small businesses, individual citizens, and other constituents.[4]

In the wake of the pandemic, President Biden proposed an unprecedented $6 trillion 2022 budget with new programs to fund infrastructure (the American Jobs Plan) and an expanded safety net (the American Families Plan) that would cost trillions more in the decades ahead. The president proposed higher taxes on upper-income earners and corporations to finance these initiatives.[5]

Although the Biden administration was unsuccessful in advancing its full agenda through Congress, the Inflation Reduction Act of 2022, a scaled-down version of the Build Back Better proposal, called for additional spending of $437 billion to be more than offset by additional revenue of $737 billion, yielding deficit reduction of approximately $300 billion over the decade ending in 2031. Although this act may seem to be an attempt to restore a modicum of fiscal

[3] For details, see Duehren, Davidson, and Lucey (2019).

[4] For a summary of policy responses to the pandemic by the United States, see Committee for a Responsible Federal Budget, *Covid Money Tracker*. For a summary of policy responses by all countries, see International Monetary Fund, *Policy Responses to COVID-19: Policy Tracker*.

[5] See Tankersley (2021) and US Office of Management and Budget, *Budget of the US Government, Fiscal Year 2022*.

sanity, as soon as the ink was dry, Biden proposed modifications to the student loan program that will cost approximately $500 billion over the coming decade.[6]

In its most recent forecast, the Congressional Budget Office predicts spending will outstrip revenues for the next thirty years. Resulting deficits will decline in 2022 and 2023 as the economy recovers from the pandemic recession but then rise in the following decades, reaching 11.1 percent of GDP in 2052, a figure topped only by 2020's 14.9 percent and 2021's 12.4 percent. Debt held by the public will rise as a percentage of GDP, reaching 185 percent by 2052 (Congressional Budget Office, 2022). Some analysts, such as Henderson and Hummel (2014) and Tanner (2015), took seriously the possibility of a US government default—before the pandemic and the accompanying spurge in spending.

The upshot of the analysis in this paper is that in a polity with an increasing share of citizens that receive more in government benefits than they pay in taxes, political pressure to raise transfer spending will increase. When tax revenues from the highest income class, who pay the majority of taxes, are maximized, increased tax revenues are no longer possible. If politicians continue to resist changes to tax policy that would raise rates on other income classes and acquiesce to demands for greater income redistribution, deficits and debt will increase.

III. Transfers, Taxes, and Debt in Scholarly Literature, Political Rhetoric, and Public Polls

A. Scholarly Literature

Many scholars have elaborated on the incentives inherent in the budgetary process when a substantial share of citizen-voters receive more in public benefits than they pay in taxes. Wagner (1992) likens the budgetary process to "common property budgeting" that leads to unrestrained incentives to overspend. Brubaker (1997) takes a similar approach, arguing that a budgetary process that "converts privately generated income and wealth into common property" gives citizen-voters incentives to withdraw as much income and wealth as possible

[6] For details on the Inflation Reduction Act, see Senate Democratic Leadership (2022). See also Probasco (2022). For details on changes to the student loan program, see Committee for a Responsible Federal Budget (2022). Of interest, the Penn Wharton Business Model estimates the Inflation Reduction Act will reduce the deficit by only $248 billion and that changes to the student loan program could cost as much as $1 trillion. See Penn Wharton Business Model (2022a; 2022b).

from the public purse and to contribute as little as possible to replenishing it. Similarly, Marlow and Orzechowski (1997) focus on the lack of prices for government programs, which leads to unrestrained demands for additional spending, with the end result being a government failure that manifests itself in public debt.

Members of the legislature, who control budgetary policy, are not managers of a private budget, nor do they have a singular mind, and so they have little incentive to guard against overspending and debt. Drawing on the work of Elinor Ostrom, Raudla (2010) argues that governing a budgetary commons, like a natural commons, requires a "stable community of appropriators" that is unlikely in a political setting characterized by short election cycles, legislative turnover, poor information, and a lack of assurance that restraint by one party will be matched by restraint from other parties. Legislators are also subject to pressure from interest groups that lobby for increased government funding and reduced taxes in exchange for political support and with no regard for the aggregate budget (Velasco, 2000; Weingast, Shepsle, and Johnsen, 1981; Holcombe, 1998).

According to Brubaker (1997), interactions between voters and legislators may be thought of as constituting a principal-agent relationship in which the members of the voting public are the principals and their elected representatives (and executive-branch employees) are the agents. Neither principal nor agent has an incentive for fiscal responsibility: legislators are beset by the aforementioned political incentives, and voters reap benefits from government programs for which other citizen-voters often pay the majority of the cost. These problems are compounded by a cognition, or knowledge, problem in which neither principals nor agents fully understand the common-pool-resource problem (Jakee and Turner, 2002). For example, what is the carrying capacity of any common pool, including the federal budget?

While the conventional view is that citizen-voters and interest groups influence legislators and their policy positions, Hebert and Wagner (2018) and Wagner (2018) posit that political parties are not passive bystanders in the budgetary process but rather shape voter preferences as well. Tax discrimination has an "ideological dialect" that joins persuasion with a logical justification. If a political party postulates that maximizing aggregate social utility is the objective and that diminishing marginal utility applies to income, tax discrimination may be deemed reasonable and fair. In popular vocabulary, the rich need to pay their "fair share," while tax-exempt or low-tax voters

benefit from tax discrimination as do the vote-seeking politicians who appeal to them. Moreover, both can feel good from an ideology or rationale that appeals to their sense of fairness and propriety. Even some high-tax voters may feel good about supporting the worthy objective and may not mind paying their "fair share."

In modern Western democracies, two ideologies justify greater spending, tax discrimination, and debt in much public opinion and irrespective of the party in power: macroeconomic stabilization and the social safety net. Voters and politicians have seen macroeconomic stabilization as an essential role of government since the Great Depression and Keynesian Revolution, a change in view that broke the prior moral constraint against deficits (Buchanan and Wagner, 1977). The provision of a social safety net is also an assumed role of government to provide for life's contingencies, such as poverty, illness, and aging, and the expansion of the safety net also dates to the 1930s and the New Deal. These twin demands for macroeconomic stabilization and economic security have created a "deficit as policy" norm that defies formal, statutory attempts to balance the federal budget (Calcagno and Lopez, 2016).

B. Political Rhetoric, Polls, and Rational Calculation

Much political rhetoric appeals to lower-, middle-, and even upper-middle-income voters who would like to shift tax liability onto other voters while benefiting from government programs. If these voters can feel good about shifting tax liability onto other taxpayers, the appeal is even stronger.

Recent US presidents have appealed to this narrative. Barack Obama pledged not to raise taxes on households earning less than $250,000 per year (the bottom 95 percent of income earners), and Joe Biden has promised not to raise taxes on households earning less than $400,000 per year (the bottom 98 percent of income earners). Although these promises would appeal to at least 95 percent of voters on the basis of rational calculation, Obama and Biden couched these promises with the rationale of ensuring that high-income earners pay their fair share, a strategy designed to resonate with many voters' ideals as well as with their pocketbooks (Long, 2020).

Polls confirm the popularity of these proposals. Politico/Morning, Fox News, and Harris-Hill found that a majority of registered voters favor higher taxes on the wealthiest and highest-earning Americans (White, 2019; Williams, 2021). A focus on recent tax and spending proposals, however, overlooks the important fact that Americans'

support for taxing high-income earners is long-standing. According to Gallup, a majority of Americans have believed that upper-income earners pay too little in taxes since the early 1990s, when polling on this question began, and over the decades since the Great Depression, the share of Americans that favor taxing the rich to fund redistribution has increased (Newport, 2016). Similarly, since the early 1990s, about half of all Americans have believed that low-income earners pay too much in taxes, and since 2004, a majority have said that corporations pay too little (Newport, 2018).

Nonetheless, a focus on aggregates obscures important partisan and income differences. When assessing the tax burden paid by upper-income Americans, Democrats, liberals, and those earning less than $75,000 per year are more likely to say that upper-income Americans pay "too little" than Republicans, conservatives, and those making more than $75,000 per year. The groups divide similarly on whether to redistribute wealth by assessing heavy taxes on the rich (Newport, 2016; 2018).

Taken together, popular political rhetoric and public opinion, likely influenced by political parties, favor wealth redistribution and tax discrimination that benefit low-income and middle-income earners over high-income earners. The rhetoric provides an ideology or narrative that resonates with much of the public as shown in the polling data and that reinforces a simple calculation by a dispassionate, rational citizen-voter (traditionally "economic man") who would favor (and support parties and candidates who would favor) policies that would provide him or her public benefits that are paid for by other taxpayers.[7]

IV. US Transfer and Tax Shares: Literature, Brief History, and Empirical Test

This section provides a brief look at the literature on transfer payments and taxes in the US, along with a history of recent trends. An empirical test supports the conclusion that the widening distribution of transfer

[7] Meltzer and Richard (1981) argue that as the voting franchise is extended down the income distribution so that the income of the (decisive) median voter becomes less than the income of the mean voter, the demands for redistribution and taxes increase. They note too that the (decisive) median voter will favor debt, which is equivalent to taxing future and presumably richer generations. Holcombe (1998) also sees the decisive voter as critical, because politicians will reward this voter with lower taxes and greater government largess. Husted and Kenny (1997) offer empirical support that an extension of the voting franchise to include more low-income voters increases welfare spending.

payments combined with the narrowing distribution of tax payments is associated with a rising ratio of US government debt to GDP.

A. Literature

Data and empirical analyses on the distribution of US transfer payments and taxes and the implications for public debt are few. Murray (2010) provides an early warning by documenting the rising share of persons living in households receiving some government benefits and the declining share of households that pay federal income taxes. In a detailed and comprehensive analysis of the distribution of transfer payments and taxes, Rector and Kim (2008) utilize Census Bureau data from 2004 to document stark fiscal imbalances across income quintiles. They find that the bottom three quintiles of the income distribution received a net transfer of approximately $1 trillion in transfer payments less taxes from the top two income quintiles. In a historical analysis, Eberstadt (2012) documents the unchecked expansion of transfer payments in the US since 1960, which has accounted for an increasing share of national government expenditure and which funds, in part, nearly half of all American households.

Empirical work has focused on the distribution of taxes. Freeland, McBride, and Gerrish (2012) document the rising share of Americans with no income tax liability and express concern that "if the price of government goes down for enough voters to create a sizable voting bloc, the overall effect in majority-rule democracy could be excessive government spending" (p. 6). They find positive statistical correlations between the rising share of "nonpayers" and both the increase in transfer payments per capita and the increase in the ratio of public debt to GDP. In a similar analysis, Lipford and Yandle (2012) examine the effects of the share of taxes paid by the top 10 percent and bottom 40 percent of the income distribution on government spending and debt, finding that as the tax liability of the top 10 percent of the income distribution rises and the tax liability of the bottom 40 percent of the income distribution falls, the ratios of gross government debt, health and income-security expenditures, and total entitlements to GDP all rise. Lipford and Yandle (2014) find similar results in a cross-sectional analysis of US states.

B. Brief History

The Congressional Budget Office (2021) provides detailed data on transfers and taxes by US households from 1979 to 2018 in its report

titled *The Distribution of Household Income, 2018*.[8] Examining these data over the past forty years reveals striking trends.

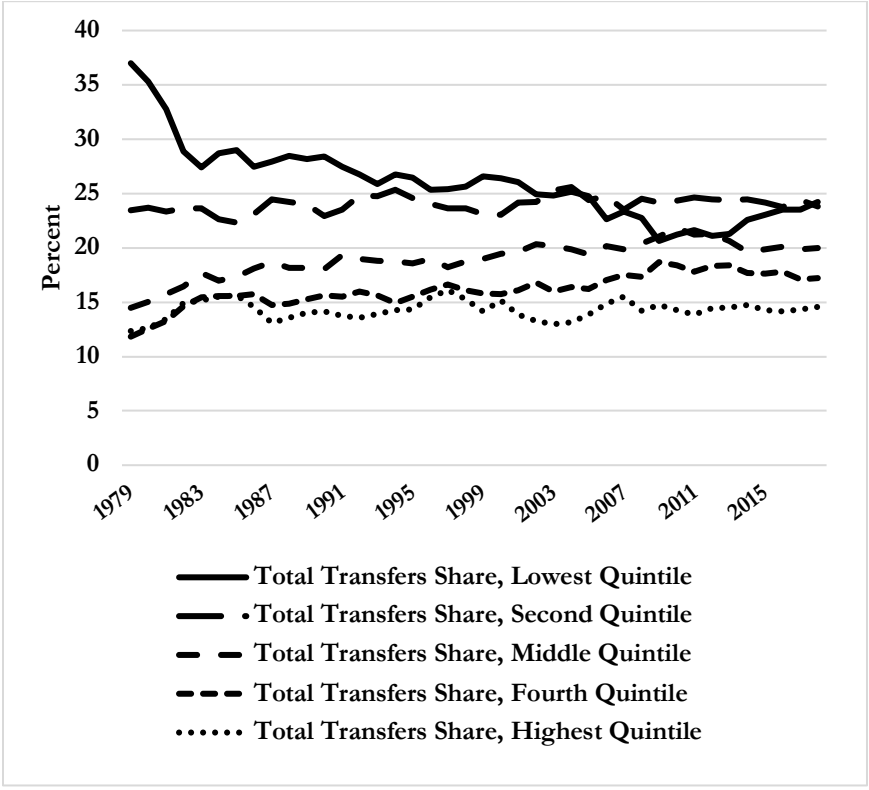
The Congressional Budget Office's analysis of household income includes data on social-insurance benefits and means-tested transfers. Social-insurance benefits include Social Security, Medicare, unemployment insurance, and workers' compensation. Means-tested transfer programs include Medicaid, the Children's Health Insurance Program, the Supplemental Nutrition Assistance Program, and Supplemental Security Income. Total transfers are calculated as the sum of the average per-household amount of social-insurance benefits and means-tested transfers multiplied by the total number of households. To obtain total transfers by income quintile, this procedure is repeated, using the summed transfers and number of households for each quintile. Then each income quintile's total transfers are divided by the aggregate-transfers figure to measure each income quintile's share of total transfers. These calculations are made for each year from 1979 to 2018.

Figure 2 presents data on the shares of total transfer payments by income quintile and shows that the distribution of total transfer payments has broadened. The share of total transfers going to households in the lowest income quintile has fallen since its 1979-high of 37.0 percent, reaching a low of 20.6 percent in 2009, before rising to 24.2 percent in 2018. The reduction in the share of transfers going to households in the bottom income quintile has financed increasing shares of transfers going to households in the middle and fourth income quintiles in particular. Comparing 1979 to 2018, the share of transfers going to households in the middle income quintile has grown from 14.5 percent to 20.0 percent, and the share of transfers going to the fourth income quintile has grown from 11.8 percent to 17.2 percent.[9] Even households in the highest income quintile have increased their share of the total from 12.3 percent to 14.6 percent. The gap between the lowest and highest income quintiles was only 9.6 percentage points by 2018, reinforcing the point that, in popular lingo, nearly everyone gets something.

[8] All data are in 2018 dollars.

[9] Although the share of total transfers going to the second income quintile has remained relatively constant over time, since 2003 the share of total transfers going to households in the second income quintile has exceeded the share going to the lowest income quintile for all years except 2005 and 2018.

Figure 2. Shares of Total Transfers by Income Quintile, 1979–2018



Sources: Congressional Budget Office, The Distribution of Household Income, 2018, August 2021, and author calculations.

The trends for total transfers are the result of similar trends for both social-insurance benefits and means-tested transfers. Households in the bottom income quintile have, over time, received smaller shares of the total, while households in the middle and upper income quintiles have received larger shares of the total. As shown by Chetty et. al (2016) and Chalhoub and Twomey (2018), income and life expectancy are positively correlated, and the longevity gap between high- and low-income individuals has increased over time because of healthier behaviors by those with higher incomes.[10] This trend is consistent with a rising share of age-based entitlements, Social Security and Medicare in particular, for individuals in the middle, fourth, and highest income quintiles. For means-tested transfers, the second, middle, and fourth

[10] Specifically, high-income individuals have lower rates of obesity and smoking and higher rates of exercise.

income quintiles have gained substantial shares over time compared to the lowest income quintile.

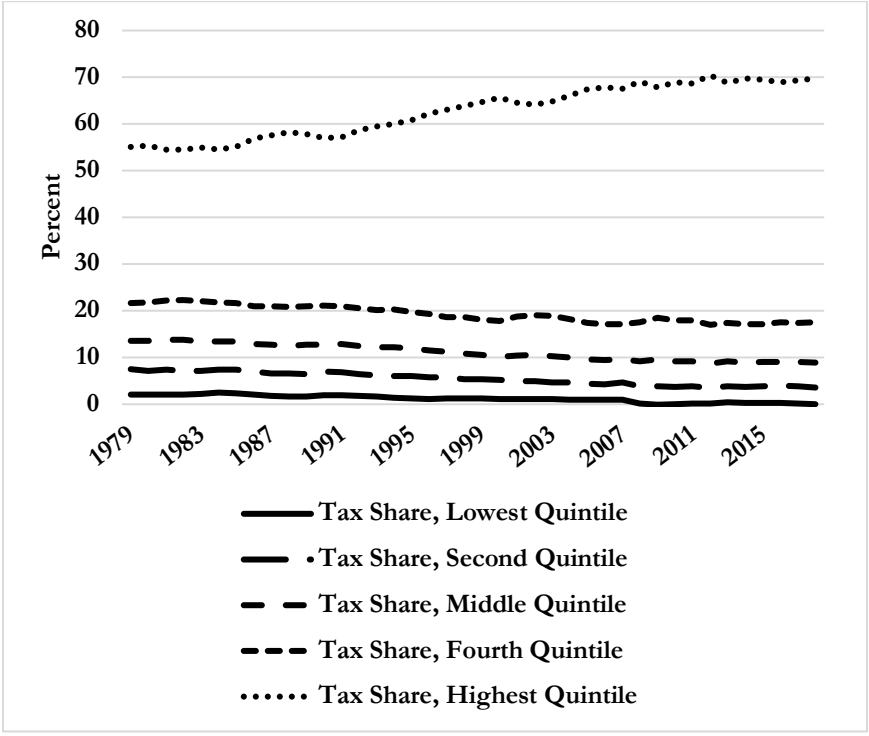
The Congressional Budget Office also examines the share of federal taxes paid by income quintile. The taxes included in the Congressional Budget Office analysis are individual income taxes, payroll taxes, corporate income taxes, and excise taxes that, combined, account for 93 percent of federal revenues.[11] Unlike the distribution of transfer payments, the distribution of tax payments has narrowed, as shown in figure 3. Most notably, the share of federal taxes paid by households in the highest income quintile has risen from 55.1 percent in 1979 to 69.9 percent in 2018, peaking at an even higher 70.4 percent in 2012.[12] Households in the other income quintiles have been the beneficiaries of this shift in the tax liability, as households in each of the other four quintiles have seen their share of taxes paid decline.[13]

[11] Most federal receipts are income based. Since 1979, individual income taxes have averaged over 46 percent of total federal receipts. When combined with social-insurance taxes, the total averages over 81 percent of receipts, and when these are combined with corporate income taxes, the total averages over 91 percent. See US Office of Management and Budget, Historical Tables, Table 2.1, "Receipts by Source: 1934–2026."

[12] As to the question whether the highest income quintile has reached (or passed) a point of unitary elasticity of income with respect to tax rates, the Congressional Budget Office data are instructive. Over the forty years for which data are available, the standard deviation of the percentage of taxes as a share of market income is only 1.44 for the highest income quintile, compared to 5.70, 3.09, 2.15, and 1.67 for the lowest, second, middle, and fourth quintiles. The low standard deviation of tax revenues as a share of market income across many changes in the tax rates and code is consistent with Hauser's law, at least for the highest income quintile, and suggests an assumption of unitary elasticity is not far from the mark.

[13] The inclusion of estate and gift taxes would accentuate these trends.

Figure 3. Shares of Taxes by Income Quintile, 1979–2018



Source: Congressional Budget Office, The Distribution of Household Income, 2018, August 2021.

To obtain composite measures of these trends, Herfindahl indexes are calculated for total, social-insurance-benefit, and means-tested transfers and for federal taxes and then measures of dispersion for each are calculated as follows:

Total-Transfers Dispersion = 10,000 − Total-Transfers Herfindahl

Social-Insurance-Benefits Dispersion = 10,000 − Social-Insurance-Benefits Herfindahl

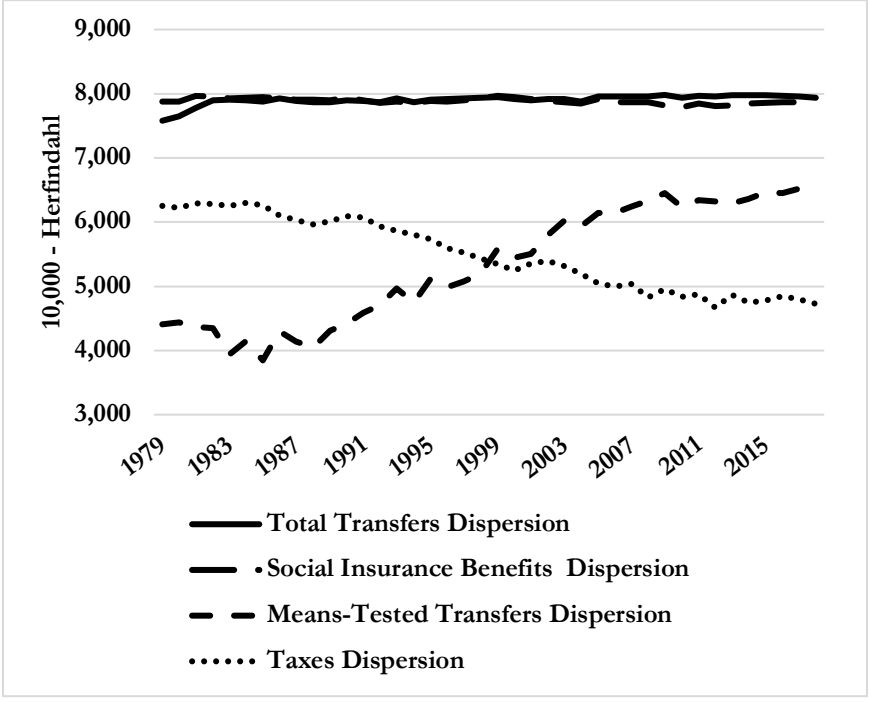
Means-Tested-Transfers Dispersion = 10,000 − Means-Tested-Transfers Herfindahl

and

Federal-Taxes Dispersion = 10,000 − Federal-Taxes Herfindahl

Figure 4 plots these dispersion measures. The increase in total-transfers dispersion is evident, though modest, and the increase in the dispersion of means-tested transfers is sharp. The decreased dispersion of taxes stands out as well.

Figure 4. Transfers and Tax Dispersion, 1979–2018



Source: Congressional Budget Office, The Distribution of Household Income, 2018, August 2021 and author calculations.

C. An Empirical Test

The end result of this analysis is that the widening distribution of transfers and the shrinking distribution of taxes combine to create powerful incentives to overspend and underfund the public budget. As an increasing share of citizen-voters receive transfers, the incentives to increase spending rise, and when the limits of taxing the decreasing share of citizen-voters who pay taxes are reached, rising debt is the result.

To test this proposition more formally, the transfer-dispersion values are divided by the tax-dispersion values to calculate dispersion ratios for total transfers, social-insurance benefits, and means-tested transfers as shown below:

Total-Transfers Dispersion Ratio = (Total-Transfers Dispersion / Federal-Taxes Dispersion) × 100

Social-Insurance-Benefits Dispersion Ratio = (Social-Insurance-Benefits Dispersion / Federal-Taxes Dispersion) × 100

and

Means-Tested-Transfers Dispersion Ratio = (Means-Tested-Transfers Dispersion / Federal-Taxes Dispersion) × 100

All three ratios rise substantially over the years of analysis.

Simple regressions of the ratios of gross and publicly held debt to GDP against the employment–population ratio and the dispersion ratios for total transfers, social-insurance benefits, and means-tested transfers test the paper's hypothesis empirically. To correct for first-order serial correlation, the estimates utilize Newey-West standard errors. The results, shown in table 1, are consistent with the logic set forth in the paper.

Table 1. Regression Results with Newey-West Standard Errors

Dependent variable: gross debt–GDP ratio

Variable	**Coefficient/ (t-statistic)**	**Coefficient/ (t-statistic)**	**Coefficient/ (t-statistic)**
Employment–population ratio	-1.99/(-1.97)*	-2.09/(-1.95)*	-1.78/(-1.53)
Total-transfers dispersion ratio	1.21/(8.73)***		
Social-insurance-benefits dispersion ratio		1.31/(8.12)***	
Means-tested-transfers dispersion ratio			0.70/(7.33)***
Constant	11.38/(0.16)	2.61/(0.03)	104.12/(1.39)
Lags	1	1	1
F-statistic	51.15***	44.94***	37.05***
N	40	40	40

Dependent variable: publicly held debt–GDP ratio

Variable	**Coefficient/ (t-statistic)**	**Coefficient/ (t-statistic)**	**Coefficient/ (t-statistic)**
Employment–population ratio	-2.50/(-2.53)**	-2.55/(-2.51)**	-2.39/(-2.19)**
Total-transfers dispersion ratio	0.69/(4.99)***		
Social-insurance-benefits dispersion ratio		0.74/(4.73)***	
Means-tested-transfers dispersion ratio			0.39/(4.20)***
Constant	98.28/(1.45)	94.10/(1.32)	153.47/(2.20)**
Lags	1	1	1
F-statistic	20.03***	18.39***	15.27***
N	40	40	40

Notes: * significant at the 10% level or higher, ** significant at the 5% level or higher, *** significant at the 1% level or higher

The estimates indicate that the employment–population ratio is negatively and significantly correlated with the debt-to-GDP ratios in five of the six estimates. A 1 percentage point increase in the employment–population ratio reduces the ratio of gross debt to GDP by about 2 percentage points and the ratio of publicly held debt to GDP by about 2.5 percentage points. All the dispersion ratios are positively and significantly correlated with both of the debt-to-GDP ratios. In the estimate for the ratio of gross debt to GDP, increases of one in the total-transfers dispersion ratio and in the social-insurance-benefits dispersion ratio are associated with a rise of over 1 percentage point in the ratio of gross debt to GDP, and an increase of one in the means-tested-transfers dispersion ratio is associated with an increase in the ratio of gross debt to GDP of 0.7 percentage points. For the ratio of publicly held debt to GDP, increases of one in the total-transfers dispersion ratio and in the social-insurance-benefits dispersion ratio are associated with an increase in the ratio of publicly held debt to GDP of about 0.7 percentage points, and an increase of one in the means-tested-transfers dispersion ratio is associated with a rise in the ratio of publicly held debt to GDP of almost 0.4 percentage points.

The empirical results herein are consistent with an incentive-based approach to fiscal finance. As the distribution of transfer payments rises and the distribution of taxes falls, the link between government spending and taxation is severed for an increasing share of citizen-voters who will benefit from greater public spending, paid for largely by other taxpayers. Some citizen-voters may be cold calculators of benefits received and taxes paid, but others may also hold the view that a wide distribution of transfer payments and a narrow distribution of taxes is fair. Either way, the pressure on the public budget becomes unsustainable, and a rising debt-to-GDP ratio is the result.

V. Closing Thoughts

The ratio of federal debt to GDP has been on an overall upward trend for decades, and long-term forecasts indicate that the ratio will continue to rise for decades to come. Is this trend sustainable? Past market judgments of unsustainable sovereign debt have been swift and unexpected (Rinehart and Rogoff, 2009). In light of this possibility, it is important to understand the lack of political will to deal with spiraling and possibly unsustainable public debt in the United States.

Two trends that help explain this budgetary reality have been documented in this paper. When transfer payments are distributed

broadly, a large share of citizen-voters have a stake in increased government spending that they may also favor for ideological reasons. This tendency is strengthened when the taxes to pay for these transfers are paid by a small share of citizen-voters, another trend that may have ideological appeal to many voters. These are exactly the trends observed in the US since at least 1979. Unless transfer payments are redirected, perhaps more narrowly to those at the bottom of the income distribution, and the tax system becomes less progressive, there is little reason to doubt the forecasts of ever-escalating debt or the consequences this debt may bring. Even if the country averts a full-scale fiscal crisis, ever-rising debt and the interest payments that accompany it may crowd out private sector spending, increase payments to foreign holders of the debt, reduce fiscal policy options in response to a recession, increase future taxes, and reduce spending on some government programs. Despite these consequences, if the incentive structure in democratic budgeting remains in place, the restoration of fiscal discipline is unlikely.

References

Buchanan, James M., and Richard E. Wagner. 1977. *Democracy in Deficit: The Political Legacy of Lord Keynes*. New York: Academic Press.

Brubaker, Earl R. 1997. "The Tragedy of the Public Budgetary Commons." *Independent Review* 1 (3): 353–70.

Calcagno, Peter T., and Edward J. Lopez. 2016. "Informal Norms Trump Formal Policy Constraints: The Evolution of Fiscal Policy Institutions in the United States." *Journal of Institutional Economics* 13 (1): 1–32.

Chalhoub, Theresa, and Madeline Twomey 2018. "Income Inequality and Life Expectancy: The Role of Tobacco Prevention Public Policies." Center for American Progress, August 6.

Chetty, Raj, Michael Stepner, Sarah Abraham, Shelby Lin, Benjamin Scuderi, Nicholas Turner, Augustin Bergeron, and David Cutler. 2016. "The Association between Income and Life Expectancy in the United States, 2001–2014." *Journal of the American Medical Association* 315 (16): 2001–2014.

Committee for a Responsible Federal Budget. 2019. "Proposed Budget Agreement Could Cost $1.7 Trillion." Committee for a Responsible Federal Budget, July 23.

Committee for a Responsible Federal Budget. 2022. "New Student Debt Changes Will Cost Half a Trillion Dollars." Committee for a Responsible Federal Budget, August 24.

Congressional Budget Office. 2017. "Estimated Deficits and Debt under the Chairman's Mark of the 'Tax Cuts and Jobs Act.'" Congressional Budget Office, November 13.

Congressional Budget Office. 2019. *The 2019 Long-Term Budget Outlook*. Congressional Budget Office, June.

Congressional Budget Office. 2021. *The Distribution of Household Income, 2018*. Congressional Budget Office, August.

Congressional Budget Office. 2022. *The 2022 Long-Term Budget Outlook*. Congressional Budget Office. July.

Davidson, Kate, and Jon Hilsenrath. 2019. "Washington Puts Aside Fears and Embraces Debt." *Wall Street Journal*, June 14.

Duehren, Andrew, Kate Davidson, and Catherine Lucey. 2019. "President, Congress Reach Budget Accord." *Wall Street Journal*, July 23.

Eberstadt, Nicholas. 2012. *A Nation of Takers: America's Entitlement Epidemic*. West Conshohocken, PA: Templeton Press.

Freeland, William, William McBride, and Ed Gerrish. 2012. *The Fiscal Cost of Nonpayers*. Washington, DC: Tax Foundation.

Hebert, David J., and Richard E. Wagner. 2018. "Political Parties: Insights from a Tri-Planar Model of Political Economy." *Constitutional Political Economy* 29: 253–67.

Henderson, David R., and Jeffrey R. Hummel. 2014. "The Inevitability of a U.S. Government Default." *Independent Review*, 18 (4): 527–41.

Holcombe, Randall G. 1998. "Tax Policy from a Public Choice Perspective." *National Tax Journal* 51 (2): 359–71.

Husted, Thomas A., and Lawrence W. Kenny. 1997. "The Effects of the Expansion of the Voting Franchise on the Size of Government." *Journal of Political Economy* 105 (1): 54–82.

Jakee, Keith, and Stephen Turner. 2002. "The Welfare State as a Fiscal Commons: Problems of Incentives versus Problems of Cognition." *Public Finance Review* 30 (6): 481–508.

Lipford, Jody W., and Bruce Yandle. 2012. "Taxpayers and Tax Spenders: Does a Zero Tax Price Matter?" *Independent Review* 16 (4): 517–31.

Lipford, Jody W., and Bruce Yandle. 2014. "Grazing the State and Local Fiscal Commons: Do Different Tax Prices Lead to More or Less Grazing?" *Public Finance Review* 42 (4): 466–86.

Long, Heather. 2020. "Joe Biden Says He Won't Raise Taxes on Anyone Making under $400,000." *Washington Post*, May 22.

Marlow, Michael L., and William P. Orzechowski. 1997. "The Separation of Spending from Taxation: Implications for Collective Choices." *Constitutional Political Economy* 8 (2): 151–63.

Meltzer, Allan H., and Scott F. Richard. 1981. "A Rational Theory of the Size of Government." *Journal of Political Economy* 89 (5): 914–27.

Merrifield, John, and Barry Poulson. eds. 2020. *A Fiscal Cliff: New Perspectives on the U.S. Federal Debt Crisis*. Washington, DC: Cato Institute.

Murray, Sara. 2010. "Obstacle to Deficit Cutting: A Nation on Entitlements." *Wall Street Journal*, September 14.

Newport, Frank. 2016. "Americans Still Say Upper-Income Pay Too Little in Taxes." Gallup, April 15.

Newport, Frank. 2018. "Slim Majority Now Says U.S. Middle Class Pays Fair Share." Gallup, April 16.

Penn Wharton Business Model. 2022a. "Inflation Reduction Act: Comparing CBO and PWBM Estimates." Penn Wharton Business Model, August 5.

Penn Wharton Business Model. 2022b. "The Biden Student Loan Forgiveness Plan: Budgetary Costs and Distributional Impact." Penn Wharton Business Model, August 26.

Phaup, Marvin. 2020. "Federal Budget Process Reform: Adding a Resource Constraint and Improving Cost Measurement." In John Merrifield and Barry Poulson, eds. *A Fiscal Cliff: New Perspectives on the U.S. Federal Debt Crisis*. Washington, DC: Cato Institute.

Probasco, Jim. 2022. "Inflation Reduction Act of 2022." Investopedia, August 16.

Raudla, Ringa. 2010. "Governing Budgetary Commons: What Can We Learn from Elinor Ostrom?" *European Journal of Law and Economics* 30: 201–21.

Rector, Robert, and Christine Kim. 2008. *How the Wealth Is Spread: The Distribution of Government Benefits, Services and Taxes by Income Quintile in the United States*. Washington, DC: Heritage Foundation.

Reinhart, Carmen M., and Kenneth S. Rogoff. 2009. *This Time Is Different: Eight Centuries of Financial Folly*. Princeton, NJ: Princeton University Press.

Senate Democratic Leadership. 2022. "Summary: The Inflation Reduction Act of 2022."

Tankersley, Jim. 2021. "Biden to Propose $6 Trillion Budget to Make U.S. More Competitive." *New York Times*, May 28.

Tanner, Michael D. 2015. *Going for Broke: Deficits, Debt, and the Entitlement Crisis*. Washington, DC: Cato Institute.

Velasco, Andres. 2000. "Debt and Deficits with Fragmented Fiscal Policymaking." *Journal of Public Economics* 76: 105–25.

Wagner, Richard E. 1992. "Grazing the Budgetary Commons: The Rational Politics of Budgetary Irresponsibility." *Journal of Law and Politics* 9: 105–19.

Wagner, Richard E. 2018. "The Language of Taxation: Ideology Masquerading as Science." In Adam J. Hoffer and Todd Nesbit, eds. *For Your Own Good: Taxes, Paternalism, and Fiscal Discrimination in the Twenty-First Century*, 77–96. Arlington, VA: Mercatus Center at George Mason University.

Weingast, Barry R., Kenneth A. Shepsle, and Christopher Johnsen. 1981. "The Political Economy of Benefits and Costs: A Neoclassical Approach to Distributive Politics." *Journal of Political Economy* 89 (4): 642–64.

White, Ben. 2019. "Soak the Rich? Americans Say Go for It." *Politico*, February 4.

Williams, Claire. 2021. "Raising Taxes on Wealthy Americans and Corporations to Fund Biden's Infrastructure Plan Is OK with over 1 in 2 Voters." *Morning Consult*, March 31.