

Checks and Balances and Public Debt¹

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Abstract

Why does one country accumulate more debt than another country? This paper performs a cross-country analysis to test the determinants of public debt, with a focus on checks and balances. Public debt has a positive relationship with checks and balances – countries with greater checks and balances than other countries tend to have a larger amount of debt. Political conflicts and warfare are also correlated with public debt. Demographic and economic circumstances, such as the age of the population and national income, may also affect public debt.

JEL Classification Codes: E62, H60

“The only reason we have a surplus today is because we have a divided government” –Milton Friedman (September 3, 2000)³

I. Introduction

Does debt increase or decrease if a government becomes more divided? If a branch of government or a political party does not have to share power with another branch of government or party, then economic reasoning suggests that spending could be more or less than if there was a check on power. For instance, a government with strong checks and balances may spend less than a government with weak checks and balances because legislation must get approved by many different fractions. However, spending may be large when there are many parties since the parties compromise and allow each other’s spending to go through (such as a wife letting a husband buy golf clubs if she can buy a new purse). Since economic reasoning suggests that checks and balances can affect debt positively or negatively, it is necessary to do an empirical investigation.

The literature on debt is vast, but the empirical literature that investigates the determinants of public debt across countries is relatively scarce. Related literature has focused on the determinants of sovereign debt and default. In their popular work, “This Time is Different,” Carmen Reinhart and Kenneth Rogoff (2009) documented the episodes of high debt and default that many countries have faced at one time in their history. Seemingly, every country has faced debt problems. Why one country accumulates debt may differ from why another country accumulates debt, but debt-ridden countries may have common characteristics. However, Reinhart and Rogoff (2009) did not test for the determinants of public debt.

Other literature has focused on why some countries default on their external debt. This question is related in that what determines whether a country accumulates public debt is likely a reason why a country cannot (or refuses to) pay the external debt. For instance, if a country is struggling to pay for its social security program, it may think about defaulting on paying interest on foreign debt. The sovereign debt literature, however, does not elaborate on the relationship between the determinants of public debt and external debt. Some countries have a history of default, and they even default when their debt (% of GDP) is not unmanageable. Default is a calculated risk that the countries perform; they feel that they are better off to default on their obligations than to make repayment. Countries that fit this model are named “serial defaulters”. “Serial Default and the Paradox of Rich-to-Poor Capital Flows”, by Reinhart and Rogoff (2004), explains why a country defaults frequently.

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³ Interview: *In Depth with Milton Friedman*, C-SPAN Book TV. *interview* <http://www.c-spanvideo.org/program/159003-1>

Once a country has tarnished its reputation of repayment, they are more likely to default again in the future. The theory that reputation encourages debt repayment was theorized in Eaton and Gersovitz (1981) and surveyed by Tomz (2007). This theory is contingent on the assumption that that borrower will always look to borrow more in the future, and therefore needs to keep its good reputation in order to keep creditors happy. One problem with this idea is that it assumes the borrower will always look to borrow more in the future and is not running some sort of Ponzi scheme. Alternatively, Bulow and Rogoff (1989) and others suggest that the main reason a country repays its debt is because of direct sanctions that the lender can enforce on the borrower if the borrower defaults. In the most related work, Rijckeghem and Weder (2009) find that those countries with strong checks and balances tended not to default on their debt. It is possible that those countries are relatively stable, and provide a relatively safe place to invest.

While it is useful to explain why some countries pay back their debt, while others default, it is also useful to explain why a country accumulates so much debt in the first place. Whether or not Greece should or shouldn't default on their debt is an interesting question, but just as interesting is why Greece got into debt trouble to begin with. The motivation of this paper is to discover the main determinants of public debt, with a particular focus on checks and balances. The following section explains the empirical test and analysis. Section III concludes and offers policy implications.

II. Data and Analysis

In this study, we run ordinary least squares in a cross-country study, examining the determinants of public debt. The dependent variable is the natural log of the average public debt (% of GDP) from the years 2002-2008, obtained from the IMF Database.

One of the variables of interest is *checks and balances*, obtained from the Database of Political Institutions (Beck, et al., 2010). The variable equals one if the legislature is not competitively elected or if the executive branch is the only one in power. It increases by one if there are more checks on a branch of government or ruling party. For instance, in a presidential system, the variable is incremented by one unit if the legislature is controlled by a different party than the president.

War or international conflicts may also cause a government to accumulate debt. We include variables that represent International violence (*intviol_avg*) and international war (*intwar_avg*), which are taken from the Polity IV dataset. Each are a scale from 0 (no violence or war) to 10 (highest form of violence or warfare).

Debt may also be increased by social programs that help the elderly and the poor. Life expectancy (*life_exp*) is considered as an explanatory variable, where a high life expectancy value may imply a large expenditure on the elderly (*World Development Indicators*, World Bank). Since there are many programs that can be considered programs for the poor, a general measurement of spending (while simultaneously controlling for war expenditure and life expectancy), may be the only practical and feasible way to compare spending. Therefore, a measurement of government size (*gov_size*) from the Frasier Institute (Gwartney, et. al. 2011) is considered as an explanatory variable for public debt. The variable goes from a 0 to 10 scale, with 0 being a large government, and 10 being a small government. While it may be obvious that large governments may rack up large debt, it is not necessarily the case. Large spenders may or may not balance their budget more than small spenders.

There may also be many reasons why the size of the economy can affect the amount of debt that a country accumulates (as a percentage of their economy). If a country is going to spend a certain absolute amount on military, social programs, etc., than a bigger economy could generate more revenues and help prevent debt from accumulating. On the other hand, a rich country may be willing to pay for more public goods than poor countries, and they may be a safe home for lenders. Therefore, the natural log of real gross domestic product per capita (*lngdp*), averaged for years 2002-2008 is considered as an explanatory variable. Table 1 lists the variables, their description, and their source.

Table 2 runs ordinary least squares of three models, with the natural log of public debt (% of GDP) as the dependent variable. T-statistics are in italics, and each model uses robust standard errors. In the first model in Table 2, we include only the natural log of per-capita GDP and the natural log of checks and balances as dependent variables to explain public debt accumulation.

GDP has a negative and statistically-significant relationship with public debt, controlling for checks and balances. High-income countries tend to have a lower amount of public debt (% of GDP) than poor countries. Checks and balances have a positive relationship with public debt, controlling for GDP. This result is contrary to the idea that more veto power leads to less spending. One possible explanation is that “compromise” involves an increase in spending as one party or branch approves spending if they can also get their spending approved as well.

As mentioned, an increase in life expectancy, war, and international violence may also put pressure on the budget. These variables are included in Model 2 of Table 2. The coefficients on all three of those control variables have the predictable sign, and each coefficient is statistically significant. An increase in international violence and war is associated with an increase in public debt. An increase in life expectancy is also associated with an increase in public debt, possibly representing a heavy burden of social security programs. The coefficient on the per-capita GDP variable remains negative and statistically significant. Despite the inclusion of the control variables in Model 2, the coefficient on the checks and balances variable remains positive and statistically significant. This means that checks and balances may play an important role in debt accumulation, even after controlling for the effect of income, violence, war, and life expectancy.

Model 3 in Table 2 includes the control variables in Model 2, but it also includes a general index for government size. The government size variable is a scale from 0 to 10, where 0 is the smallest government size, and 10 is the largest government size. The variable was taken from the Fraser Institute’s *Economic Freedom of the World Annual Report*. While controlling for the other variables, smaller government size is associated with smaller public debt. The coefficient is statistically significant. While this may seem true by construction, it is not necessarily the case that more spending leads to more debt; it is true if revenues do not increase along with spending. Interestingly, the coefficients on GDP, international violence and war, and life expectancy remained statistically significant after controlling for government size. This result implies that a country will tend to have more debt than the another country if its spending is on war or social security programs, even if it has the same amount of spending and income as the other country.

The variable of interest in Model 3 is checks and balances (Inchecks). The regression in Model 3 differs from the other models in that government size is also included as a dependent variable. The coefficient on the checks and balances variable remains positive and statistically significant after including the government size variable. This result can be interpreted as follows: for a given level of government spending (% of GDP), countries that have many veto players (or a more divided government), tend to have more debt (% of GDP). There are a couple of possible explanations. One is that parties or branches of government may accept spending by other parties or branches, along as they will also approve their spending as well. Another possible explanation is that countries with strong checks and balances may be more stable, and those countries may be a safer place to send your savings to.

III. Conclusions and Policy Implications

At the time of the writing, public debt is a major concern for many countries, including the United States. The purpose of this study is to test whether a divided government will tend to accumulate more debt than a government with very few checks on its power. We find that countries with more checks and balances will tend to have more public debt, controlling for other variables that may affect public debt.

If reducing public debt is a goal of the federal government, eliminating checks and balances may help achieve that goal, but would not be a wise tool. As discussed in Rijkceghem and Weder (2009), checks and balances may be a signal of strength, which may allow a country to borrow more than a country that has little checks on power. However, checks and balances may also lead to compromises, where each branch approves of the spending in order to get their spending approved as well. A country can recognize this result and it can takes steps through rules or constitutional changes, which could limit spending without dismantling a stable democracy that has healthy checks and balances. For example, a balanced-budget amendment can limit spending, while keeping intact a system of checks and balances.

Table 1: Key

Indebt	The natural log of public debt (% of GDP), average from years 2002 through 2008. Data from IMF database (General Government Debt, % of GDP)
Inchecks	The natural log of "checks and balances," average from years 2002 through 2008 (The Database of Political Institutions, 2010).
intviol_avg	The average of the intviol score from years 2002-2008 (polityiv dataset). A scale of 0 to 10, where 0 denotes no episodes of political violence, while 10 denotes the highest magnitude of violence.
intwar_avg	The average of the intwar score from years 2002-2008 (polityiv dataset). A scale of 0 to 10, where 0 denotes no episodes of international warfare, while 10 denotes the highest magnitude.
lngdp	The natural log of real gdp per capita, average from years 2002-2008 (Penn World Tables 7.0, variable rgdpch)
Life_exp	Average life expectancy from years 2002-2008 (World Development Indicators, World Bank)
gov_size	0 to 10 scale, with 0 being a large government, 10 being a small government. Average from 2002-2008. Obtained from the <i>Economic Freedom of the World 2010 Annual Report</i> (Gwartney, et. al. 2011)

Table 2: Determinants of Public Debt (% of GDP)

Dependent Variable: The natural log of public debt (% of GDP)			
Variable	Model 1	Model 2	Model 3
lngdp	-.23***	-.379**	-.361***
	<i>-5.29</i>	<i>5.35</i>	<i>-3.86</i>
Inchecks	.266**	.279***	.272**
	<i>2.28</i>	<i>2.69</i>	<i>.02</i>
intviol_avg		2.45***	1.25*
		<i>4.21</i>	<i>1.83</i>
life_exp		.022***	.02**
		<i>2.5</i>	<i>1.95</i>
intwar_avg		.23***	-3.38***
		<i>10.27</i>	<i>-3.55</i>
gov_size			-.08*
			<i>-1.9</i>
_cons	5.58***	5.29***	5.72***
	<i>16.26</i>	<i>14.03</i>	<i>10.75</i>
N	142	141	122
r2	.17	.27	.21
r2_a	.16	.24	.17
F	14.3	97.5	13.1

T-statistics are in italics. Robust standard errors are used in all regressions.

*** significance at the 1% level, **significance at the 5% level, * significance at the 10% level.

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