



# Political competition and debt trajectories in Japan and the OECD<sup>☆</sup>

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Received 28 June 2000; received in revised form 26 February 2001; accepted 2 May 2001

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## Abstract

Public debt has accumulated rapidly in OECD countries since 1970. We assess the political explanations for debt accumulation, paying particular attention to the US and Japan. The key finding is that political competition explains variation in debt accumulation. Political competition encourages fiscal prudence. Hence, non-competitive countries will build up debt. Thirty years of OECD experience provides strong empirical support for this conjecture, and suggests that high debt levels in Japan are more due to political than economic factors. © 2002 Elsevier Science B.V. All rights reserved.

*JEL classification:* E6; J6

*Keywords:* Fiscal policy; Public debt; Political competition

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## 1. Introduction

While the fiscal condition of most OECD countries has deteriorated markedly in the past 30 years, there has been considerable variation in the fiscal performance of these countries. For example, Italy, Belgium, Japan, and Ireland accumulated significant amounts of public debt whereas Finland, Norway, and, until recently, Germany, implemented relatively conservative fiscal policies. Some countries, such as the US, Ireland, and New Zealand implemented fiscal tightenings in response to high levels of debt; other countries, notably Japan and Belgium, did not.

This variation in fiscal performance continues even today. Consider the world's two largest national economies, the US and Japan. The fiscal policy debate in the US focuses on

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<sup>☆</sup>This paper is part of a larger research project on the politics of fiscal policy by Skilling, alone and in collaboration with Zeckhauser.

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the appropriate use of the projected fiscal surpluses, and the implications of buying back public debt. In contrast, recent IMF projections show public debt in Japan rising to 150 percent of gross domestic product (GDP) by 2004. This paper seeks to identify the causes of the significant differences in the fiscal performance between Japan and the US, and OECD countries more generally, over the past 30 years (Figs. 1–3). We employ the ratio of a nation's *gross public debt* to its GDP as our central measure of its fiscal condition. The government's current fiscal deficit or surplus indicates how the debt ratio is changing.

In 1970, Japan had a gross debt of 10 percent of GDP, a remarkably small number. Since then, aside from a brief reduction in the late 1980s, Japan's debt ratio has grown swiftly, and is projected to reach a remarkable 117 percent by the end of year 2000. This dramatic trajectory can be explained in part by economic fundamentals: large terms-of-trade shocks in the 1970s and recession in the 1990s fueled the growth of debt, whereas strong economic growth in the 1980s briefly reduced it. Indeed, variation in economic growth influences changes in Japan's gross debt more than it does in many other countries. But economic factors do not provide a complete explanation. Japan has not halted the increase in debt in the way that other high debt countries have. By contrast, the US has had a more varied path of debt since 1960. Its debt decreased through the 1960s and 1970s, but then increased significantly in the 1980s. However, the US arrested its growth in gross debt at 63 percent of GDP in 1993. Its debt ratio has declined significantly since then and further large reductions are projected.

Why does fiscal performance vary in this way across nations? Much research has been directed at this question. The consensus is that economic factors alone cannot explain the observed fiscal policy, and that politics and institutions play a crucial role (Alesina et al., 1997; Franzese, 1998). In this paper, we build on this understanding of the politics of fiscal policy by outlining and testing a simple theory of fiscal policy decision making. The theory incorporates voters' preferences as a building block. The independent variable is the way the political system affects the incumbent government's response to these preferences.

We make two major claims in this paper:

1. Competition in a political system leads to a fiscal policy that results in smaller deficits. As a result, less debt will be accumulated in countries with more competitive political systems.
2. Holding the level of political competition constant, dominant political parties—the ones most frequently in power—implement fiscal policy settings that result in smaller deficits.

If true, these claims plausibly explain the path of deficits and debt observed over the past four decades in OECD nations. And while statistical confidence is not possible with data on just two nations, the claims are consistent with the patterns observed in Japan and the US, and in particular with their contrasting ability to constrain high levels of debt.

## **2. Fiscal policy as a response to voter preferences**

Empirical evidence suggests that the level of the deficit responds to the stock of public debt. This is not surprising in light of Herbert Stein's dictum that "if something cannot go

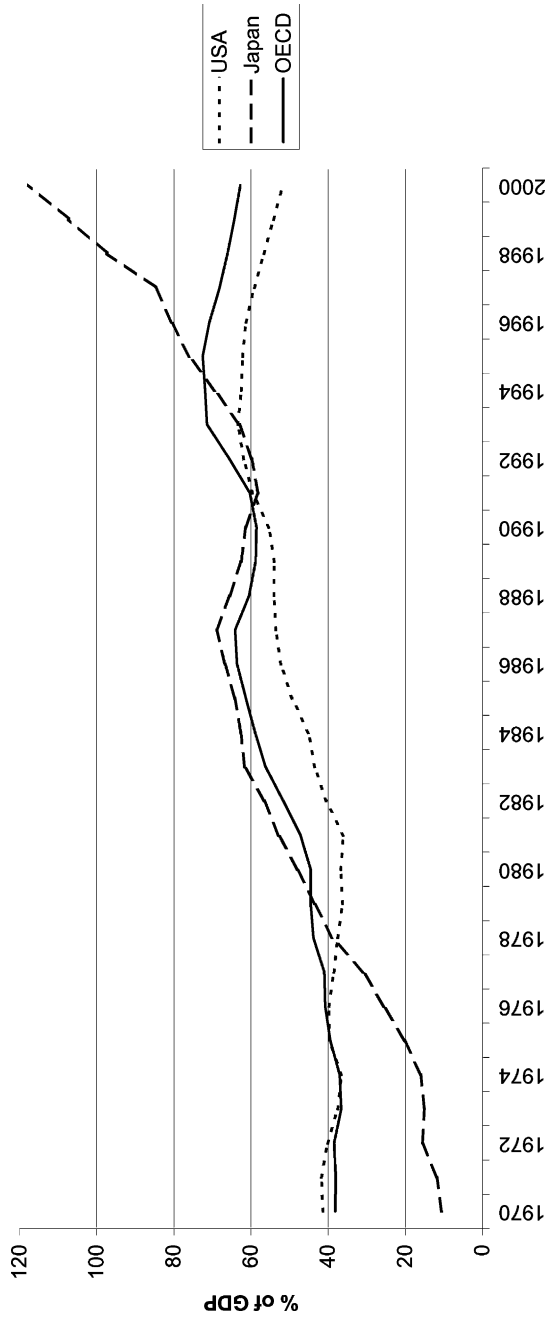


Fig. 1. Gross debt/GDP.

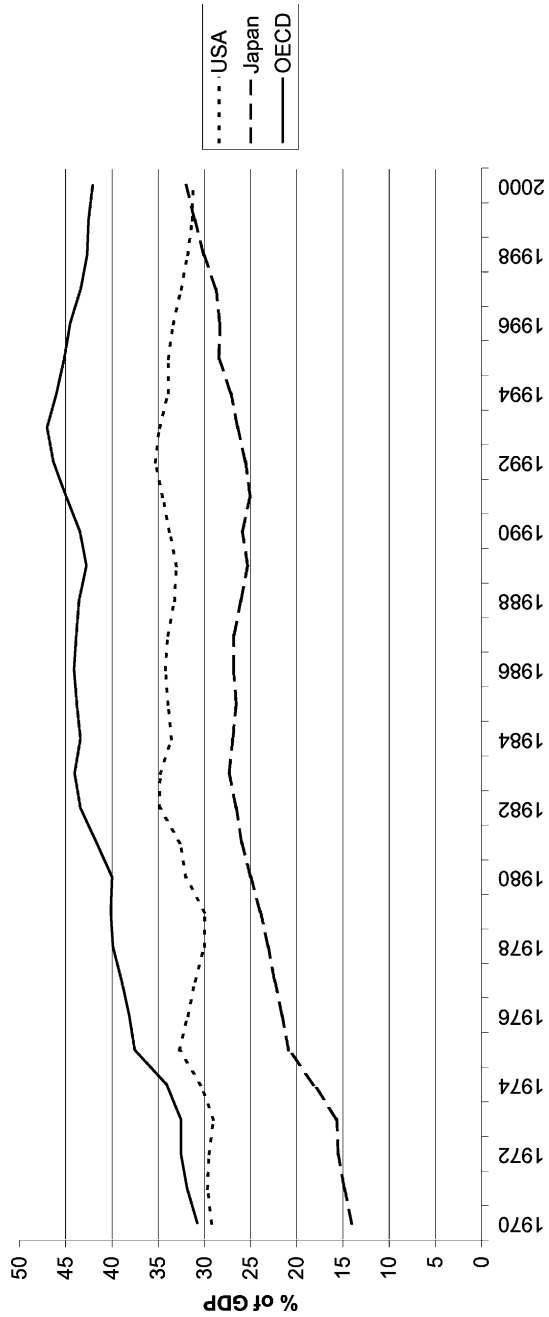


Fig. 2. Public spending/GDP.

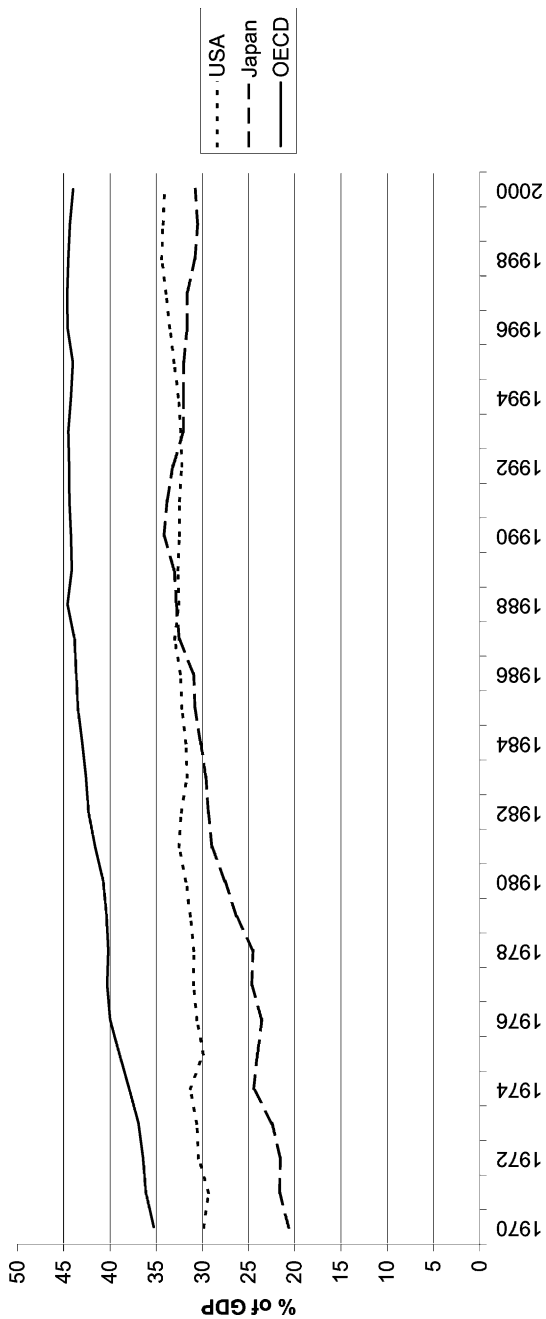


Fig. 3. Public revenue/GDP.

on forever, it will stop.” If we accept the common assertion of economists that there are increasing marginal costs of debt, governments should be expected to respond to high and growing debt by tightening fiscal policy, and for the most part they do, as documented by Bohn (1998) for the US and by Skilling (1999) for OECD countries between 1960 and 1997. However, these observations alone do not explain why governments accumulate such high debt levels and why (and when) they decide to subsequently adjust to prudence.

Casual intuition, as well as a large body of theory, suggests that governments accumulate debt because spending is popular with voters and raising taxes is not. Moreover, present-oriented and somewhat myopic voters do not monitor government actions well enough to predict their future consequences. Indeed, most citizens may be unaware of many areas of current expenditure. They are aware of taxes, and may believe that by holding them down now they can get future generations to share some of their burden. Deficits and debt are the logical consequence.

Fortunately, voters are not quite this naïve, at least not always. They recognize that debt levels can get excessive, in effect that there are increasing marginal costs of debt. In empirical work, not shown, we find that voters punish tight fiscal policy at low debt levels by voting against the incumbent, whereas at high levels of debt they reward fiscal tightening, presumably realizing that a failure to adjust may entail still greater costs.<sup>1</sup> Thus, we find that voters become more prudent (fiscally conservative) as debt levels rise, when prudence is called for.

These results on voters’ debt-contingent fiscal conservatism help to reconcile the widespread fiscal profligacy by post-war OECD governments with recent empirical work that suggests that voters are fiscal conservatives (Peltzman, 1992), or that they do not punish governments that implement large fiscal tightenings (Alesina et al., 1998).

We conjecture that the path of deficits and gross debt may be understood in part as the rational response of electorally oriented politicians to voters’ behavior. Our focus will be on the *primary balance*, the current fiscal deficit net of interest payments. In this paper, unless otherwise indicated, we normalize dollar values by representing them as a percentage of GDP. Thus, when we talk of the primary balance, we are talking in percentage terms. Following Alesina et al. (1998), we define a fiscal tightening as an annual improvement in the primary balance of more than 1.5 percentage points; a fiscal loosening is an annual deterioration of more than 1.5 percentage points.

### 3. Political competition and political dominance

If voters’ preferences are to affect fiscal policy decision making, political structures will play a central role. The two characteristics of political structures that we identify as important are the level of political competition within a country and the dominance or non-dominance of the party in power. We examine whether more competitive political systems yield better fiscal performances than political systems where power is more concentrated,

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<sup>1</sup> Skilling’s (1999) results show that fiscal tightening improves the re-election prospects of the incumbent at debt levels above 60 percent of GDP, but hurts those of an incumbent who implements fiscal tightening at debt levels below 40 percent of GDP. Conversely, fiscal loosening receives greater electoral support at lower debt levels than at higher debt levels.

and whether the dominant political party within each nation acts in a more fiscally prudent manner because it is more likely to be in power in the future.

This analysis of competition and dominance differs from previous research on political institutions that measured the strength and durability of government by focusing on the frequency of turnover and the expected time in office (Grilli et al., 1991). Our focus, by contrast, is on the degree of competition in the political system and the future orientation of the incumbent.

### 3.1. *Political competition*

We construct a *political competition index* (PCI) as 1 minus a Herfindahl “political concentration index.” This is a direct extension of the index’s use as a market concentration index (Tirole, 1988). We base the index on the proportion of time that different parties, or a long-lived coalition of parties, were in power between 1960 and 1997.<sup>2</sup> We treat a stable coalition, such as those that have dominated Italy and Belgium for the past 40 years, as equivalent to a single political entity. Although the party shares of such coalitions change, and there can be frequent turnovers of governments, where a core group of parties dominate the governing coalition we interpret this as a coherent political bloc. Non-competitive systems, such as those in Italy and Japan, have a low competition index rating, whereas more competitive political systems, such as those in the US and Finland have higher index values (Table 1).

We believe that greater political competition provides a stronger incentive for incumbents to be responsive to the preferences of voters, as there is a more credible threat of removal from office. Therefore, we believe that political competition generally improves the primary balance (the fiscal deficit before interest payments) by disciplining the incumbent not to implement unsustainable fiscal policy. This is consistent with—what we label—the Chicago School view of the effects of political competition on fiscal performance. Fig. 4 provides some support for this intuition; it graphs the level of political competition against debt accumulated since 1970; the three OECD countries with the least competitive political systems currently have the three highest debt levels. Further, when we divide the countries into categories by the intensity of competition, we find that they have very different debt profiles (Fig. 5).<sup>3</sup>

### 3.2. *Political dominance*

Running a deficit shifts an obligation forward; future governments must ultimately pay. A deficit imposes a negative externality on future regimes.<sup>4</sup> Presumably, the more likely it is that a party will be in power in the future, the more it will internalize this externality, and the less it will shift the financial obligations forward. This leads us to look to

<sup>2</sup>We define the political competition index (PCI) as  $PCI = 1 - \sum \alpha_i^2$  where  $\alpha_i$  is the proportion of time in office for party (or coalition)  $i$  and  $\sum \alpha_i = 1$ . We also calculate political competition (and political dominance) over two sub-periods. Our results are robust to these different definitions.

<sup>3</sup>Refer to Appendix A for a description of these categories.

<sup>4</sup>This leaves aside arguments about Ricardian Equivalence, efficient intergenerational transfers, etc. However, much these arguments intrigue economists, they are irrelevant esoterica to hard-nosed politicians and voters.

Table 1  
Party dominance and PCI values

Country	1960–1997		1960–1979		1980–1997	
	Dominant party	Competition index	Dominant party	Competition index	Dominant party	Competition index
US	Republican	0.50	Democrat	0.49	Republican	0.48
Japan	LDP	0.04	LDP	0.00	LDP	0.08
Germany	CDU	0.44	CDU	0.50	CDU	0.27
France	Gaullists	0.42	Gaullists	0.00	Socialists	0.49
UK	Conservatives	0.44	Conservatives	0.49	Conservatives	0.31
Italy	DC	0.18	DC	0.00	DC	0.33
Canada	Liberals	0.43	Liberals	0.25	Liberals	0.50
Austria	SPO	0.40	OVP	0.49	SPO	0.00
Belgium	CVP	0.00	CVP	0.00	CVP	0.00
Denmark	SD	0.55	SD	0.37	Conservatives	0.49
Finland	SDP	0.57	SDP	0.50	SDP	0.59
Iceland	Independents	0.42	Independents	0.32	Independents	0.48
Ireland	Fianna Fail	0.45	Fianna Fail	0.37	Fianna Fail	0.49
The Netherlands	CDA	0.63	KVP	0.50	CDA	0.21
Norway	AP	0.52	AP	0.45	AP	0.45
Sweden	SDA	0.39	SDA	0.25	SDA	0.52
Australia	Liberal	0.49	Liberal	0.25	Labour	0.44
New Zealand	National	0.34	National	0.25	National	0.45
Average		0.34		0.31		0.37

differences in behavior between the ruling parties that are likely and unlikely to be in power in the future.

We define the *dominant party* to be the party (or coalition of parties) that had the highest share of incumbency between 1960 and 1997 within each country. For example, the Conservatives are the dominant party in the UK and the Liberals are the dominant party in Canada. Controlling for political competition, we hypothesize that the dominant party in any political system will be associated with lower deficits and higher surpluses, since it is more likely to be in power in the future when the costs of high debt and fiscal tightening are realized. There is a tension, of course, between political competition and political dominance. The more competition there is, the less likely it is that the dominant party will be in office. This suggests that there is some trade-off between political competition and political dominance in terms of obtaining improved fiscal performance.<sup>5</sup>

### 3.3. Results

These ideas and hypotheses are tested on a panel of 18 OECD countries from 1960 to 1997. We examine the effect of political competition on the primary balance, public

<sup>5</sup> If there are only two possible parties in a country, there will be a strictly negative but nonlinear relationship between competition and political dominance. Still, the nonlinearity will allow the dominance effect to predominate in some cases, and the competition effect in others.



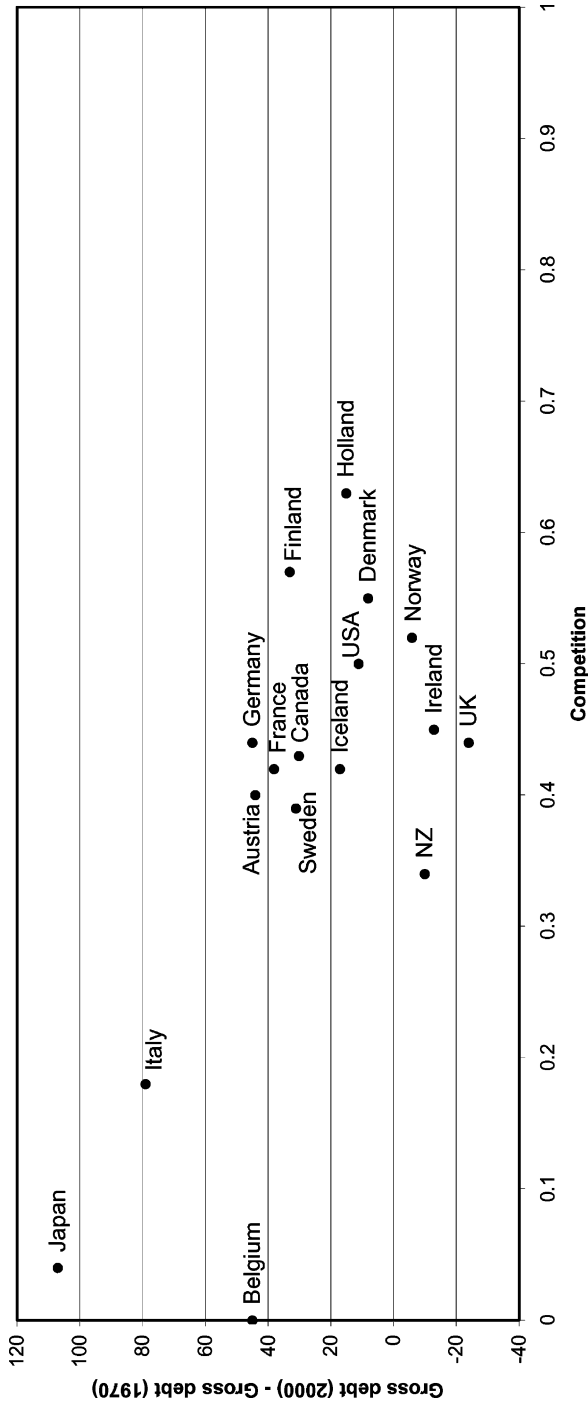


Fig. 4. Gross debt accumulation and political competition.

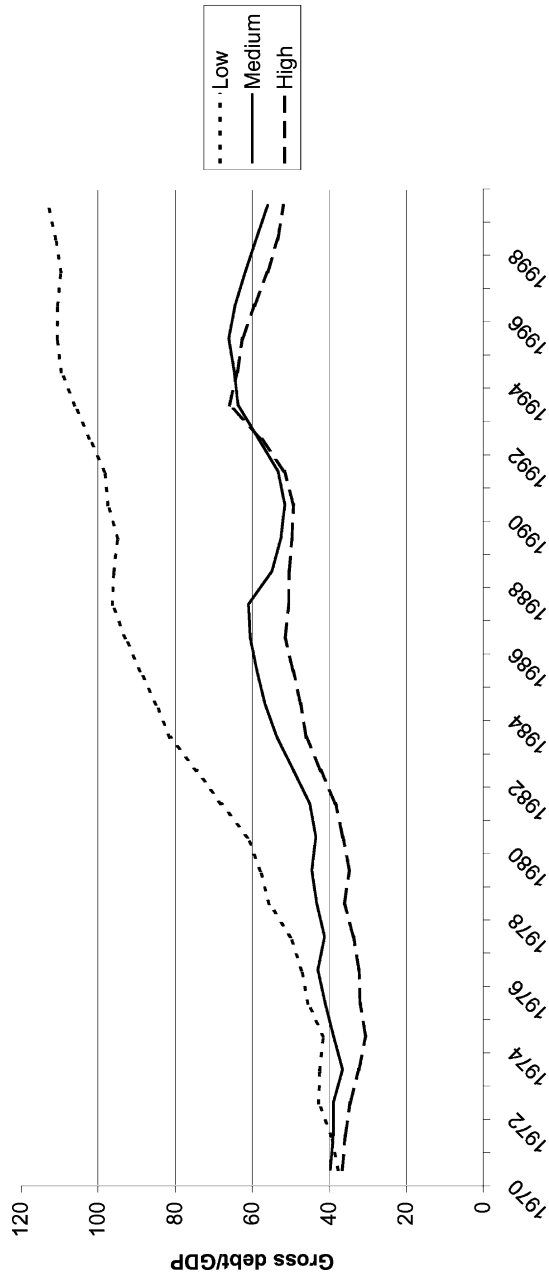


Fig. 5. Gross debt by intensity of competition.

Table 2  
The effects of political competition and political dominance on fiscal policy<sup>a</sup>

	Primary balance (1)	Primary balance (2)	Change in public spending	Change in public revenue
Competition	1.67 <sup>***</sup> (3.129)	1.15 <sup>*</sup> (1.795)	-1.33 <sup>***</sup> (-3.634)	-0.27 (-1.222)
Dominant party	0.23 (1.601)	0.18 (0.958)	-0.21 <sup>**</sup> (-2.242)	0.04 (0.564)
Gross debt	0.03 <sup>***</sup> (3.754)	0.03 <sup>***</sup> (3.152)	-0.03 <sup>**</sup> (-1.982)	-0.01 <sup>*</sup> (-1.826)
Low debt	0.37 <sup>*</sup> (1.694)	0.46 (1.580)	-0.12 (-0.870)	-0.07 (-0.743)
High debt	-0.01 (-0.054)	0.12 (0.472)	-0.12 (-0.914)	0.28 <sup>***</sup> (3.323)
Extreme debt	-0.60 <sup>*</sup> (-1.681)	-0.36 (-0.834)	0.36 (1.535)	0.50 <sup>***</sup> (3.263)
Lagged spending			-0.00 (-0.102)	
Lagged revenue				0.01 (1.618)
Real growth (lagged)	0.20 <sup>***</sup> (4.063)	0.26 <sup>***</sup> (3.936)	-0.09 <sup>***</sup> (-2.664)	-0.18 (-0.828)
Annual change in real growth	0.18 <sup>***</sup> (4.489)	0.19 <sup>***</sup> (3.692)	0.01 (0.505)	-0.03 <sup>*</sup> (-1.656)
Inflation (lagged)	-0.00 (-0.053)	-0.01 (-0.454)	0.01 (0.740)	0.01 <sup>*</sup> (1.797)
Annual change in inflation	-0.02 (-0.916)	-0.05 (-1.235)	0.03 <sup>*</sup> (1.953)	-0.00 (-0.323)
Unemployment (lagged)	0.00 (0.154)	0.03 (0.734)	-0.02 (-0.939)	-0.00 (-0.232)
Annual change in unemployment	-0.38 <sup>***</sup> (-3.608)	-0.39 <sup>***</sup> (-3.033)	0.55 <sup>***</sup> (8.055)	0.08 (1.444)
Coalition	-0.19 (-1.034)	-0.27 (-1.230)	0.25 <sup>**</sup> (2.359)	-0.08 (-0.868)
Majority	0.07 (0.470)	0.11 (0.506)	-0.19 <sup>*</sup> (-1.777)	-0.07 (-0.893)
Right	-0.22 (-1.528)	-0.15 (-0.747)	0.06 (0.620)	-0.01 (-0.219)
Constant	-2.88 <sup>***</sup> (-4.561)	-1.92 <sup>**</sup> (-2.414)	2.73 <sup>***</sup> (5.528)	0.52 (1.373)
$R^2$	0.83	0.83	0.83	0.68
$N$	445	416	406	443

\* Variables that are significant at the 90 percent level.

\*\* Variables that are significant at the 95 percent level.

\*\*\* Variables that are significant at the 99 percent level.

<sup>a</sup> The coefficients are reported, and the  $t$ -statistics are in parentheses (based on panel-corrected standard errors). The coefficients on the three (decade-length) time fixed-effects and the three regional dummies are not reported.

spending, and public revenue. Appendix A describes the data and empirical approach in more detail.

We find that political competition has a significantly positive effect on the primary balance (Table 2). The coefficients suggest that an increase in the competition index from 0 to 0.5 (approximately the distance between Japan and the US) will lead to an annual improvement in the primary balance of over 0.5 percentage points. We also find that competition appears to improve the primary balance substantially through reduced growth in spending. Indeed, the effect of competition on growth in public revenue is small and statistically insignificant.

The incumbency of a dominant party has a less powerful effect on these fiscal variables. It is not significant at conventional levels on the measures of primary balance. However, dominant parties are associated with significantly lower spending growth—although this effect is much smaller than the effect of political competition.

The economic and fiscal environment also has a powerful effect on fiscal policy decision-making. In particular, the debt level is a significant determinant of spending decisions. As debt increases, spending growth decreases which, given constant revenue

growth, directly improves the primary balance. Real growth, unemployment, and inflation also have significant effects on these variables in the expected directions. In particular, an increase in the unemployment rate has a significantly expansionary effect on spending and a negative effect on the primary balance.

Consistent with previous empirical research, we find that coalition governments are associated with worse fiscal performance in terms of the primary balance and spending growth. More surprisingly, we find that right wing parties are also associated with worse fiscal performance, although in an insignificant manner.

#### **4. Application to Japan and the US**

Our empirical results suggest that variation in the level of political competition, and in the pattern of incumbency of different political parties, has affected nations' debt trajectories over the past few decades. Indeed, these results suggest that differences in the degree of political competition in the political systems of the US and Japan explain a significant portion of their fiscal records in recent decades.

The Liberal Democratic Party (LDP) has dominated the Japanese political system for the past 50 years. Although the strength of the LDP has waned, particularly over the past decade, it remains the dominant political entity and it is not clear that Japan's opposition parties are capable of taking control. Accordingly, the Japanese political system remains non-competitive. In contrast, the US political system has been highly competitive. Democrats and Republicans have shared the presidency about evenly since 1960, and control of the House of Representatives has also been shared between the parties. There is also competition between the executive and legislative branches of government in the US in a way that there is not in Japan, a parliamentary democracy.

Given the differences in these political environments, consider the relative performances of the two countries with respect to the primary balance and the accumulation of debt. Although Japan started with low gross debt (10 percent in 1970, compared with 41 percent in the US), Japan caught up with a vengeance and has had higher debt than the US since 1978. Japan currently has a debt ratio that is over 60 percentage points higher than the US. Although a large amount of debt has been accumulated over the past few years, particularly since 1998, debt levels in Japan were higher than average well before the recent attempts to deficit finance counter-cyclical spending policies. Unsustainable fiscal policy is not just a recent phenomenon.

We argue that the lack of a competitive political environment is a major reason that Japan allowed its debt to rise after it had already reached high levels; unsustainable fiscal policies can be pursued far longer in a non-competitive political environment. Compare Japan's experience with the path of the US gross debt since 1980. Although debt was accumulated in the 1980s, the competitive political environment in the US is likely to have promoted the fiscal tightening in the 1990s.

Japanese public spending levels now surpass those of the US, after being considerably lower for virtually all of the last 30 years (Fig. 2). We believe that the lack of political competition in Japan is a major explanatory factor. In a competitive political system, we would expect to see some reductions in spending once the debt levels become extreme.

Despite extreme debt levels, spending has not been constrained in Japan; indeed, spending has pursued an upward trajectory for some time. Although the incumbency of a dominant party may encourage some degree of prudence (lower deficits, reduced spending growth), in Japan it appears that the effects of political competition are stronger.

Political competition frequently seems to be a pre-condition for substantial fiscal adjustment. For example, Italy, another country dominated by a single ruling coalition from 1946 to 1994, had accumulated debt equal to 126 percent of GDP by 1994. However, the changes to the electoral system put in place in 1993 resulted in new parties and coalitions forming, and a more competitive political system. These political changes coincided with the beginning of a substantial fiscal tightening in Italy, and the tightest budget since World War II. As a result, gross debt in Italy has been reduced to 116 percent of GDP, and is projected to decline further.

## 5. Concluding remarks

This paper shows that fiscal policy decisions can be partially understood as choices by ruling parties that wish to stay in power. Political structure matters: greater competition leads to prudence, particularly when debt levels are low or extreme.

We conjecture that the non-competitive nature of the Japanese political system has contributed to the failure of the Japanese government to reduce its very high levels of debt. Dominant parties that preside over the accumulation of debt may be reluctant to tighten fiscal policy, as this would effectively admit the error of past ways. This may be a factor in Japan, and may suggest that fiscal adjustment will be further delayed because the LDP has been responsible for accumulating this public debt.

In recent years, Japan—or at least analysts of Japan—have been searching for a fundamental structural solution to its long-term economic problems, including its mushrooming debt. Most proposed solutions involve economic reforms, which will lead to a more competitive economy. This analysis suggests that political reforms, leading to a more competitive electoral system, may be just as important to Japan's improved economic performance.<sup>6</sup> However, even if this analysis were widely accepted, it is not clear that such reforms would be implemented: parties do not readily give up power.

## Appendix A. Data and methodology

To implement the empirical tests we construct a panel data set that contains economic and political data for 18 OECD countries from 1960 to 1997, both inclusive.<sup>7</sup> The 18

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<sup>6</sup>This claim is supported by other commentators. In a recent *New York Times* article, it was stated that “The list of purely economic problems is well known . . . But increasingly, economists and experts are saying Japan's problems are first and foremost political: this is the only major industrial democracy that for the last half century—except for one brief interruption—has been governed by the same political group, the Liberal Democratic Party” (6 February 2001, p. A8).

<sup>7</sup>The countries included in this data set are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Sweden, the UK and the US.

countries in this data set are all of those OECD countries for which we have economic, fiscal, and political data for at least 20 years. The base economic data is drawn from the June 1999 OECD Economic Outlook, and covers the period from 1960 to 2000.

For the political data, we rely primarily on the results reported by Budge et al. (1993, 1998). These papers provide data on governments in 20 industrial democracies from 1945 to 1997, including data on the existence of coalition government and the government's ideological complexion. We obtain the US data from Alesina and Rosenthal (1995, p. 241).

Political competition is measured as the PCI defined in Footnote 2.

Dominant party = 1 if dominant party is in office, 0 otherwise.

Coalition = 1 if more than one party is in government, 0 otherwise

Right = 1 if right and center parties hold at least 66 percent of total votes, 0 otherwise

We divide the countries into low, medium, and high competition categories, as follows:

- high competition (0.5–1): USA, Denmark, Finland, The Netherlands and Norway;
- medium competition (0.3–0.5): Germany, France, UK, Canada, Austria, Iceland, Ireland, New Zealand, Sweden, and Australia;
- low competition (0–0.3): Italy, Belgium, and Japan.

The main fiscal variable of interest is the primary balance, which is simply the fiscal balance plus the net interest payments. We call this 'Primary balance (1)' in the regressions. However, because of data limitations, this specification did not allow us to examine the breakdown between spending and revenue. We therefore construct another measure of the primary balance, which is similar in spirit. Following Kontopoulos and Perotti (1999), we deduct the property income payments and receipts (which include interest payments and receipts) from public spending and revenue. The difference between this measure of public revenue and public spending gives the primary balance. We call this term 'Primary balance (2)'. All of these terms are expressed as a percentage of GDP.

We control for three economic variables; real growth (the annual change in real GDP); inflation (the annual change in the GDP deflator); and the unemployment rate. We follow Franzese (1998) and distinguish between the temporary and permanent effects of these variables on the dependent variable by including both the lagged level (to capture the long-run effect) and the current-period change (to capture the short-run effect).

All of the equations are estimated using the panel-corrected standard errors procedure (Beck and Katz, 1995, 1997). To address serial correlation concerns, the spending and revenue dependent variables are expressed in first differences, and all of the equations include two lagged dependent variables and a lagged level.

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