

Fiscal Consolidation and Sustainability of Japan's Public Debt after the Global Financial Crisis

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Abstract

After the 2008 global financial crisis, the sustainability of public indebtedness has become a central public policy issue in the United States, Europe, and Japan. In the United States especially, the public debt ceiling has become a continuing source of concern and political dispute. This paper employs Japanese Long-term Economic Statistics (LTES) to investigate the sustainability of Japan's public debt and changes in fiscal discipline after the 2008 global financial crisis. First, results of the unit-root test show that the level of Japan's public debt has become unsustainable after the crisis. Second, the 2008 global financial crisis has destroyed Japan's fiscal discipline, which had been relatively strong before the crisis. Third, fiscal discipline was strong between the Russo–Japanese War and World War I and for several decades following World War II. It was relatively strong during the fiscal consolidation period in the latter 1980s. We thus conclude that post-war fiscal discipline in Japan resembled the pre-war period despite the absence of military expenses after World War II. Although fiscal consolidation could reduce public debt to some degree, the level of public debt in 2017 might generate high inflation in the future, as it did after World Wars I and II.

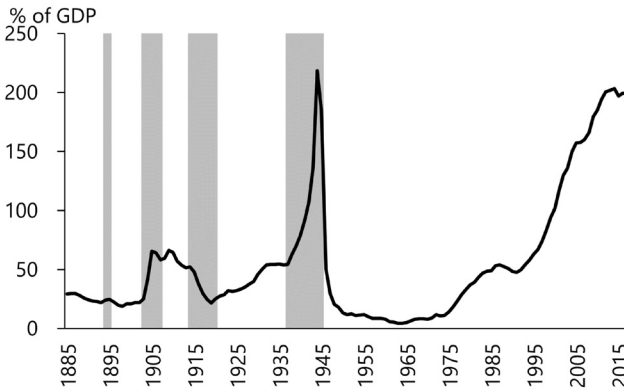
Keywords : Public debt, fiscal deficit, Sustainability of the public debt

1 Introduction

Tax reductions and increased public expenditure during the long-term stagnation since the 1990s resulted in Japan's public debt approaching 200% of its GDP at the end of 2010. Japan's debt has soared since the global financial crisis in late 2008. The debt-GDP ratio increased by 18% in 2009. People are worried about the debt because Japan's labor power has decreased through a falling birth rate and aging society.

The Japanese economy has never experienced rapid debt accumula-

Figure 1: Public Debt in Japan



1) Shaded areas indicate wartime. These include the First Sino-Japanese War (1894–1895), the Russo-Japanese War (1903–1907), World War I including the Siberian Intervention (1914–1920), and the Second Sino-Japanese War and Pacific Ocean War (1937–1945). These periods are defined as the fiscal years in which government implemented the Extraordinary Special Accounts for War Expenses.

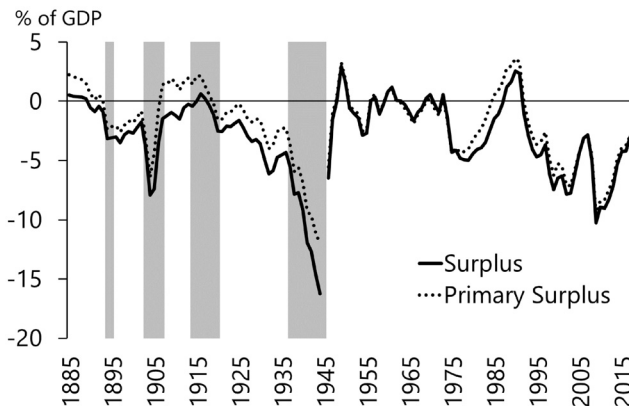
Data Sources)

- 1885–2002: Statistics Bureau, Ministry of Internal Affairs and Communications, *Historical Statistics of Japan*, Table 5–9.
- 2003–2017: Ministry of Finance

tion. After the Russo–Japanese War (1904–1905), government financed huge war expenses by issuing government bonds. Other examples of long-term war expenses include the Second Sino–Japanese War and the Pacific Ocean War from 1937 to 1945 (Figure 1).

Each example above involves different processes of adjusting public debt. Public debt associated with the Russo–Japanese War was resolved by fiscal surpluses after the war. Debt accumulated between 1937 and

Figure 2: Fiscal Surpluses (General Government) in Japan



1) Shaded areas indicate wartime. These include the First Sino–Japanese War (1894–1895), the Russo–Japanese War (1903–1907), World War I including the Siberian Intervention (1914–1920), and the Second Sino–Japanese War and the Pacific Ocean War (1937–1945). These periods are defined as the fiscal years in which government implemented the Extraordinary Special Accounts for War Expenses.

Data Sources)

- 1885–1940: Ohkawa and Shinohara (1979)
- 1941–1955: Japan Statistical Association (1988)
- 1955–1979: Cabinet Office, *National Accounts for 1998*.
- 1980–1993: Cabinet Office, *National Accounts for 2009*.
- 1994–2017: Cabinet Office, *National Accounts for 2017*.

1945 was reduced by hyperinflation after the war (Figures 2 and 3).

Our analysis considers the following aspects. First, we verify the sustainability of Japan's public debt by using Long-term Economic Statistics (LTES) since the 1880s. Ahmed and Rogers (1995) examined long-term data in the U.S. and UK and concluded that these nations' public indebtedness is sustainable. In Japan, research using long-term historical data is rare, although Broda and Weinstein (2005), Doi et al. (2005), and Iwamura et al. (2006) used data from the post-war period.¹

Second, we implement the Markov-switching regression to consider the possibility of structural breaks after events such as the 2008 global financial crisis. Okazaki (2004) shows that fiscal discipline has relaxed since the end of 1920s. We investigate whether this structural change is observed in actual data.

Besides these empirical issues, tests with structural breaks are important. Sustainability is defined as the case in which the ex-post intertemporal budget constraint is satisfied. This definition allows a reduction in the value of debt resulting from hyperinflation associated with fiscal collapse.² Therefore, tests that reveal structural breaks enable us to investigate the sustainability of public debt even when the sustainability condition is temporarily not satisfied.

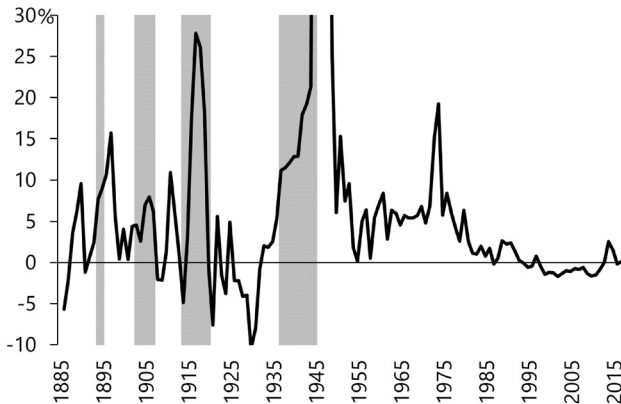
The rest of this paper is organized as follows. Section 2 reviews related research to examine the conditions for fiscal sustainability. Section 3 implements tests for the sustainability of public debt using LTES on

1 Doi et al. (2005) and Iwamura et al. (2006) conclude that the public debt is not sustainable, while Broda and Weinstein (2005) simulate certain cases using the data and conclude that it is sustainable.

2 Leeper (1991) calls this situation an "active" fiscal policy, and Woodford (1995) subsequently defines it as a "Non-Ricardian" fiscal policy.

the basis of the methods reviewed in section 2. Section 4 discusses fiscal discipline in Japan alongside results from section 2. Section 5 presents the conclusion of the study.

Figure 3: GDP Deflator in Japan



1) The shaded areas indicate wartime periods. These include the First Sino-Japanese War (1894–1895), the Russo–Japanese War (1903–1907), World War I including the Siberian Intervention (1914–1920), and the Second Sino–Japanese War and the Pacific Ocean War (1937–1945). These periods are defined as the fiscal years in which government implemented Extraordinary Special Accounts for War Expenses.

2) Japan suffered hyperinflation after the Pacific Ocean War. Records show 104.3 % in 1945, 535.1% in 1946, 145.0% in 1947, and 77.8% in 1948.

Data Sources)

- 1885–1955: Ohkawa and Shinohara (1979).
- 1955–1979: Cabinet Office, *National Accounts for 1998*.
- 1980–1993: Cabinet Office, *National Accounts for 2009*.
- 1994–2017: Cabinet Office, *National Accounts for 2017*.

2 Testing the Sustainability of Public Debt

2.1 Testing Sustainability with a Linear Model

This study employs methods to test the sustainability of public debt; these methods were developed by Hamilton and Flavin (1986). Trehan and Walsh (1991) expanded their methods to include the variability of market discount rates. The necessary condition for sustainability of public debt is the cointegration of tax revenue, government expenditures, and interest on public debt; the sufficient condition is the stationarity of public debt. In that regard, Trehan and Walsh (1991) tested the necessary and sufficient conditions and concluded that the U.S. public debt is sustainable.

Bohn (1995) and Ahmed and Rogers (1995) used the necessary and sufficient conditions that tax revenue, government expenditures, and interest on public debt consist of a cointegration vector and that this vector satisfies a constraint.

We obtain the condition for the sustainability from government's budget constraint. First, the flow budget constraint in period t is given as

$$(1) \quad D_t - D_{t-1} = G_t - T_t + r_t D_{t-1} = -s_t,$$

where D_t is the level of public debt, G_t is government expenditure, T_t is tax revenue, $r_t D_{t-1}$ is interest on public debt, and s_t is the fiscal surplus. The stochastic discount factor is defined as $Q_{t,t+k} = [\beta^k u'(C_{t+k})/u'(C_t)]$, where β is the subjective discount factor, C_t is the consumption level at period t , $u(\cdot)$ is the utility function that satisfies the conditions $u'(\cdot) > 0$ and $u''(\cdot) < 0$. The Euler condition for inter-temporal substitution of consumption satisfies

$$(2) \quad E_t \left[\left(\prod_{j=0}^k Q_{t,t+j} \right) \right] = 1.$$

Solving equation (1) and substituting equation (2) into the budget constraint, we obtain the inter-temporal budget constraint as

$$(3) \quad E_t \sum_{k=0}^{\infty} Q_{t,t+k} G_{t+k} - E_t \sum_{k=0}^{\infty} Q_{t,t+k} T_{t+k} + (1+r_t) D_{t-1} = \lim_{K \rightarrow \infty} E_t Q_{t,t+K} D_{t+K}.$$

We will show the condition for the sustainability of public debt. If the transversality condition for this system, $\lim_{K \rightarrow \infty} E_t Q_{t,t+K} D_{t+K} = 0$, is satisfied, we obtain

$$(4) \quad (1+r_t) D_{t-1} = E_t \sum_{k=0}^{\infty} Q_{t,t+k} (G_t - T_t).$$

This means that the level of public debt at the beginning must be equal to the present value of government's present and future net revenue if the present value of public debt at the terminal is to converge to zero—that is, if it is to satisfy the transversality condition.

Ahmed and Rogers (1995) transformed equation (3) to derive the necessary and sufficient condition for sustainability. Differencing and arranging equation (3), we obtain

$$(5) \quad \Delta E_t \sum_{k=0}^{\infty} Q_{t,t+k} G_{t+k} - \Delta E_t \sum_{k=0}^{\infty} Q_{t,t+k} T_{t+k} + (G_t - T_t + r_t D_{t-1}) \\ = \lim_{K \rightarrow \infty} E_t Q_{t,t+K} D_{t+K} - \lim_{K \rightarrow \infty} E_{t-1} Q_{t,t+K-1} D_{t+K-1},$$

where Δ is the difference operator.

Ahmed and Rogers (1995) show that the necessary and sufficient condition for the sustainability is that government expenditures, tax revenue, and interest on public debt consist of the cointegration vector (1, -1, 1). This constraint on the cointegration vector indicates the fiscal

deficit $-s_t$ in equation (1). Therefore, we can verify the sustainability of public debt by testing the stationarity of the fiscal deficit $-s_t$. This test is usually implemented as a unit-root test for

$$(6) \quad \Delta s_t = \mu + \lambda s_{t-1} + \varepsilon_t,$$

where the null hypothesis is $\lambda = 0$.

2.2 Structural Breaks and Sustainability

When the true model is not linear, as in equation (6), unit-root tests do not function because of a formulation error. Raybaudi et al. (2004) employed a nonlinear model with structural breaks between stationary and non-stationary regimes to test the sustainability of current account deficits by estimating the Markov-switching regression as

$$(7) \quad \text{Stationary regime } (\theta_t = 0) : \Delta s_t = \mu_0 + \lambda s_{t-1} + \sigma \varepsilon_t,$$

$$(8) \quad \text{Non stationary regime } (\theta_t = 1) : \Delta s_t = \mu_1 + \sigma \varepsilon_t.$$

Combining these equations, we obtain

$$(9) \quad \Delta s_t = [\mu_0(1 - \theta_t) + \mu_1\theta_t] + \lambda(1 - \theta_t)s_{t-1} + \sigma \varepsilon_t,$$

where coefficient λ satisfies $-2 < \lambda < 0$, and ε_t is the disturbance term, which follows the white-noise process. The state variable θ_t follows the first-order Markov chain $\theta \in \Theta = \{0, 1\}$, and the transition probability $p_{ij} = P\{\theta_t = j \mid \theta_{t-1} = i\}$ satisfies $p_{ij} \in [0, 1]$ and $\sum_j p_{ij} = 1$.

The Markov-switching model is estimated by the maximum likelihood method assuming that the conditional probability density, given the observed and state variables till period t is Gaussian. If $\theta_t = 1$ in equation (9), then the process of s_t follows equation (8), and it can be concluded

that it is locally—but not necessarily globally—non-stationary. Franco and Zakoian (2001) defined the necessary and sufficient condition for second-order stationarity as

$$(10) \quad x = p_{00}\rho^2 + p_{11} + (1 - p_{00} - p_{11})\rho^2 < 1,$$

$$(11) \quad y = p_{00}\rho^2 + p_{11} < 2,$$

where $\rho = 1 + \lambda$.

3 Empirical Analysis Using Japanese Long-term Economic Statistics (LTES)

In this section, we test the sustainability of Japan's public debt and test for structural breaks in the data by using LTES in Japan. First, we explain the data. Second, we test the sustainability of public debt using a linear model by employing a cointegration test. Third, we test sustainability with a structural break by estimating the Markov-switching model. Finally, we discuss Japan's fiscal discipline in the context of long-term historical data.

3.1 Data

Data in our analysis concerning fiscal surpluses are calculated from SNA data. Public saving is indicated by S_t^g , public capital formation is represented by I_t^g , and net interest payments used in this calculation are represented as

$$s_t = T_t - G_t - r_t D_{t-1} = S_t^g - I_t^g.$$

All data are divided by GDP.

We used annual data from 1885 to 2009 collected from Ohkawa and Shinohara (1979), the Japan Statistical Association (1988), and the Cabinet Office of Japan. We used a sequence of interest payments on government bonds until 1954 from the *Annual Reports on Government Bond Statistics* because property income was unavailable in SNA data for this period.

Level shifts may occur in our data between 1940 and 1941 when the data estimated by Ohkawa and Shinohara (1979) are chained to those estimated by the Japan Statistical Association (1988) between 1954 and 1955 when the data are chained to 68SNA, between 1979 and 1980 when the data are chained to 93SNA, and between 1993 and 1994 when the data are chained to 2008SNA. However, information useful in testing for structural breaks may be lost by axiomatically correcting for level shifts; hence, we do not correct data prior to analysis.

Figure 2 shows the sequence of fiscal surpluses. Shaded areas indicate wartime: the First Sino–Japanese War 1894–1895, the Russo–Japanese War 1903–1907, World War I including the Siberian Intervention 1914–1920, and the Second Sino–Japanese War and Pacific Ocean War (World War II) 1937–1945.³ Fiscal surpluses tend to decline in wartime, but they improved rapidly after the Russo–Japanese War and the Pacific Ocean War.

Descriptive statistics for the fiscal surplus and its components (public saving and public investment) are shown in Table 1. Japan's fiscal surplus reaches its minimum in 1944 and maximum in 1949. The Jarque–

3 These periods do not necessarily correspond to the actual war days because these periods are defined as the fiscal years in which the Extraordinary Special Accounts for War Expenses were planned and implemented by the government.

Table 1 : Descriptive Statistics

Variable	Mean	Median	Maximum	Minimum	Std. Dev.	Jarque -Bera
Public Savings	1.372	1.951	8.887 [1949]	-12.605 [1944]	3.791	43.973 (.000)
Public Investments	4.396	4.332	8.420 [1947]	1.281 [1886]	1.660	2.575 (.276)
Fiscal Surplus	-3.024	-2.576	2.938 [1949]	-16.259 [1944]	3.379	49.238 (.000)

1) Figures in brackets indicate years that recorded maximum (or minimum) values.

2) Values in parentheses mean P-values of the Jarque-Bera test statistics.

Data Sources)

- 1885-1940: Ohkawa and Shinohara (1979)
- 1941-1955: Japan Statistical Association (1988)
- 1955-1979: Cabinet Office, *National Accounts for 1998*.
- 1980-1993: Cabinet Office, *National Accounts for 2009*.
- 1994-2017: Cabinet Office, *National Accounts for 2017*.

Bera test rejects the normality of the fiscal surplus.

3.2 Empirical Results with a Linear Model

We apply the unit-root test to the fiscal surpluses explained above to examine whether Japan's public debt is sustainable. First, we apply the unit-root test for each component of fiscal surplus (public savings S_t^g , and public investments I_t^g .) as the preliminary analysis, because it is necessary that these series follow a first-order integrated process (Ahmed and Rogers, 1995).

Results of the test for sustainability appear in Table 2. The unit roots are not rejected for the levels of all variables. The unit roots are rejected for the first differenced variables of public investment I_t^g and interest on public debt $r_t D_{t-1}$; hence, we conclude that these variables follow first-

Table 2: Results of Unit-root Tests

Variables		Levels		1 st differences	
		ADF	DF-GLS	ADF	DF-GLS
Public	Test Stat.	-1.360	-1.255	-7.232 ***	-6.845 ***
Savings	Lag Length	2	2	1	1
Public	Test Stat.	-3.040 **	-1.769 *	-14.865 ***	-7.608 ***
Investments	Lag Length	1	1	0	0

- 1) "ADF" means the Augmented Dickey-Fuller test, and "DF-GLS" means Dickey-Fuller GLS test by Elliott, Rothenberg, and Stock.
- 2) Lag lengths in the unit-root tests are chosen by the Schwarz Bayesian information criterion.
- 3) "****" (or "***", "**") indicate that the null-hypothesis of unit root is rejected at 1% (5%, 10%) significance levels.

order integrated processes. The result for public savings S_t^g is ambiguous. The unit root is not rejected by the Augmented Dickey-Fuller (ADF) test, but it is rejected at the 10% significance level by the Dickey Fuller-GLS test (DF-GLS), which has greater testing power.

Table 3 indicates the results of testing for sustainability with a linear model. The unit root for the level of fiscal surplus cannot be rejected at

Table 3: Tests for Sustainability of Public Debt with a Linear Model

	Levels		1 st differences	
	ADF	DF-GLS	ADF	DF-GLS
Test Stat.	-2.001	-0.010	-8.076 ***	-8.837 ***
Lag Length	1	2	1	1

- 1) These tests are implemented as unit-root tests on "Fiscal Surplus" in Table 1 for the period 1885-2009.
- 2) "ADF" means the Augmented Dickey-Fuller test and "DF-GLS" means Dickey-Fuller GLS test by Elliott, Rothenberg, and Stock.
- 3) Lag lengths in the unit-root tests are chosen by the Schwarz Bayesian information criterion.
- 4) "****" (or "***", "**") means that the null-hypothesis of unit root is rejected at 1% (or 5%, 10%) significance level.

5% significance by ADF and DF-GLS tests. Therefore, we conclude at the 5% significance level that Japan's public debt was not sustainable for the entire period 1885–2009.

3.3 Empirical Results from a Markov-Switching Model

We apply the Markov-switching regression model to the sequence of fiscal surpluses to test the sustainability of and the structural change in fiscal conditions in Japan. In the next section, we focus on the probability that the series are stationary in each period to examine the strength of government's fiscal discipline in that period.

Table 4 shows the result of the Markov-switching regression. First, all parameters are estimated significantly in this model. Then, we test second-order stationarity for the fiscal surplus on the basis of equations (10) and (11). These conditions are satisfied in our result, shown in Table 4; hence, we conclude that Japan's public debt is sustainable in the second order.⁴

4 Fiscal Discipline with Japanese Long-term Economic Statistics

4.1 Wars and Fiscal Discipline before World War II

Figure 4 shows the probability that the series of fiscal surpluses are in the stationary regime derived from estimates of the model in equation (9). We interpret the results shown in Figure 4.

First, fiscal discipline indicated by the graph in Figure 4 was relaxed

⁴ Note that this result is not derived from the formulated testing process because x , y do not follow typical probability distributions.

following the First Sino-Japanese War in 1894 until the end of the Russo-Japanese War in 1905. This result corresponds to the increase in fiscal deficits in that period (Figure 2) due to expenditures on wars and military action against China. Public debt did not escalate in this period because of compensation from China after the First Sino-Japanese War.

Table 4: Estimation Results of the Markov-switching Regression

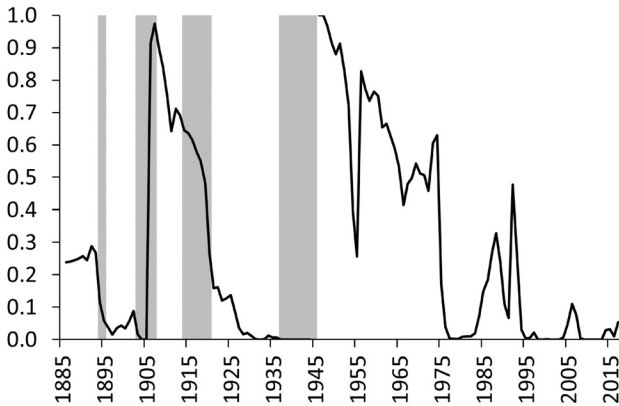
Variable	μ_0	μ_1	λ	σ
Estimates	-0.151	-0.264 **	-0.600 ***	1.199 ***
Std. Errors	(0.273)	(0.125)	(0.066)	(0.076)
Variable	p_{00}^*	p_{11}^*	p_{00}	p_{11}
Estimates	-2.446 **	-3.298 ***	0.920	0.964
Std. Errors	(1.039)	(0.671)		
Variable	x	y	Log likelihood	
Estimates	0.970	1.112	-219.7	

- 1) The Markov-switching regression between two regimes is defined as

$$\Delta s_t = \mu_0 + \lambda s_{t-1} + \sigma \varepsilon_t$$
 in the stationary regime,

$$\Delta s_t = \mu_1 + \sigma \varepsilon_t$$
 in the non stationary regime,
 where s_t is fiscal surplus and ε_t is the disturbance term, which follows the white-noise process.
- 2) $p_{00} = P\{\theta_t = 0 | \theta_{t-1} = 0\}$ and $p_{11} = P\{\theta_t = 1 | \theta_{t-1} = 1\}$, where $\theta_t = 0$ means that the fiscal surplus occurs in the stationary regime and $\theta_t = 1$ means that it occurs in the non-stationary regime.
- 3) p_{00}, p_{11} are calculated by $p_{00} = 1/(1 + \exp(p_{00}^*))$, $p_{11} = 1/(1 + \exp(p_{11}^*))$.
- 4) Values in parentheses indicate standard errors of estimates.
- 5) Second-order conditions for stationarity are defined as $x < 1$ and $y < 2$, where $x = p_{00}\rho^2 + p_{11} + (1 - p_{00} - p_{11})\rho^2$, $y = p_{00}\rho^2 + p_{11}$ and $\rho = 1 + \lambda$.
- 6) "***" (or "**", "*") means that the null hypothesis of unit root is rejected at the 1% (5%, 10%) significance level.

Second, from Figure 4, we observe that fiscal discipline tightened rapidly after the Russo-Japanese War. Fiscal surpluses were recorded for a decade. The huge quantities of government bonds issued to finance the Russo-Japanese War were sold to foreigners through the London mar-

Figure 4: Probability of Stationary (Sustainable) Regime

- 1) This figure is derived from results shown in Table 4.
- 2) Shaded areas indicate wartime. These include the First Sino-Japanese War (1894–1895), the Russo-Japanese War (1903–1907), World War I including the Siberian Intervention (1914–1920), and the Second Sino-Japanese War and Pacific Ocean War (1937–1945). These periods are defined as the fiscal years in which government implemented Extraordinary Special Accounts for War Expenses.

ket because Japan's domestic market could not accommodate the quantity. In addition, Russia did not compensate Japan after the war, and the balance of payments was constrained by adoption of the gold standard. Substantial foreign ownership of government bonds may have encouraged fiscal discipline. Public debt was reduced from 67% of GDP in 1905 to 49% in 1915 through fiscal consolidation, falling to 22% of GDP in 1919 because of inflation during World War I.

Third, fiscal discipline relaxed rapidly after World War I (Figure 4). Okazaki (2004) shows that party politics in the 1920s and military power in the 1930s increased government expenditures because of the decentralized political system and the absence of political power after the re-

tirement of powerful elder statesmen. In addition, inflation reduced the real value of the public debt during World War I (Figures 1 and 3).⁵

Fiscal deficits were enlarged by the economic crisis that closed the 1920s and by military expenditures after the mid-1930s for the Second Sino-Japanese War and Pacific Ocean War. During that period, fiscal discipline collapsed. Public debt soared and caused hyperinflation following World War II, as shown in Figure 3.

4.2 Fiscal Discipline after World War II

In the long run, Japan has enjoyed prosperity without war. Military expenses are not the main cause of fiscal deficits. Has this change influenced fiscal discipline?

Fiscal balance and discipline were maintained until the beginning of the 1970s, although this success is partly attributable to rising tax revenues from rapid growth. At the beginning of the 1970s, government issued bonds because of the serious recession caused by the oil shock and the end of rapid growth, and fiscal discipline deteriorated until the mid-1980s (Figure 4). Public debt rose from 11% of GDP in 1973 to 55% in 1987.

In the latter 1980s, efforts toward fiscal consolidation and rising tax revenue from economic expansion revived fiscal discipline, and in 1991, public debt was reduced to 47% of GDP. However, this revival was temporary. Fiscal deficits arose after the collapse of the “bubble economy” in 1991, and public debt has been soaring for two decades, reaching 164% of GDP in 2005. The increase in the debt-GDP ratio was stabilized from

5 Note that public debt in Figure 1 is defined as the horizon of central government, whereas we analyze the fiscal surplus of general government.

2005 to 2007, and the tax revenue then declined after the global financial crisis. The debt-GDP ratio reached 190% in 2009 and 200% at the end of 2010.

Ironically, the absence of war expenses, the paths of public debt in Figure 1, and post-World War II fiscal discipline evident in Figure 4 resemble conditions before the War. The present accumulation of public debt is as serious as that in the pre-war period, although the Japanese household sector now holds financial assets equaling about 300% of GDP.

5 Conclusion

This study employed Japanese LTES to investigate the sustainability of Japan's public debt and changes in fiscal discipline. First, we implemented the Augmented Dickey-Fuller and the Dickey-Fuller GLS tests to examine sustainability with a linear model. The result implies that Japan's public debt is not sustainable at the 5% significance level. Second, we estimated the Markov-switching regression model to investigate sustainability with a structural break. This analysis implies second-order stationarity of the fiscal surplus. We concluded that public debt is sustainable from this perspective. Third, we applied estimates of the Markov-switching regression model to examine whether Japan's government has maintained fiscal discipline during that period by focusing on the probability that the series of fiscal surplus occur in stationary regimes.

Our results imply that fiscal discipline was robust between the Russo-Japanese War and World War I and for several decades after World

War II, and was relatively robust during fiscal consolidation in the latter 1980s. We concluded that post-war fiscal discipline in Japan resembled that of pre-war periods despite the absence of war expenses after World War II.

Although an effort at fiscal consolidation could reduce Japan's public debt to some degree, such a large quantity of public debt would cause high inflation in the future, as it did after World War I and World War II.

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