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REEXAMINING THE MACROECONOMIC POLICY CYCLE IN TAIWAN: EVIDENCE FROM THE CENTRAL BANK'S MONETARY REACTION FUNCTION*

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Abstract

This paper examines evidences of opportunistic and partisan incentives in Taiwan's macroeconomic policy cycles. The analysis directly investigates how monetary authorities adjust domestic credit in response to different political events. Using data from the Central Bank of China (CBC), over the sample period from 1990 to 2018, the empirical results appear to support the opportunistic theory, as well as suggest that macroeconomic policy cycles are more significant in presidential elections than in the legislative elections. Moreover, as compared with the Democratic Progress Party (DPP), the Kuomintang Party (KMT) has tended to more frequently and extensively conduct expansionary monetary policies before elections, most likely in order to increase the chances of party incumbents being reelected.

Keywords: political business cycle, opportunistic theory, partisan theory, macroeconomic policy cycle, monetary reaction function, Taiwan elections
JEL Classification Codes: C22, E32, E58

I. *Introduction*

The purpose of this paper is to analyze how monetary authorities have used policy instruments to influence the presidential and legislative elections in Taiwan since 1990. In contrast to checking the movement of monetary aggregates or interest rates, we apply a new methodology and investigate macroeconomic policy cycles by examining the reaction function of monetary authorities directly. Since 1987, when Chiang Ching-Kuo — the leader of Kuomintang (KMT) — withdrew martial law, Taiwan has gradually moved towards political democratization. The rise of other political parties, particularly the Democratic Progress Party (DPP), heralded the fall of the authoritarian KMT regime. Subsequently, Taiwan's politics have

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switched from one-party dictatorship to a two-party system.[1] The fierce competition between the two parties not only provokes ethnic conflict in Taiwan's society but also increases the incentives for incumbents to manipulate macroeconomic policies to influence election outcomes.[2]

Political business cycle (PBC) theory is commonly used to examine the relationship between political elections and macroeconomic performance.[3] According to the seminal work of Nordhaus (1975), Rogoff and Sibert (1988), and Rogoff (1990), a basic prediction of PBC theory is that incumbent governments have an incentive to manipulate the economy to increase their probability of reelection. A growing body of empirical evidence (Paldam 1979, Keller and May 1984, Alt 1985;, Cargill and Hutchison 1988, Rogoff and Sibert 1988, Alesina and Roubini 1992, Ergun 2000, Thames Jr. 2001, Shi and Svenssen 2006, Persson and Tabellini 2003, Akhmedov and Zhuravskaya,, Brender and Drazen 2005, Spanakos and Rennó 2006, Veiga and Veiga 2007, Abrams and Butkiewicz 2012, Rohlfs, Sullivan, and McNab 2015) indicates a relationship between macroeconomic activity and political institutions in industrial democracies. Only a few tests of PBC theory focus on emerging market economies and developing countries. One such study was undertaken by Remmer (1993), who reevaluates the political business cycle on the basis of the experiences of a group of less industrialized nations (eight Latin American countries), examining the impact of elections on their macroeconomic performance. The main finding of this study is that elections shape macroeconomic policy choice and performance, sometimes enhancing the ability of governments to respond appropriately to macroeconomic challenges. Thus, instead of encouraging politicians to sacrifice the performance of the economy in order to gain votes, elections may create conditions that permit leaders to set aside immediate political concerns in favor of the pursuit of prevailing economic wisdom. In fact, politicians may wish to manipulate the economy for electoral gains but their capacity to do so is distinctly limited, particularly in an environment of economic instability and policy constraints. Cerda and Vergara (2007) use a panel of municipal data to discover that the unemployment rate and output gap have significant influence on Chilean presidential elections. They also suggest that people tend to blame the incumbent if the mayor is from the same coalition and cannot reduce unemployment below the national level.

The empirical evidence of PBC theory in Taiwan's case is quite mixed. On the basis of quarterly data from 1971 to 1993, Huang and Liu (1996) find that an opportunistic approach does not hold in Taiwan; however, they do suggest that the government has tended to use contractionary monetary policies before elections in order to maintain price stability and win votes. Jang (2001) uses a VAR model to test several monetary variables, and also finds that the political monetary cycle does not exist in Taiwan. These authors only observe that money supply has tended to decrease before legislative elections. In contrast to previous studies, Huang (2001) finds that Taiwan's central bank did indeed use expansionary monetary policies, such as decreasing the reserve requirement and rediscount rates, in order to increase the reelection chances of President Lee Teng-Hui.[4] He argues that it is very difficult for the central bank to

[1] Even though there are more than two political parties in Taiwan, KMT and DPP are the major parties.

[2] In 1996, KMT won the first presidential election. DPP won both the following presidential elections, in 2000 and 2004. In 2008, however, KMT has taken political power back from DPP again in the presidential election in 2008, and finished the second party transition in Taiwan. In 2016, DPP has won back the presidential election and completed the third party transition in Taiwan.

[3] Alesina (1988) and Willett (1988) provide surveys on the political business cycle hypothesis.

remain neutral during elections given the tremendous political pressures from the incumbent government. Finally, Chang (2000) and Chan (2006) empirically test the relationship between Taiwan's fiscal policies and local elections, and both find that the local governments in Taiwan have tended to conduct expansionary fiscal policies before elections. The latter also indicates that partisan theory does not hold in Taiwan's case since the partisans within the incumbent government have no significant impact on local government fiscal expenses. This finding on expansionary fiscal expenditures in Taiwan is also supported by Hung and Hsieh (2016).

Against these backgrounds, this paper directly investigates how the monetary authorities adjust domestic credit in response to different political events. Two main hypotheses are derived and empirically tested as stated below:

> *H_1: An incumbent government will tend to use expansionary monetary policies to improve their chances of re-election, and this effect is larger as the election is approaching.*
> *H_2: Left-wing governments are more likely to use expansionary monetary policies as the election is approaching, whereas right-wing governments do the opposite.*

Using the data from the Central Bank of China (CBC) over the sample period from 1990 to 2018, the empirical results support the opportunistic theory and suggest that macroeconomic policy cycles are more significant in presidential elections than in legislative elections. Moreover, as compared with the Democratic Progress Party (DPP), the Kuomintang Party (KMT) tends to conduct expansionary monetary policies before elections in order to increase the chances of incumbents being reelected.

As such, this paper differs from previous studies on two counts. First, we investigate the existence of macroeconomic policy cycles by directly examining how monetary authorities manage the domestic credit level. I apply the monetary reaction function of Ouyang and Rajan (2010) to study the behavior of Taiwan's monetary authorities. I focus on monetary policies only because these policies are easier to manipulate than fiscal policies and their effects are observed in a short period of time. Moreover, while the use of monetary aggregates or interest rates as monetary policy instruments is common in the literature, this can be problematic because these macroeconomic variables capture too much information and have a high degree of volatility.[5] Second, we try to investigate if macroeconomic policy cycles in Taiwan are motivated by opportunistic or partisan intentions. Hibbs (1977) suggests that macroeconomic policy cycles may produce diverse economic outcomes because of ideological differences among political parties. While a right-wing party has a greater preference for low inflation, a left-wing party would be willing to bear a higher cost of inflation in order to fight against unemployment. In Taiwan, while the DPP has a larger social base and is closer to left-wing parties in Western nations; the KMT is just the opposite, generally having strong organizational and electoral ties to capital interests and the professional managerial class.

The paper is organized as follows: Section II provides overviews on political business cycle theory; section III offers some preliminary evidence of macroeconomic policy cycles in

[4] Mr. Lee Teng-Hui was the first elected president in Taiwan.

[5] Alesina et al. (1997) points out three problems of using monetary aggregates as proxies for monetary policy. First, it is difficult to choose among different monetary aggregates. Second, money has been very volatile and unstable in the past two decades in the US Third, the structure of US financial markets has changed significantly since the 1980s, and may affect monetary demand.

Taiwan; section IV describes the data sources and the empirical model; section V provides a discussion of our empirical results; and finally, section VI presents the conclusion.

II. *Literature Reviews on Political Business Cycles Theory*

While the idea of political manipulation has been around for some time, Nordhaus (1975) was the first to formalize a non-rational model of the political business cycle on the bases of traditional Keynesian macroeconomic theory. The Nordhaus model assumes that the incumbent administration tries to maximize votes by taking advantage of an exploitable Phillips curve and that voters are not fully rational in evaluating the performance of the incumbent administration. In an election, voters reward the incumbent government for low unemployment (or high growth) and punish it for high unemployment (or low growth).[6] Given these assumptions, the model predicts that an incumbent administration will artificially stimulate the economy immediately before each election and eliminate the resulting inflation with a recession after the election. The results indicate that unemployment will decrease prior to a presidential election, subsequently increasing early in the next term, along with a corresponding rise in inflation. Voters tend to reward this behavior because an election takes place when the economy is temporarily doing well. This model also suggests that the electorate can be deceived time and again because they are presumably irrational and naïve.

For some scholars, such as Robert Lucas, the assumptions of the Nordhaus model are quite unsatisfactory. Alternatively, Lucas argues that the notion of rationality of behavior should be applied to expectation formation. For Lucas, applying the idea of rational expectations to the Phillips curve and macroeconomics in general has the potential to produce astounding results in interpreting the effects of policy. Following these developments of the economic literature, several authors have proposed models which reconcile the Nordhaus insights with voter rationality. Rogoff (1990) and Rogoff and Sibert (1988) are the two main contributions who have developed alternative rational expectations models. Within these models the political business cycle may occur in government spending if the incumbent administration has an incentive to manipulate public opinion as concerns the competency of the administration.[7]

All of these models emphasize the role of policymaker "competence", defined as efficiency in providing large amounts of government services at low tax rates. Rogoff and Sibert argue that the incumbent administration has an opportunity to manipulate fiscal policy before an election in order to behave more competent than it really is because the public can observe such competency only after a time lag. In other words, different governments handle the economy more or less competently. Consequently, because competence is private information, the government is in a better position to evaluate is competency than the electorate, with individual voters only able to assess government competence through observing economic outcomes. Therefore, by assuming that voters have incomplete information, macroeconomic political business cycles may occur probabilistically depending on the actual objective practices

[6] Econometric studies of votes in presidential elections initiated by Fair 1978 and replicated by Hibbs (1987) found that voters reward the incumbent party for the high economic growth and punish for its low growth.

[7] Kenneth Rogoff and Anne Sibert, "Elections and Macroeconomic Policy Cycles," *Review of Economic Studies* 55 (1988): 1-16.

TABLE 1. PRESIDENTIAL AND LEGISLATIVE ELECTION TIMES IN TAIWAN

Presidential Election (year/month)	Legislative Election (year/month)
1996/03	1995/12
2000/03	1998/12
2004/03	2001/12
2008/03	2004/12
2012/01	2008/01
2016/01	2012/01
	2016/01

of the administration.

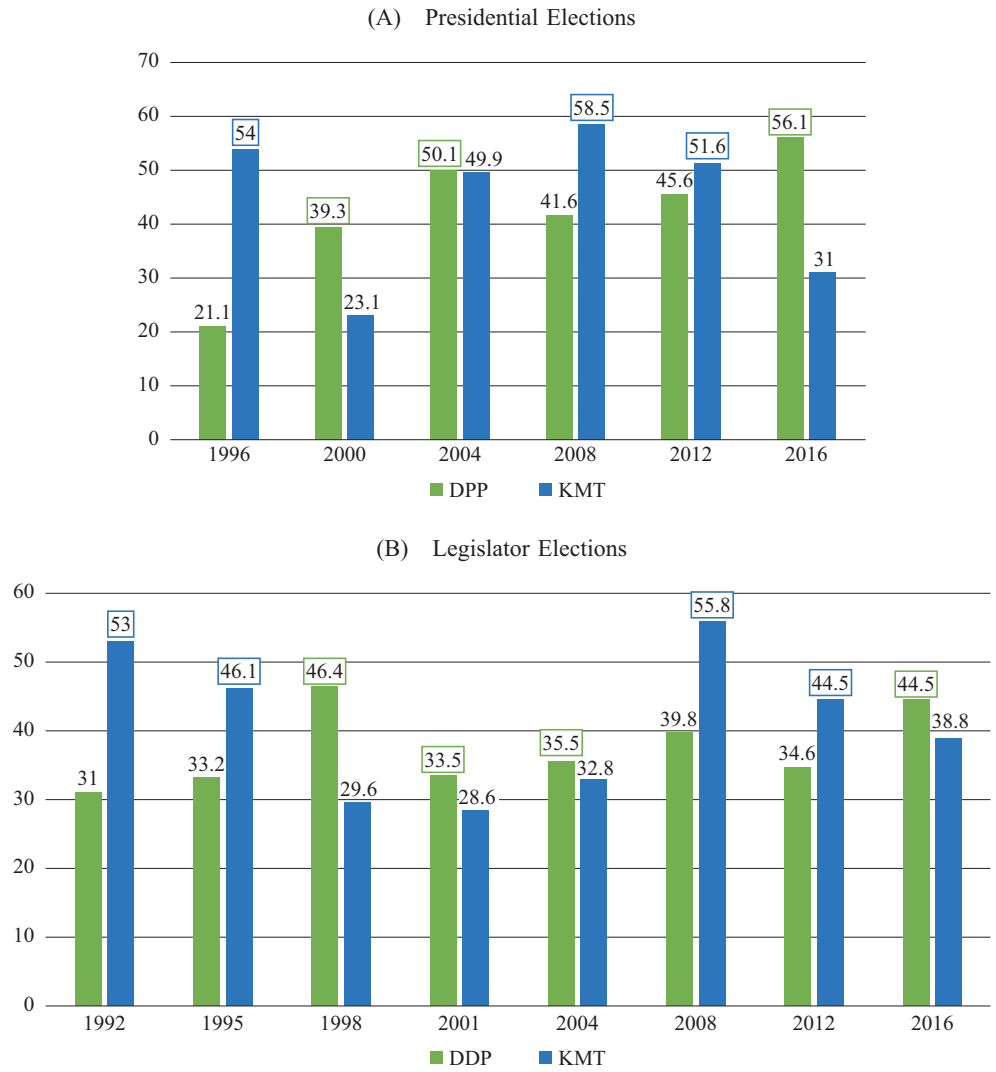
Lastly, some scholars have suggested that the identity of the party in power could have an impact on the political business cycle. For example, Hibbs (1977) has argued that voters have heterogeneous preferences and therefore parties could have different ideological goals. The usual way of accounting for these differences between parties (and therefore governments) is to consider that they do not have the same ideal positions on the short-term Phillips curve. Left-wing governments with strong organizational and electoral ties to labor will tend to favor the use of expansionary monetary policies and low interest rates in an attempt to create low unemployment rates. This is done in order to attract votes. On the other side of the political spectrum, governments led by rightist parties — especially those with strong ties to capital interests and the managerial class — will prefer restrictive monetary policies and high interest rates with the goal being to produce a lower rate of inflation. However, a growing body of literature — as indicated in Oatley (1999) — suggests that international financial integration has eliminated the latitude leftist governments require to pursue fiscal and monetary expansionary policies and, as a consequence, distinct partisan macroeconomic policies have largely been eliminated. In this so-called "capital mobility hypothesis" we can expect leftist governments will tend to adopt policies identical to those preferred by the right — tight spending policies and balanced budgets. Empirically, Swank and Swank (1993) show that in the United States, Republican administrations aim to reduce tax rates when elections are approaching, whereas Democratic administrations are more concerned with inflation and unemployment. Partisan differences are therefore found in Haynes and Stones (1990), Kneebone and McKenzie (2001), Krause (2005), Aidt *et al*. (2011), and Benito *et al*. (2013), but not in Grier (1987) and Haynes and Stone (1989).

III. *Preliminary Evidence of Macroeconomic Policy Cycles and Central Bank Independence in Taiwan*

1. Macroeconomic Policy Cycles

In search of evidence of macroeconomic policy cycles in Taiwan, I first examine monetary aggregate (M0 and M2) growth rates before and after presidential and legislative elections since 1990. Table 1 shows the election dates for both presidential and legislative elections in the past. While the presidential election has been held every four years since 1996, legislative elections were held every three years prior to 2008, and subsequently every four years after that date.

FIGURE 1. THE VOTES OF RECENT PRESIDENTIAL AND LEGISLATOR ELECTIONS IN TAIWAN SINCE 1996 (%)

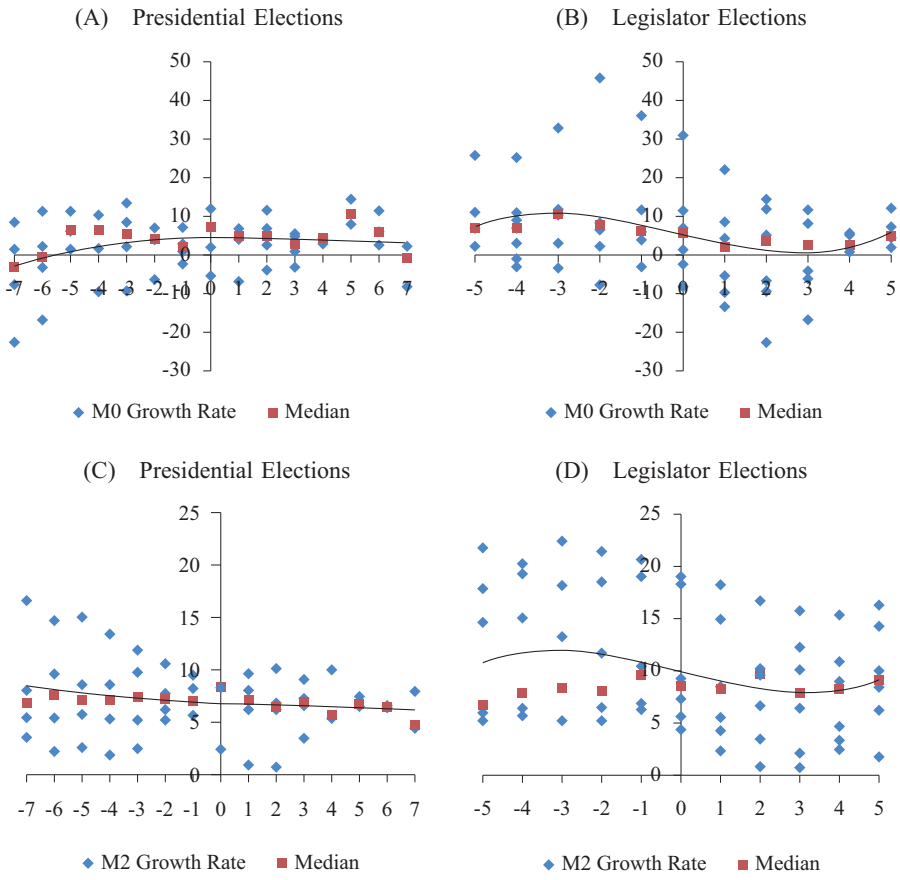


Data Source: The R.O.C. Election Study Center, National Chengchi University.
Note: The number in circle is the vote of the incumbent party in the election.

Figure 1 shows that the incumbent party has faced the threat of defeat from the challenging party in most of Taiwan's presidential and legislative elections.

When it comes to the monetary policy cycles, Figure 2 shows that M0 growth rates (indicated by "blue" dots) tend to increase when a presidential election is approaching. The median M0 growth rate (indicated by "red" dots) increases from −3% seven quarters before the election to 7% in the election year and drops to −7% seven quarters after the election.[8]

FIGURE 2. THE MOVEMENT OF MONETARY AGGREGATES (M0 AND M2) GROWTH RATES PRE- AND POST- PRESIDENTIAL AND LEGISLATOR ELECTIONS (%)



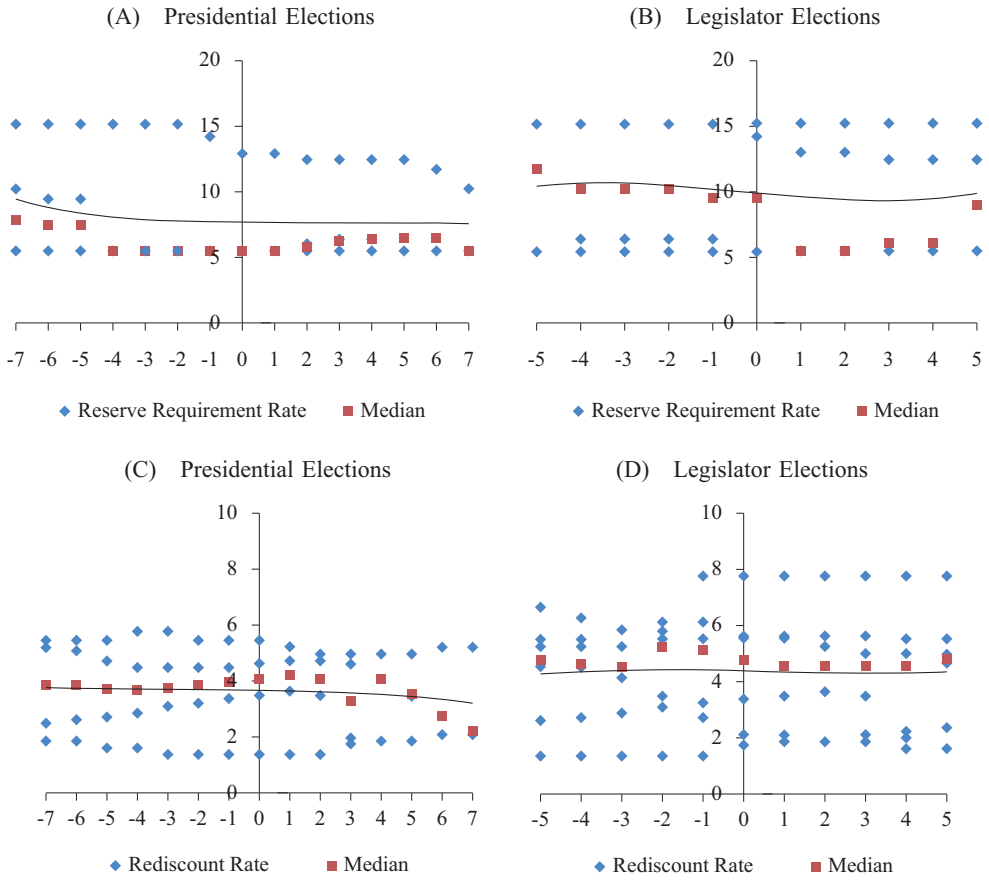
Data Source: AREMOS Economic Statistical Database.
Note: The curve in the figures is the polynomial trend with the degree of 3.

Compared to M0, the median M2 growth rate does not show significant movement before or after presidential elections. However, average M2 growth rates tend to be higher before elections. With regard to legislative elections, both M0 and M2 growth rates seem to have a more obvious politically-oriented cycle before and after elections, with high monetary aggregate growth rates before elections and a decline after. The median M0 growth rate generally reaches its highest level three quarters before an election, while M2 growth rates tend to be at their highest one quarter before an election.

Figure 3 indicates the behavior of several monetary policy instruments, such as reserve requirement rates and rediscount rates, which Taiwan's central bank commonly uses in its

[8] Faust and Irons (1999) indicate that the average can easily be affected by extreme values and could give misleading information. Therefore, we also provide medians in the figures.

FIGURE 3. THE MOVEMENT OF MONETARY POLICY INSTRUMENTS (RESERVE REQUIREMENT RATES AND REDISCOUNT RATES) PRE- AND POST- PRESIDENTIAL AND LEGISLATOR ELECTIONS (%)



Data Source: AREMOS Economic Statistical Database.
Note: The curve in the figures is the polynomial trend with the degree of 3.

regular market operations. The movement of median reserve requirement rates suggests that Taiwan's monetary authorities tend to decrease the rate from 7.5% to around 5.5% four quarters before presidential elections and raise it to around 6.5% four quarters after the elections. With respect to legislative elections, the median reserve requirement rates tend to increase before elections and drop significantly from 9.5% to 5.5% immediately afterwards. However, average rates show that reserve requirement rates are quite stable before and after legislative elections. To sum up, the influence of macroeconomic business cycles on reserve requirement rates seems to be more obvious in Taiwan's presidential elections. In addition to examining the MO and M2 rates, we also analyzed the movement of rediscount rates, but did not find much evidence of significant changes before or after both presidential and legislative elections.

2. Central Bank Independence

Next we turn to the issue of central bank independence. Central banks have the power to make monetary policy. Several decades ago the Central Bank of the Republic of China (CBC) was established as a government institution, functioning as a development bank that provides funds to government for the financing of public expenditures and addressing balance of payments problems. This was the status of most central banks as they existed in other nations around the world. In the past thirty years, however, economic theories on central banking have attributed significant importance to the concept of credibility of monetary policy and central bank independence (CBI). This positions holds that central bank policies should be made from the perspective of overall economic development in the best interest of all and should not favor specific interest groups. For example, The US and Europe even regard the central bank power to determine monetary policy as a fourth estate, independent of the executive, legislative and judiciary powers.

In terms of the local system, however, Taiwan's central bank enjoys far less independence than its counterparts in the US, the EU and Japan. In 2012, the Legislative Yuan passed an amendment to the Organizational Act of the Executive Yuan that placed the central bank under the oversight of the Executive Yuan, thus removing it from the list of independent bodies (Hueng, 2010).[9] In other words, although the CBC enjoys a certain degree of independence because its Board of Directors are protected by tenure, as an agency currently under the auspices of the Executive Yuan, the CBC's budget is controlled by the government. As a result, any attempt to resist inflationary public debt is likely to fail. Consequently, there have been a lot of calls from various interests within the general public to reform the Central Banking system with the first step would being to make the CBC an independent agency with a decision making capacity autonomous from executive government control.

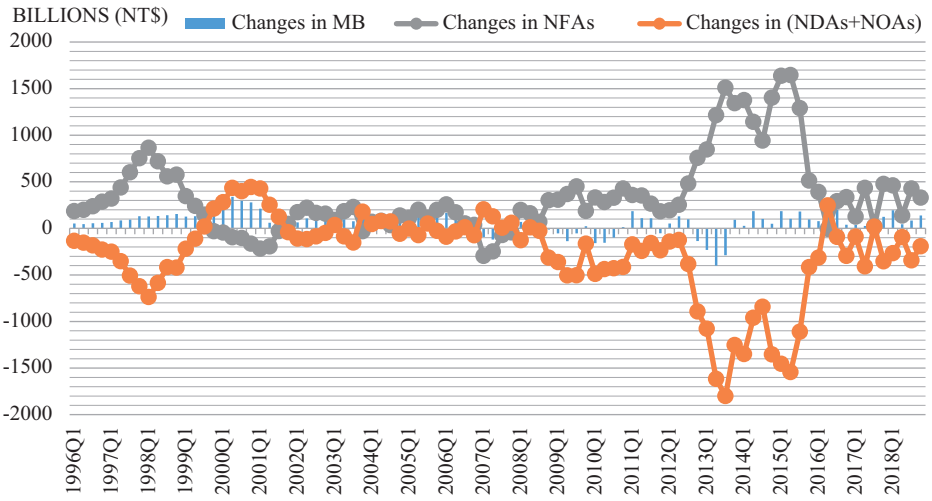
IV. *Data and Empirical Models*

To facilitate the examination of macroeconomic policy cycles in Taiwan, we investigated the policy reaction functions of Taiwan's central bank (CBC) as concerns political business cycles.[10] Maintaining the stability of prices and the exchange rate has been the main policy goal of the CBC. To achieve this goal, since 1992 it has adopted a monetary-aggregate (M2) targeting policy. On a yearly basis the CBC announces a target zone for the M2 growth rate for the following year, and uses the monetary base as the operating target to effectively control the M2 growth rate. As well, in its regular monthly meetings the Bank also determines a target monetary base for the following month. Figure 4 shows how the CBC adjusts its net domestic assets (NDAs), that is, domestic credits, to prevent several factors from disturbing the monetary base. Importantly, any policy adjustment in open market operations or reserve requirement rates

[9] The amendment to the Organizational Act of the Executive Yuan was passed in 2012. Since then, the bank has become one of a very small number of central banks in the world that is legally not independent, which makes the independency even worse.

[10] The independence of Taiwan's central bank has been widely discussed since it was restored in 1961. Lu and Chia (2004) undertook a comprehensive comparison of the organization and its personnel before and after reform.

FIGURE 4. QUARTERLY ANNUAL CHANGE IN NFAs, NDAs, AND MONETARY BASE IN TAIWAN, 1996:Q1–2018:Q4



Data Source: AREMOS Economic Statistical Database.

will influence domestic credit, and this will be reflected in the NDAs' accounting terms on CBC balance sheets. Therefore, how the CBC adjusts domestic credit in response to different economic situations and political elections is an important area of practice requiring examination.

1. Empirical Model

To investigate the ability of the CBC to control domestic credit we follow the analysis by Ouyang and Rajan (2010). Their analysis includes international reserves, macroeconomic variables, and several political business cycle dummies as explanatory variables. They derive an empirical model utilizing a theoretical basis which explicitly minimizes a simple loss function of the monetary authority, subject to a number of constraints that reflect the functions of the economy.

A monetary reaction function based on the literature and the monetary policy conducted by the CBC is set up as follows:

$$\Delta NDA_t^* = \alpha_0 + \sum_{i=0}^{n} \beta_{1i} \Delta NFA_{t-i}^* + \sum_{i=0}^{n} \beta_{2i} \Delta mm_{t-i} + \sum_{i=0}^{n} \beta_{3i} \Delta p_{t-i} + \sum_{i=0}^{n} \beta_{4i} \Delta y_{c,t-i} + \sum_{i=0}^{n} \beta_{5i} \Delta G_{t-i} + \sum_{i=0}^{n} \beta_{6i} \Delta (r_{t-i}^* + s_{t+1-i}^e) + \sum_{i=0}^{n} \beta_{7i} \Delta REER_{t-i} + \beta_8 D^{MPC} + \varepsilon_t$$

where

ΔNDA_t^* = The quarterly annual change in the adjusted net domestic assets, scaled by the GDP (adjustments to be discussed in Section III.2).

ΔNFA_t^* = The quarterly annual change in the adjusted net foreign assets, scaled by the

GDP (adjustments to be discussed in Section III.2).

Δmm_t = The quarterly annual change in the money multiplier for M2.

Δp_t = The quarterly annual change in the consumer price index.

$\Delta y_{c,t}$ = Cyclical income. The real output deviates from its trend and is divided by the trend. The trend is measured by the HP filter.

ΔG_t = The quarterly annual change in government expenditure, scaled by the GDP.

$\Delta(r_t^* + s_{t+1}^e)$ = The quarterly annual change in the foreign interest rate plus the expected nominal exchange rate (foreign currency per US$).[11]

$\Delta REER_t$ = The quarterly annual change in the real effective exchange rate (REER).

D^{MPC} = Macroeconomic policy cycle dummies (discussed in detail below).

The monetary reaction function includes variables considered important in monetary policy actions. To keep the monetary base and price stable, monetary authorities tend to reduce domestic credits in response to an increase in foreign reserves, the money multiplier, or inflation. Both a rise in the REER and higher exchange rate-adjusted foreign interest rates tend to worsen a country's external balances, making the central bank adopt a tighter monetary policy to attract capital inflows and stabilize its currency value. Moreover, the central bank tends to implement a contractionary monetary policy if there is a cyclical rise in real output or a more expansionary fiscal policy. Therefore, with the exception of the macroeconomic policy cycle dummies, the signs of these control variables are all expected to be negative.

Several dummy variables are set up to examine the opportunistic and partisan theories of macroeconomic policy cycles. To investigate the opportunistic approach, we follow Alesina *et al*. (1997) and define two dummy variables, $D^{\text{pre-election(n)}}$ and $D^{\text{post-election(n)}}$, to indicate the *n*-period before and after an election (including the election period), respectively. On the basis of the opportunistic theory, the incumbent tends to conduct an expansionary monetary policy before elections to attract votes, and tightens the policy after elections, indicating a positive sign for $D^{\text{pre-election(n)}}$ and a negative one for $D^{\text{post-election(n)}}$. I also defined another dummy, D^{DPP}, which identifies the DPP administration period, to examine evidence of different behaviors by Taiwan's two major political parties. We then use two interaction terms, $D^{\text{pre-election(n)}} \times D^{DPP}$ and $D^{\text{post-election(n)}} \times D^{DPP}$, to separate the opportunistic behaviors under the DPP and KMT administrations.

To facilitate the search for evidence of partisan theory in Taiwan, I set up three more dummy variables, that is $D^{\text{Traditional Partisan}}$, $D^{\text{rational Partisan-A(n)}}$, and $D^{\text{rational Partisan-B(n)}}$. First, $D^{\text{Traditional Partisan}}$ is used to examine traditional partisan theory, suggesting that analysts should look for permanent differences across administrations in regard to macroeconomic variables. $D^{\text{Traditional Partisan}} = 1$ suggests a KMT (right-wing) administration is in office, while -1 indicates a DPP (left-wing) administration. Second to examine the possibility that partisan effects on real aggregates cannot last long during the post-election period, as suggested by the rational partisan theory, we define two rational partisan dummies to check for robustness: $D^{\text{rational Partisan-A(n)}}$ indicates a change of administration in each presidential term and $D^{\text{rational Partisan-B(n)}}$ identifies the moment when one administration actually changes to another.[12] $D^{\text{rational Partisan-A(n)}} = 1$ represents the *n*-period starting

[11] The exchange rate is in logarithm form.

[12] The actual change of administration may have greater electoral surprise effects on real aggregates. See Alesina et al. (1997).

with a KMT administration, −1 indicates the *n*-period starting with a DPP administration, and 0 suggests other changes. $D^{\text{rational Partisan-B(n)}}=1$ represents the *n*-period starting with a change to a KMT administration, −1 represents the *n*-period starting with a change to a DPP administration, and 0 indicates other changes. Since both the traditional and rational partisan theories imply that money growth should be larger when a left-wing party is in office, we should expect to find a negative sign for all of these partisan dummies.

2. Data and Definitions

To examine the opportunistic behavior of the CBC, I used quarterly observations of relevant variables over the sample period spanning Q1 in 1990 to Q4 in 2018. Evidence of different behaviors by Taiwan's two major political parties only begins from the year 2000 as Taiwan's two-party system was not implemented until that time. All the data are from the CBC's website and the *AREMOS* database. Since both NDAs and NFAs are based on the monetary authority's balance sheet, we need to exclude some non-policy-related changes, such as the revaluation effects caused by the value of gold and exchange rate fluctuations. Hence, the change in the adjusted net foreign assets is $\Delta NFA_t^*=NFA_t-NFA_{t-1}\left(\frac{S_t}{S_{t-1}}\right)$, while the change in the adjusted net domestic assets is $\Delta NDA_t^*=\Delta NDA_t+NFA_{t-1}\left(\frac{S_t}{S_{t-1}}-1\right)$.[13] The relevant variables, such as the change in adjusted NDAs and NFAs and the fiscal deficit are scaled by the GDP. To avoid seasonal effects, we applied annual change on quarterly data and compared the data across years; that is, each quarter was compared with the corresponding quarter of the previous year. As for the uncovered interest rate parity, for analytical purposes we assume that economic agents have perfect foresight to proxy the expected exchange rate for the next period. The foreign interest rate is the 3-month US Treasury bill rate, while the domestic interest rate is the money market rate in Taiwan. To check for stationarity we applied the standard ADF and KPSS unit root tests to each of the variables and found all variables to be stationary at a 10% significance level.[14]

We focused on the patterns observed around presidential and legislative elections to search for any evidence of opportunistic theory since monetary policy issues are more relevant in nationwide elections. As well, during national elections the electorate are generally more concerned with the ruling party's ability to manage the country and the economy.[15] A few variations of lags in the political dummies were explored, $n=4, 6, 8$, to capture the time lag from a political regime change to a policy change for the robustness check.

[13] Please refer to Ouyang and Rajan (2010) for a detailed discussion on revaluation effects. Another possible revaluation effect is caused by interest earned from foreign reserves accumulation. However, we ignore this effect given the low interest rates policy in Taiwan now.

[14] These can be obtained from the authors on request.

[15] Taiwan's presidential elections are held every four years, starting from 1996, while legislative elections are held every three years, starting from 1989. After an amendment in the Constitution in 2005, which intended to synchronize the legislative and presidential elections and reduce the size of the Legislative Yuan by half, the legislators began to serve for four-years term since 2008.

V. *Empirical Results*

1. Macroeconomic Policy Cycle in Taiwan

Due to the endogeneity problem between NDAs and NFAs, we estimate the monetary reaction function using two-stage least squares (2SLS); generalized method of moments (GMM) standard errors are computed with the Newey-West fixed bandwidth based on the number of observations.[16] The Breusch-Godfrey serial correlation LM test is passed after including AR terms in the regressions.

Tables 2 and 3 show empirical results evidencing the opportunistic theory in Taiwan's presidential and legislative elections, respectively. In Table 2, we find that Taiwan's monetary authorities have significantly increased domestic credits before presidential elections and reduced it after the election is over, suggesting that the opportunistic theory does exist in Taiwan's presidential elections. However, evidences of opportunistic incentives are not so obvious in legislative elections. During both the *n*-periods, before and after legislative elections, domestic credits are consistently negative.

2. Comparison between KMT and DPP

While the results so far appear to support the opportunistic theory, it would be more interesting to know if the KMT and the DPP show different opportunistic behaviors in both elections. In Tables 4 and 5, the estimated coefficients of $D^{\text{pre-election}}$ and $D^{\text{post-election}}$ represent opportunistic incentives during the KMT administration. The sum of the estimated coefficients of $D^{\text{pre-election}}$ and $D^{\text{pre-election}} \times D^{\text{DPP}}$, as well as those of $D^{\text{post-election}}$ and $D^{\text{post-election}} \times D^{\text{DPP}}$, are also used to study the DPP's opportunistic behavior. A Wald test is applied to check the significance of the combined coefficients. The empirical results in Table 4 suggest that the KMT has tended to pursue expansionary monetary policies to attract votes before presidential elections, while the DPP has not done so. Moreover, the DPP has significantly reduced domestic credits during the year before elections. However, both political parties tend to tighten domestic credits after elections. The empirical results for both legislative and presidential elections are similar. In Table 5, we find that the DPP has consistently decreased domestic credits before and after legislative elections. Compared to the DPP, KMT policies have displayed a more obvious pattern of opportunistic behavior, but with less significance. With regard to other control variables, they are all statistically significant and, except for lagged inflation, have the right sign. Lagged inflation is statistically significant in all functions, but has the wrong sign.

3. Partisan Theory

To test partisan theory in Taiwan's politics, we use three political dummies to proxy the different periods after a change of administration. If partisan theory holds, we should find that the sign for these dummies is negative. However, the empirical results in Table 6 suggest a

[16] Newey and West (1987) derived a consistent covariance matrix estimator in the presence of both heteroskedasticity and autocorrelation.

TABLE 2. TEST FOR OPPORTUNISTIC THEORY OF MACROECONOMIC POLICY CYCLE IN TAIWAN'S PRESIDENTIAL ELECTIONS, 1990:Q1–2018:Q4

2SLS coeff. with GMM standard errors	Presidential Elections					
	n-period pre-Elections			*n*-period post-Elections		
Dep. variable: ΔNDA_t	$n=4$	$n=6$	$n=8$	$n=4$	$n=6$	$n=8$
constant	**0.214*****	**0.226*****	**0.381****	**0.356*****	**0.543*****	**0.614*****
	(0.006)	(0.210)	(0.027)	(0.018)	(0.121)	(0.112)
ΔNFA_t	**-0.892*****	**-0.991*****	**-1.000*****	**-0.988*****	**-0.989*****	**-0.998*****
	(0.014)	(0.032)	(0.069)	(0.029)	(0.018)	(0.019)
Δmm_t	**-0.967*****	**-0.988*****	**-0.916*****	**-0.845*****	**-0.851*****	**-0.912*****
	(0.029)	(0.049)	(0.043)	(0.023)	(0.043)	(0.024)
Δp_{t-1}	**2.432*****	**3.242*****	**3.868*****	**3.701*****	**2.347*****	**3.449*****
	(0.253)	(0.821)	(0.513)	(0.123)	(0.291)	(0.238)
$\Delta y_{c,t}$	**-0.458***	-0.090	**-0.546****	**-0.478***	-0.272	**-0.316***
	(0.218)	(0.184)	(0.273)	**(0.278)**	(0.240)	**(0.289)**
ΔG_t	**-0.003*****	**-0.002*****	**-0.005*****	**-0.007*****	**-0.006*****	**-0.004****
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$\Delta(r_t^* + s_{t+1}^e)$	**-0.769*****	**-0.757*****	**-0.668*****	**-0.621*****	**-0.857*****	**-0.883****
	(0.084)	(0.049)	(0.069)	(0.062)	(0.063)	(0.065)
$\Delta REER_{t-1}$	**-0.368***	-0.438	-0.438	**-0.451*****	**-0.439***	**-0.417****
	(0.100)	(0.325)	(0.213)	(0.127)	(0.112)	(0.106)
$D_{t-1}^{pre\text{-}election(n)}$	0.003	**0.086*****	**0.069***	—	—	—
	(0.027)	(0.015)	(0.029)			
$D_{t-1}^{post\text{-}election(n)}$	—	—	—	**-0.086*****	-0.002	**-0.045*****
				(0.028)	(0.013)	(0.014)
AR(1)	**0.822*****	**0.765*****	**0.836*****	**0.656*****	**0.708*****	**0.661*****
	(0.045)	(0.048)	(0.030)	(0.051)	(0.056)	(0.054)
AR(2)	**0.898*****	**0.865*****	**0.899*****	**0.764*****	**0.862*****	**0.817*****
	(0.052)	(0.031)	(0.051)	(0.026)	(0.054)	(0.039)
AR(4)	**-0.798*****	**-0.879*****	**-0.845*****	**-0.875*****	**-0.827*****	**-0.825*****
	(0.054)	(0.087)	(0.027)	(0.039)	(0.054)	(0.062)
Observations	116	116	116	116	116	116
Adj. R^2	0.968	0.976	0.988	0.966	0.972	0.989

Note: (*) Significant at more than 10 percent; (**) Significant at more than 5 percent; (***) Significant at more than 1 percent.

different story, indicating that the predominantly right-wing KMT has tended to implement higher expansionary monetary policies during the early days—and sometimes across the whole term—of its administrations. However, the more left-wing DPP has exhibited the opposite pattern of behavior. The three political dummies are all statistically significant and positive. To check for robustness, I followed the existing literature, and used the M0 growth rate and the money market rate to test for empirical evidence of partisan theory.[17] Even though the signs of the political dummies were correct when we tested the M0 growth rate, none of these variables were statistically significant. Tests on money market rates had similar results. The empirical results of the robustness checks are located in Table 7. To sum up, no significant evidence of

[17] Here, we also try different monetary aggregates, such as M1 and M2 growth rates, and other macroeconomic variables such as inflation, unemployment rate, and real GDP growth rate. Even though the signs are mixed, none of these political dummies used to proxy the partisan theory are statistically significant.

TABLE 3. TEST FOR OPPORTUNISTIC THEORY OF MACROECONOMIC POLICY CYCLE IN TAIWAN'S LAGISLATOR ELECTIONS, 1990:Q1–2018:Q4

2SLS coeff. with GMM standard errors	Lagislator Elections					
	n-period pre-Elections			*n*-period post-Elections		
Dep. variable: ΔNDA_t	$n=4$	$n=6$	$n=8$	$n=4$	$n=6$	$n=8$
constant	**0.154*****	**0.164*****	**0.216****	**0.156*****	**0.193*****	**0.214*****
	(0.002)	(0.222)	(0.017)	(0.014)	(0.421)	(0.412)
ΔNFA_t	**-0.812*****	**-0.891*****	**-0.862*****	**-0.868*****	**-0.949*****	**-0.998*****
	(0.015)	(0.032)	(0.029)	(0.021)	(0.028)	(0.119)
Δmm_t	**-0.975*****	**-0.924*****	**-0.945*****	**-0.947*****	**-0.951*****	**-0.977*****
	(0.033)	(0.059)	(0.093)	(0.043)	(0.123)	(0.014)
Δp_{t-1}	**1.425*****	**2.342*****	**2.868*****	**2.741*****	**2.367*****	**2.414*****
	(0.223)	(0.721)	(0.313)	(0.023)	(0.221)	(0.218)
$\Delta y_{c,t}$	**-0.528***	-0.690	**-0.646****	**-0.678***	-0.372	**-0.346***
	(0.218)	(0.284)	(0.273)	(0.178)	(0.241)	(0.259)
ΔG_t	**-0.002*****	**-0.005*****	**-0.003*****	**-0.006*****	**-0.003*****	**-0.005****
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$\Delta(r_t^* + s_{t+1}^e)$	**-0.629*****	**-0.637*****	**-0.627*****	**-0.645*****	**-0.757*****	**-0.783****
	(0.056)	(0.059)	(0.029)	(0.012)	(0.013)	(0.015)
$\Delta REER_{t-1}$	**-0.268***	-0.238	-0.338	**-0.445*****	**-0.481***	**-0.464****
	(0.100)	(0.125)	(0.113)	(0.187)	(0.134)	(0.136)
$D_{t-1}^{pre\text{-}election(n)}$	-0.002	**0.079*****	**-0.086***	—	—	—
	(0.024)	(0.025)	(0.019)			
$D_{t-1}^{post\text{-}election(n)}$	—	—	—	**-0.067*****	-0.001	**-0.046*****
				(0.023)	(0.013)	(0.004)
AR(1)	**0.762*****	**0.722*****	**0.736*****	**0.741*****	**0.782*****	**0.761*****
	(0.043)	(0.068)	(0.030)	(0.011)	(0.026)	(0.054)
AR(2)	**0.882*****	**0.878*****	**0.867*****	**0.864*****	**0.838*****	**0.865*****
	(0.022)	(0.031)	(0.041)	(0.016)	(0.054)	(0.012)
AR(4)	**-0.698*****	**-0.756*****	**-0.825*****	**-0.815*****	**-0.867*****	**-0.847*****
	(0.054)	(0.047)	(0.017)	(0.092)	(0.054)	(0.022)
Observations	116	116	116	116	116	116
Adj. R^2	0.978	0.965	0.968	0.965	0.977	0.998

Note: (*) Significant at more than 10 percent; (**) Significant at more than 5 percent; (***) Significant at more than 1 percent.

partisan theory was found to exist in Taiwan's federal political system. One possible explanation for this outcome may be that the ideological cleavage of Taiwan's two-party system is largely centered on issues surrounding cross-strait unification or independence rather than macroeconomic policies.

TABLE 4. BY TWO PARTIES: TEST FOR OPPORTUNISTIC THEORY IN TAIWAN'S PRESIDENTIAL ELECTIONS, 2000:Q1–2018:Q4

2SLS coeff. with GMM standard errors	Presidential Elections					
	n-period pre-Elections			*n*-period post-Elections		
Dep. variable: ΔNDA_t	$n=4$	$n=6$	$n=8$	$n=4$	$n=6$	$n=8$
constant	**0.156*****	**0.241*****	**0.136*****	**0.254*****	**0.153*****	**0.262*****
	(0.008)	(0.010)	(0.032)	(0.018)	(0.013)	(0.013)
ΔNFA_t	**-0.981*****	**-0.976*****	**-0.924*****	**-0.922*****	**-0.955*****	**-0.945*****
	(0.016)	(0.010)	(0.013)	(0.017)	(0.011)	(0.038)
Δmm_t	**-0.968*****	**-0.985*****	**-0.955*****	**-0.835*****	**-0.968*****	**-0.967*****
	(0.045)	(0.032)	(0.018)	(0.018)	(0.023)	(0.014)
Δp_{t-1}	**2.378*****	**2.198*****	**2.519*****	**2.712*****	**2.672*****	**2.742*****
	(0.218)	(0.230)	(0.395)	(0.217)	(0.281)	(0.269)
$\Delta y_{c,t}$	-0.126	-0.161	-0.127	**-0.437***	**-0.423***	**-0.486***
	(0.223)	(0.127)	(0.182)	(0.264)	(0.231)	(0.22)
ΔG_t	**-0.003*****	**-0.004*****	**-0.003*****	**-0.003*****	**-0.005*****	**-0.003*****
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$\Delta(r_t^* + s_{t+1}^e)$	**-0.276*****	**-0.246*****	**-0.266*****	**-0.266*****	**-0.289*****	**-0.264****
	(0.055)	(0.063)	(0.072)	(0.069)	(0.017)	(0.054)
$\Delta REER_{t-1}$	**-0.165***	-0.123	-0.176	**-0.151*****	**-0.272****	**-0.298*****
	(0.096)	(0.132)	(0.102)	(0.120)	(0.089)	(0.067)
$D_{t-1}^{pre\text{-}election(n)}$	**0.086****	**0.076*****	**0.086*****	—	—	—
	(0.017)	(0.027)	(0.027)			
$D_{t-1}^{post\text{-}election(n)}$	**-0.075*****	**-0.066****	**-0.064*****	—	—	—
	(0.022)	(0.014)	(0.037)			
$D_{t-1}^{post\text{-}election(n)}$	—	—	—	**-0.074****	0.0004	-0.007
				(0.013)	(0.020)	(0.014)
$D_{t-1}^{post\text{-}election(n)} \times D^{DPP}$	—	—	—	-0.023	-0.023	**-0.078*****
				(0.018)	(0.026)	(0.045)
AR(1)	**0.352*****	**0.394*****	**0.365*****	**0.387*****	**0.380*****	**0.396*****
	(0.047)	(0.031)	(0.028)	(0.050)	(0.072)	(0.050)
AR(2)	**0.426*****	**0.426*****	**0.378*****	**0.345*****	**0.384*****	**0.286*****
	(0.042)	(0.017)	(0.043)	(0.034)	(0.023)	(0.051)
AR(4)	**-0.473*****	**-0.436*****	**-0.498*****	**-0.491*****	**-0.523*****	**-0.436*****
	(0.054)	(0.068)	(0.052)	(0.049)	(0.058)	(0.006)
$H_0: \beta_{D^{pre\text{-}el.}} + \beta_{(D^{pre\text{-}el.} \times D^{DPP})} = 0$	**-0.056*****	0.0003	-0.021	—	—	—
	(0.016)	(0.011)	(0.015)			
$H_0: \beta_{D^{post\text{-}el.}} + \beta_{(D^{post\text{-}el.} \times D^{DPP})} = 0$	—	—	—	**-0.026*****	-0.023	**-0.082*****
				(0.020)	(0.017)	(0.031)
Observations	76	76	76	76	76	76
Adj. R^2	0.976	0.988	0.968	0.977	0.998	0.989

Note: (*) Significant at more than 10 percent; (**) Significant at more than 5 percent; (***) Significant at more than 1 percent.

TABLE 5. BY TWO PARTIES: TEST FOR OPPORTUNISTIC THEORY IN TAIWAN'S LAGISLATOR ELECTIONS, 2000:Q1–2018:Q4

2SLS coeff. with GMM standard errors	Lagislator Elections					
	n-period pre-Elections			*n*-period post-Elections		
Dep. variable: ΔNDA_t	$n=4$	$n=6$	$n=8$	$n=4$	$n=6$	$n=8$
constant	**0.146*****	**0.187*****	**0.134*****	**0.256*****	**0.253*****	**0.261*****
	(0.008)	(0.012)	(0.056)	(0.028)	(0.013)	(0.012)
ΔNFA_t	**-0.982*****	**-0.934*****	**-0.987*****	**-0.942*****	**-0.854*****	**-0.987*****
	(0.026)	(0.010)	(0.012)	(0.027)	(0.021)	(0.038)
$\Delta \mathrm{mm}_t$	**-0.965*****	**-0.947*****	**-0.947*****	**-0.836*****	**-0.965*****	**-0.943*****
	(0.045)	(0.032)	(0.028)	(0.028)	(0.023)	(0.014)
Δp_{t-1}	**2.687*****	**2.376*****	**2.856*****	**2.897*****	**2.952*****	**2.486*****
	(0.228)	(0.151)	(0.355)	(0.227)	(0.281)	(0.219)
$\Delta y_{c,t}$	-0.116	-0.126	-0.117	**-0.457***	**-0.413***	**-0.423***
	(0.232)	(0.121)	(0.182)	(0.256)	(0.225)	(0.221)
ΔG_t	**-0.003*****	**-0.005*****	**-0.003*****	**-0.005*****	**-0.004*****	**-0.003*****
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$\Delta(r_t^* + s_{t+1}^e)$	**-0.289*****	**-0.298*****	**-0.329*****	**-0.467*****	**-0.389*****	**-0.364****
	(0.045)	(0.043)	(0.062)	(0.021)	(0.017)	(0.054)
$\Delta REER_{t-1}$	**-0.184***	-0.123	-0.176	**-0.134*****	**-0.172****	**-0.245*****
	(0.078)	(0.112)	(0.112)	(0.150)	(0.029)	(0.047)
$D_{t-1}^{pre\text{-}election(n)}$	**0.067****	**0.088*****	**0.068*****	—	—	—
	(0.017)	(0.017)	(0.017)			
$D_{t-1}^{pre\text{-}election(n)} \times D^{DPP}$	**-0.098*****	**-0.068****	**-0.065*****	—	—	—
	(0.012)	(0.013)	(0.027)			
$D_{t-1}^{post\text{-}election(n)}$	—	—	—	**-0.083****	0.0004	-0.006
				(0.023)	(0.020)	(0.014)
$D_{t-1}^{post\text{-}election(n)} \times D^{DPP}$	—	—	—	-0.013	-0.023	**-0.048*****
				(0.018)	(0.026)	(0.045)
AR(1)	**0.334*****	**0.324*****	**0.384*****	**0.386*****	**0.368*****	**0.386*****
	(0.017)	(0.031)	(0.018)	(0.056)	(0.012)	(0.043)
AR(2)	**0.434*****	**0.478*****	**0.398*****	**0.365*****	**0.355*****	**0.381*****
	(0.012)	(0.017)	(0.023)	(0.034)	(0.063)	(0.071)
AR(4)	**-0.587*****	**-0.562*****	**-0.526*****	**-0.652*****	**-0.623*****	**-0.609*****
	(0.064)	(0.068)	(0.012)	(0.019)	(0.058)	(0.005)
$H_0: \beta_{D^{pre\text{-}el.}} + \beta_{(D^{pre\text{-}el.} \times D^{DPP})} = 0$	**-0.089*****	0.0033	-0.042	—	—	—
	(0.026)	(0.041)	(0.016)			
$H_0: \beta_{D^{post\text{-}el.}} + \beta_{(D^{post\text{-}el.} \times D^{DPP})} = 0$	—	—	—	**-0.058*****	-0.034	**-0.078*****
				(0.020)	(0.018)	(0.031)
Observations	76	76	76	76	76	76
Adj. R^2	0.968	0.988	0.964	0.987	0.957	0.969

Note: (*) Significant at more than 10 percent; (**) Significant at more than 5 percent; (***) Significant at more than 1 percent.

TABLE 6. TEST FOR PARTISAN THEORY—MONETARY REACTION FUNCTION, 2000:Q1–2018:Q4

2SLS coeff. with GMM standard errors	*Dep. Variable:* ΔNDA_t		
constant	**0.062*****	**0.192*****	**0.078*****
	(0.003)	(0.088)	(0.021)
ΔNFA_t	**-0.863*****	**-0.768*****	**-1.982*****
	(0.014)	(0.011)	(0.028)
Δmm_t	**-0.982*****	**-0.934*****	**-0.867*****
	(0.031)	(0.046)	(0.011)
Δp_{t-1}	**0.898*****	**1.798*****	**1.687*****
	(0.120)	(0.337)	(0.442)
$\Delta y_{c,t}$	**-0.617***	-0.236	-0.287
	(0.165)	(0.209)	(0.152)
ΔG_t	**-0.004*****	**-0.004*****	**-0.005*****
	(0.001)	(0.001)	(0.001)
$\Delta(r_t^* + s_{t+1}^e)$	**-0.232*****	**-0.273*****	**-0.325*****
	(0.042)	(0.061)	(0.010)
$\Delta REER_{t-1}$	-0.152	**-0.194***	-0.183
	(0.045)	(0.108)	(0.111)
$D_{t-1}^{Tradit'l\ Partisan}$	**-0.086*****	—	—
	(0.003)		
$D_{t-1}^{Rational\ Partisan-A(n=4)}$	—	**0.067****	—
		(0.019)	
$D_{t-1}^{Rational\ Partisan-B(n=4)}$	—	—	**0.072****
			(0.024)
AR(1)	**0.442*****	**0.542*****	**0.548*****
	(0.049)	(0.043)	(0.048)
AR(2)	**0.325*****	**0.315*****	**0.382*****
	(0.022)	(0.058)	(0.064)
AR(4)	**-0.598*****	**-0.478*****	**-0.489*****
	(0.086)	(0.062)	(0.052)
Observations	76	76	76
Adj. R^2	0.968	0.988	0.989

Note: (*) Significant at more than 10 percent; (**) Significant at more than 5 percent; (***) Significant at more than 1 percent.

TABLE 7. TEST FOR PARTISAN THEORY—MONETARY AGGREGATE AND INTEREST RATES, 2000:Q1–2018:Q4

Dep. Variable: DV_t	$DV_t=\Delta m0_t$			$DV_t=i_t$		
constant	6.762	7.824	4.573	0.478	0.343	0.437
	(15.018)	(7.556)	(8.476)	(0.224)	(0.081)	(0.053)
DV_{t-1}	**0.824*****	**0.868*****	**0.962*****	**1.682*****	**1.638*****	**1.868*****
	(0.141)	(0.116)	(0.137)	(0.097)	(0.350)	(0.135)
DV_{t-2}	-0.125	-0.139	-0.424	**-0.562*****	**-0.478*****	**-0.673*****
	(0.153)	(0.159)	(0.256)	(0.101)	(0.348)	(0.437)
Δu_{t-1}	-2.435	-1.825	-0.825	—	—	—
	(4.245)	(2.434)	(2.124)			
$D_{t-1}^{Tradit'l\ Partisan}$	-2.769	—	—	0.062	—	—
	(5.382)			(0.078)		
$D_{t-1}^{Rational\ Partisan-A(n=4)}$	—	-9.248	—	—	-0.042	—
		(13.358)			(0.079)	
$D_{t-1}^{Rational\ Partisan-B(n=4)}$	—	—	-12.665	—	—	-0.012
			(31.992)			(0.344)
Observations	76	76	76	76	76	76
Adj. R^2	0.768	0.758	0.687	0.798	0.665	0.688

Note: (*) Significant at more than 10 percent; (**) Significant at more than 5 percent; (***) Significant at more than 1 percent.

VI. *Concluding Remarks*

This paper has examined evidence opportunistic and partisan incentives in Taiwan's macroeconomic policy cycles. In contrast to the existing literature, we directly investigate how monetary authorities adjust domestic credits in response to different political events, such as presidential and legislative elections or a change of administration. Unlike Drazen (2001) who argues that monetary political cycles are more widely observed in countries with a highly independent central bank, our empirical results support opportunistic theory and indicate that macroeconomic political cycles are more significant in Taiwan's presidential elections than in legislative elections. This may be due to the fact that the Taiwanese electorate cares more about economic growth in terms of presidential elections rather than legislative elections. This result makes the CBC's independence appear more questionable, which if indeed the case will result in the bank making the wrong decisions on major policy issues due to inappropriate political intervention before presidential and national level legislative elections.

Of significant note, compared to the DPP, the KMT has tended to conduct expansionary monetary policies before elections in order to increase the chances of their incumbents being reelected. This may be due to the fact that the CBC was under the management of the Executive Yuan until large-scale reforms in 2002. Before that, its budget was monitored and controlled by the Legislature, and the ministers of economic affairs and finance were members of the board of the central bank. Since the DPP did not come to power until 2000, the KMT commanded more authority over monetary authorities with the ability to manipulate monetary policies during elections. Finally, we did not find strong evidence of partisan theory in Taiwan.

This may be partially due to the increase of financial market integration which nowadays acts on a global scale, forcing all political parties to respond in the same way to large financial institutions that can easily and quickly shift their funds across national borders. Rather than being able to pursue expansionary fiscal and monetary policies, leftist governments are likely to adopt policies identical to those ostensibly preferred by the right, which is consistent with the financial integration of partisan theory as mentioned previously. Furthermore, ideological differences between Taiwan's political parties may have more to do with cross-strait unification issues, as opposed to the traditional right-wing/left-wing macroeconomic policy divide seen in other countries.

Concerning recommendations for future research, one possible direction might involve systematically looking into the interrelationships between the level of central bank independence and monetary policy cycles. In particular, investigating how a publicly-elected monetary authority often makes policy decisions which suffer from an inflationary bias, as Kydland and Prescott (1977) and Barro and Gordon (1983) have pointed out, may prove fruitful. Perhaps further research will confirm that insulating monetary policy from political pressures is the key to reducing these forms of bias. Unfortunately, due to data limitations, as concerns the independence of Taiwan's central bank, we save this line of investigation for future endeavors, which I believe will improve the current understanding of the connections between low inflation and low independence in Taiwan's political and economic system.

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