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for Fiscal Discipline between 1920 and 2008

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ABSTRACT

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JEL Classification: D72, H30, H6

Key words: fiscal discipline, fiscal conservatism, political attitude, discourse analysis

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1. Why and How to Measure Political Commitment for Fiscal Discipline?

Deficit evolution of the OECD countries has been quite disparate since the seventies although the economic evolution is rather similar among these countries. Consequently, an important amount of literature has emerged these last years aiming to identify which are the key political and institutional variables, added to the standard economic and social variables, to reach a better explanation of the different fiscal behavior of industrialized countries. Alesina and Perotti (1995) and Persson and Tabellini (1998) propose a comprehensive review of the state of the question, advancing the main theories and the empirical results. Poterba (1996), Barea (1997), Krol (1997), von Hagen (1998) and Imbeau (2004) focus more specifically on the literature concerning the impact of formal budgetary constraints.

Apparently, political institutions and budgetary institutions seem to be crucial for fiscal discipline. But, if certain institutions are more favorable to fiscal discipline, it would be possible that these mechanisms have been adopted because voters or politicians in this collectivity are more conservative against debt financing than in others collectivities with more "debt-friendly" settings. Poterba is, to our knowledge, the first author to raise this potential misspecification of the models, pointing out the problem in a very clear way: "The critical question for policy evaluation is how to interpret this correlation between budget institutions and fiscal-policy outcomes. It is possible that the correlation simply reflects correlation involving fiscal discipline, fiscal institutions, and an omitted third variable, voter tastes for fiscal restraint. Voters in some jurisdictions may be less inclined to borrow to support current state outlays or to use deficits to shift

the burden of paying for current state programs to the future. If these voters are also more likely to support the legislative or constitutional limits on deficit finance, then the observed link between fiscal rules and fiscal policy could be spurious" (Poterba 1997: 399). If it was the case, public or political preferences could become at the end a relevant factor explaining the comparative evolution of debt.

Similar questioning has emerged in other institutional context, like the relationship between central bank independence and the control of inflation (Hayo 1998, Hayo and Hefeker 2002, De Jong 2002).

Which attitude has been adopted among the specialists of political economy of debt after Poterba's question was raised? The scope of answers is rather large. A first group of economists, even considering the potential influence of preferences, prefer to consider institutions as if they were completely exogenous. This is the choice taken by Bayoumi and Eichengreen (1995) and Stein, Talvi and Grisanti (1998). Other authors, like Von Hagen and Harden (1994), Bayoumi and Eichengreen (1995), Poterba (1994) or Alesina and Perotti (1997), consider, for different theoretical reasons, that fiscal preferences have great chances to produce a minor impact on empirical results.

Other economists, not satisfied with these attempts to minimize the eventual impact of preferences, use variables that are supposed to catch the complex notion of "preferences on debt". The first attempt done in this direction was logically to take into account the political affiliation of executive or legislative power. That is the solution retained by Holtz-Eakin (1988) and Poterba (1995). But, as Bohn and Inman (1996) remark, this is a too much crude notion of preferences.

Another possibility tempted is to consider fiscal conservatism as a dummy variable that becomes active for countries or collectivities that are reputed to be fiscal conservatives and null otherwise (Bohn and Inman (1996) and Alesina and Bayoumi (1996)). The

main caveat of this approach is that fiscal conservatism is not captured from a measurable social or political variable, but only on the ground of the researcher's intuition, supposed to follow a "general agreed feeling".

Bohn and Inman (1996) have gone a step further in their effort to tackle fiscal preferences using the CBS/New York Times opinion poll that indicates the percentage of voters that themselves identify as conservatives (for the period 1976-1988). The problem is that the notion of "fiscal conservatism" does not necessarily correlate with political conservatism, and only this latter notion is usually captured by polls. Some authors like Koven (1999) or Dunn and Woodard (1991) seem to establish a strong essential linkage between both notions.

Rueben (1999) shows that, in the near field of constraints in expenditures growth, if preferences are taken into account (measured here by the presence of referendum) empirical results changes dramatically. A positive correlation appears between constraints and expenditure control, when the initial model without preferences did not show such a relationship.

Dafflon and Pujol (2001) build up an index of Swiss cantonal fiscal conservatism based on voters' behavior concerning Swiss federal referenda with fiscal content, that is, 75 different voting from 1979 to 1998. They found statistically significant relationship between preferences and indebtedness: the more a canton adopts a fiscal conservative profile, the lesser the extent of cantonal debt, *ceteris paribus*. Pujol and Weber (2003) state the robustness of the influence of fiscal preferences on deficits by showing that the measure of voters behavior proposed by Dafflon and Pujol depends basically on strictly non economic variables, like cultural appurtenance (measured by cantonal language), religion and political affiliation.

Another alternative way of research that we further investigate in this paper is not to focus on voters' preferences, but directly on those of politicians.

Two main theoretical schemes have been contemplated till now. The first one relies on the fiscal profile auto-identified by the protagonists of the fiscal policy decisions regarding the acceptability of public deficits. It is clear that the pertinence of this kind of measure is strongly dependent on the capability of the questionnaire to reveal the notion of fiscal conservatism of each person interviewed. Schwab-Christe (1996) has produced an interesting index of fiscal conservatism of local government in Switzerland but, unfortunately, it contemplates only measures about fiscal adjustment. Imbeau (1999) proposes a measure of fiscal preferences based on hypothetical decisions to be taken in the fiscal policy framework acceptable by each interviewed, that announces promising results. But by now, this option remains at an stage of agenda research.

We suggest, according to our knowledge, an original approach to handle with fiscal preferences, based on the analysis of rhetorical discourse advanced by policy makers of a given collectivity in the context of the budgetary negotiation and reflected in official and public documents. The main idea is to identify all range of arguments used in order to justify or to refuse the adoption of new deficits and then analyze if they are to be classified as fiscal conservative or fiscal non-conservative. Thereafter all this information is translated into synthetic numerical values of "fiscal conservatism"². A first empirical application using this methodology was done by Pujol (1998) for the Swiss cantons of Fribourg and Geneva, for the period 1970-1997. The idea pursued there was to select only the arguments given by the politicians representing parties in power in the Government and the majority supporting it in the Parliament. The political

² We are using in this paper the notion of "fiscal conservatism" in a pure positive meaning. We do not enter in normative analysis concerning the pertinence of this fiscal policy choice compared to any competing policy option.

engagement was used as a proxy for the fiscal conservatism of the collectivity, as these political actors are the responsible for the fiscal policy driven in the canton. Political commitment for fiscal discipline is much weaker in Geneva than in Fribourg. In fact, this difference corresponds also to the respective situation of their cantonal finances. Granger causality analysis shows that the fiscal stringent discourse in Fribourg tends to influence the level of the deficit. The reversal situation is found in Geneva: the political discourse seems to accommodate to the evolution of the cantonal finances.

We propose an empirical extension of this methodology by applying it to the main world economy, the US, for a long time period, comprised between 1920 and 2002, corresponding to modern public finances.

Next two sections are devoted to briefly present the matrix of analysis of the budgetary discourse. Section 4 shows the empirical application of the methodology to the US Presidents case, with an interpretation of the results.

2. Building up a Matrix of Analysis of Political Commitment for Fiscal Discipline

We just sketch in this section the core elements needed to justify how to provide a tool to analyze and decode the budgetary discourse in a measure of political commitment for fiscal discipline.

The objective searched is to find a method enabling us to translate all political interventions related to debt and deficits in terms of fiscal conservative and fiscal non-conservative attitudes. Two main sources of political statements can be identified. The first one concerns the normative or theoretical arguments, which are the consequence of prescriptions according the different economic approaches on fiscal policy and on the rival theories about public debt. We assume thus the interaction between economic ideas and policies and, in particular, that existing economic ideas open the door to the

acceptance of multiple and sometime opposed fiscal practices³. The second set of political arguments are of positive or practical nature, in that sense that this kind of political interventions is based on concrete budgetary practices that tends to justify (fiscal non conservative) or to attack (fiscal conservative) the presence of actual deficits.

The key element, especially regarding the normative arguments, is to determine what has to be considered as a pro-fiscal discipline statement inside the political debate on budgetary issues. The choice made here is that a fiscal conservative attitude corresponds to pursue a “golden rule” fiscal policy or any other more restrictive practice concerning the use of public debt. The “golden rule” on public finance asks for a full covering of the annual current public expenditures by fiscal receipts and other related resources, public debt excluded. Under this fiscal policy rule, public debt is reserved to finance public capital expenditures.

This fiscal policy rule was proposed by many Classical and Neoclassical authors. Other more severe practices can be proposed, as the strict golden rule (the amortization of the due share of past public investments is considered as current expenditure to be financed by taxes), or even a balanced budget for all kind of expenditures. All these practices are also considered as fiscal conservative.

Then, a fiscal non-conservative practice is one which justifies the debt finance of a share of current public expenditures, like for instance the Keynesian approach.

³ "Because policy and ideas are intertwined, in discussing the main macroeconomic currents we refer also to economic events of the time. We show how theories influence policies, and how the results of policies influence views about theory.

Any student should wonder about a field in which opinions and policy prescriptions change so often. And you should worry, too, about the differences in views among macroeconomists at any given time. For instance, what should you conclude about budget deficits when one group of economists claims deficits have no real effects and another group blames deficits for high real interest rates and the large trade deficit?" (Dornbusch and Fisher 1990, p. 674).

The golden rule of public finance provides a clear and reasonable criterion of fiscal conservatism. Nevertheless, as it can be expected, only a marginal share of the political interventions in the frame of the budget debate will directly advocate for one or other of the theoretical fiscal policy approaches. Politicians usually move to more concrete arguments for or against deficits, based on these theories or on theories of public debt.

The boundary we have chosen is very useful in order to categorize each one of the more concrete arguments, as the golden rule is directly linked to the classical theory of public debt. The theoretical justification to reserve deficits only to finance capital expenditures is the consideration that public debt imposes a burden to the future, when public debt has to be paid back with an increase of taxes. Based on this assertion, allocative and distributive considerations imply that the right means to finance current outlays are taxes, while capital expenditures can be financed by debt. This is the classical theory of public debt, and it drives to the golden rule principle. Thus, all the specific arguments based on the classical theory on debt can also be considered as conservative interventions. Logically, all the specific arguments that attack the classical foundations on fiscal policy and the theory of debt can be considered as fiscal non-conservative interventions.

A matrix of normative arguments (see table 1) has thus been elaborated, containing the pertinent specific arguments that have been identified, classifying each one of them as fiscal conservative or fiscal non-conservative following the criteria mentioned above.

Particular arguments have been regrouped in family arguments. Even if the affiliation of one specific argument can be discussed, their appurtenance to a fiscal conservative view or to a non conservative one appears to be clear enough for almost all the cases. This later fact is the most important for the utility of the methodology proposed. The following families of arguments have been proposed:

A. Equity issues

B. Efficiency on the allocation of resources (desired level of public expenditure)

C. Risks related with excessive deficits and debt

D. Debt and economic cycles

E. Other

- Clearness of the rule
- Equivalence between debt and taxes
- Tax smoothing
- Imperfection of capital markets

Table 1: Matrix of Normative Arguments

Argument	Fiscal conservative use	Fiscal non conservative use
A. Equity	A1. Excessive indebtedness penalizes future generations	A4. Public debt can be used if it is considered that future generations will be richer
	A2. Current expenditures should be financed by taxes	A4. Debt burden is not relevant if we consider the society as a whole (we owe the debt to ourselves)
	A3. Public investments may be financed with public debt, as future generations will enjoy the benefits	A6. The notion of public investment should be extended to a number of current expenditures
		A7. Marginalist analysis makes the case for accepting deficits for current expenditures
	A8. Social expenditures should not be sacrificed because of a fiscal adjustment	
B. Efficiency	B1. Taxes are the best way to identify the fair price for public services	B6. Balanced budget creates the false image that public services are well managed
	B2. The best way to avoid excessive current expenditures growth is to finance them by taxes	B7. Empirical evidence shows that public intervention is not excessive, even when financed by deficits
	B3. Budget balance is the main means to counteract politicians' trend to overspend	B8. Rational expectations eliminate all kind of fiscal illusion
	B4. Balanced budget is needed because the Government should behave as private households	B9. If deficit-financing is confined to investments, it favors extravagant brick expenditures
	B5. Public investments may be financed with loans, in order to avoid a sub-optimal expenditure	B10. The analogy between government and households activities is fallacious
C. Risks of excessive deficits	C1. Public debt crowds out private investments	C8. The globalization of capital markets limits the crowding out effect
	C2. Debt service entails government freedom of action	C9. When public debt is hold by national residents, the service of the debt does not create a financial burden
	C3. Excessive indebtedness may generate fiscal crisis and future fiscal adjustments	C10. Functional finances show that the level of "excessive deficits" cannot be reached
	C4. Excessive deficits limit economic growth	C11. There is an overestimation of public debt burden, as public assets are not taken into account
	C5. Excessive indebtedness destabilize the economic framework	C12. Public debt is an easy way to finance public expenditures
	C6. Debt cannot be financed by inflation in the long term	C13 Public debt can be financed by inflation
	C7. The burden produced by public investments financed by deficits is affordable	C14. An annual balanced budget may endanger the economic growth for less developed regions in a country
D. Deficits and business cycle	D3. Severe theoretical shortcoming show that a discretionary fiscal policy does not work	D1. Deficit financing is necessary to apply counter-cyclical fiscal policies
	D4. It is almost impossible to apply a discretional fiscal policy in a coherent way	D2. If there are iddle resouces, deficit financing can become a net wealth for society
	D5. Politicians use keynesian prescriptions in order to get an easy financing in bad times	
	D6. Keynesian fiscal principles are not useful for a small open country	
	D7. Only a strict fiscal rule ensures the credibility of the fiscal policy	
E. Other arguments Equivalence between taxes and deficits		E1. Debt burden is supported by the present generation because of rational expectations
	E3. The hypothesis of the theorem of equivalence are unrealistic	E2. Deficits and tax produce the very same economic effects
Tax smoothing	E4. It is better to have an annual balanced budget than tax stability	E5. It is better to ensure tax stability than an annual balanced budget
Clearness of the rule	E6. Annual balanced budget is a clear rule which does not admit interpretations	E7. The effort to maintain a balanced budget produces perverse strategic behavior
		E8. The principle of a structural balanced budget is clearer principle
Capital market imperfections		E9. Public debt enables poor households to pay less than if they should ask for a loan to pay their taxes

As we announced at the beginning of this section, political arguments for or against deficits have two different roots. The first one, based on normative considerations, has been yet presented. Now, the arguments based in positive or purely practical consideration have also to be taken into account. This kind of political interventions can be adopted under a wide range of forms. They respond all to the politician's aim to make actual or future deficits more or less acceptable. Independently if this attitude is fully conscious or not, the fact is that this kind of public intervention reinforces the commitment for fiscal discipline when it gives a severe regard against deficits, and it weakens it when the opposite arrives. Some of those interventions reflect in fact the presence of strategic behavior, and have been identified by a number of authors working in the field of public choice and political economy of deficits, like Alesina and Perotti (1995) or Persson and Tabellini (1998).

Table 2 presents the groups of arguments we have retained, classifying each one of them as fiscal conservative or fiscal non-conservative.

As for the precedent point, we think that the summary description given in the table is clear enough and does not need any further comment on it.

It can be considered that at this point, all the essentials to provide the tool to analyze the political discourse in order to determine the commitment for fiscal discipline are presented. They are simply formed by the addition of the matrix of normative arguments and the matrix of positive arguments.

Table 2: Matrix of Positive Arguments

Argument	Fiscal conservative statement	Fiscal non conservative statement
F. Budget project	F1. The efforts undertaken to ensure a balanced budget are mentioned	F2. A deficit is justified explaining that serious sacrifices have been made in order to attain the budget project figures
G. Budgetary modifications	G1. Measures are proposed on order to avoid differences with budgeted numbers, or deviations are criticized	G2. A justification is given to budget modifications resulting in a deficit increase
H. Financial planning	H1. A fiscal adjustment is undertaken and justified in order to respect an established financial plan	H2. A deficit is accepted with the remark that it is smaller to what was established in the financial plan
I. Budgetary forecast	I1. The necessity to establish prudent forecasting is advocated	I4. Optimist foretasting helps to justify actual deficits as "unexpected deficits" I5. Actual deficit is considered acceptable because it is lower than it was established in the budget
	I2. The statement reflects that part of the good budgetary results come from exceptional non recurrent events	
	I3. The excessive optimism concerning future budgetary perspectives is denounced	
J. Budgetary transparency	J1. Practices that tend to show a false good budgetary situation are denounced	J3. Gimmicks resulting in an apparent better fiscal performance are used or justified
	J2. Budgetary practices showing a higher deficit than real figures are used or justified	
K. Uncontrolled expenditures	K1. Balanced budget is considered as an own responsibility even acknowledging external restrictions	K2. The deficit is justified as a result of entitlement programs upon which there is small capacity to intervene
		K3. The deficit is justified arguing that it is the fruit of financial relations with other collectivities
L. Budgetary rules	L1. Budgetary practices that are not coherent with existing budget rules are denounced	L4. A deficit is justified mentioning that it respects budgetary rules L5. A budgetary rule is interpreted as a right to create deficits
	L2. Budgetary practices that may provoke a future non respect of established budget rules are denounced	
	L3. A fiscal adjustment is justified as needed to comply with budgetary rules	
M. Budgetary tradition	M1. Fight against deficits is supported remembering that the government maintained fiscal conservative records in the past	M3. Danger of deficits is minimized by arguing that they are smaller than those reached in the past
	M2. A fiscal adjustment is defended because present deficit is worse than precedent deficits	
N. Comparison with other governments	N1. Fiscal discipline is advocated in order to remain a government less indebted than others	N4. Deficit problems are relativized arguing that other governments are in a worse fiscal position
	N2. A fiscal adjustment is supported in order to avoid becoming the "worst student in the classroom"	
	N3. A deficit is rejected arguing that this option is not acceptable when other government are undertaking fiscal adjustments	N5. A deficit is justified arguing that the fiscal position is worse than elsewhere because of specific extraordinary burdens
O. Diagnosis of the fiscal situation	O1. The causes of present fiscal performance are explained	O3. The deficit is explained and justified by putting the charge to others past decisions or behavior
	O2. Strategic behavior that can potentially undermine budget balance is denounced	O4. Present deficit is considered as a result of other agents' present behavior and responsibility
		O5. Practices producing past or present deficits are justified

3. The Index of Political Commitment for Fiscal Discipline

How to use the matrix in a practical manner in order to tackle the politicians' commitment for fiscal discipline? The proposal is to go directly to political discourse, trying to decode all political statements in terms of fiscal conservative / non-conservative basis. The issue is thus "simply" to read all the pertinent budgetary documents to first identify all public interventions concerning deficits and debt. Then, compare the content of the political declaration with the catalogue of normative and positive arguments identified and presented in the precedent section. If the political statement fits one of the theoretical elements of the matrix, a reference to the document is inserted in the correspondent cell of the matrix.

We propose two complementary indexes of attitude towards fiscal discipline. The first one is open, and it is simply calculated as the difference between the number of statements favorable to fiscal discipline minus the number of declarations opposed to fiscal discipline. A positive value reflects a political position tending to support fiscal discipline. The highest the positive value it takes, the higher the insistence of the politician in defending this view, which suggest a stronger commitment towards fiscal discipline. Values near to zero indicate either that the politician has a shared view on this topic, or that she is not interested in fiscal discipline problems or that she consider that it is not politically rewarding to publicly manifest her present political position.

The second index is a closed index ranging between value +10; when all statements are favorable to fiscal discipline, and -10, when all declarations are against fiscal discipline. A zero value indicates an equal number of declarations for and against fiscal discipline. It is elaborated with the expression: $(\text{Cons}_t - \text{Noncons}_t) / (\text{Cons}_t + \text{Noncons}_t) * 10$. Being Cons_t the total number of fiscal conservative interventions in time t and Noncons_t the total number of fiscal non-conservative interventions. This second

measure does not manifest directly the intensity in the defense of the political position, but it provides a clearer view of the direction given to the political debates, independently if they are numerous or not.

We have already applied this methodology to the Swiss regional case (Pujol 1998) and the Spanish case (Pujol 2003). Our aim is to expand the analysis to a longer time period, using the case of the United States, as the fiscal policy of this country has historically behaved as reference for other countries during this century, and because of the accessibility of all the other relevant time series variables. Also, the history of US public finances are quite well known, as it can be put in contrast with the results we intend to reach addressing directly to the public discourse of the main protagonists of this public policy.

As already mentioned, the methodology proposed is based on the discourse analysis. We have used in this case the official transcriptions of the Presidential public interventions before the Congress as recorded in the *Congressional Record*. For every single year covered in the analysis we have scrutinized direct references to debt, deficits and fiscal policy contained in the annual *State of the Union message*, as well as the *Presidential Federal Budget Message*. We have not taken into account the annual *Economic Report of the President*, as this series is more recent (it starts after the Second World War), and does not cover all the period under analysis.

4. US Presidents Political Attitude towards Deficits, 1920-2002

4.1 Statements Identified

2409 presidential statements have matched with the normative and positive arguments of the matrix of analysis. A first methodological conclusion seems clearly to emerge: the matrix of analysis of the political discourse succeeds in capturing an important

amount of budgetary arguments in the American case, as it happened in the Swiss and the Spanish cases. We show in the figure 1 the distribution of relevant statements per year. Annual results are grouped by terms in the figure 2.

Figure 1

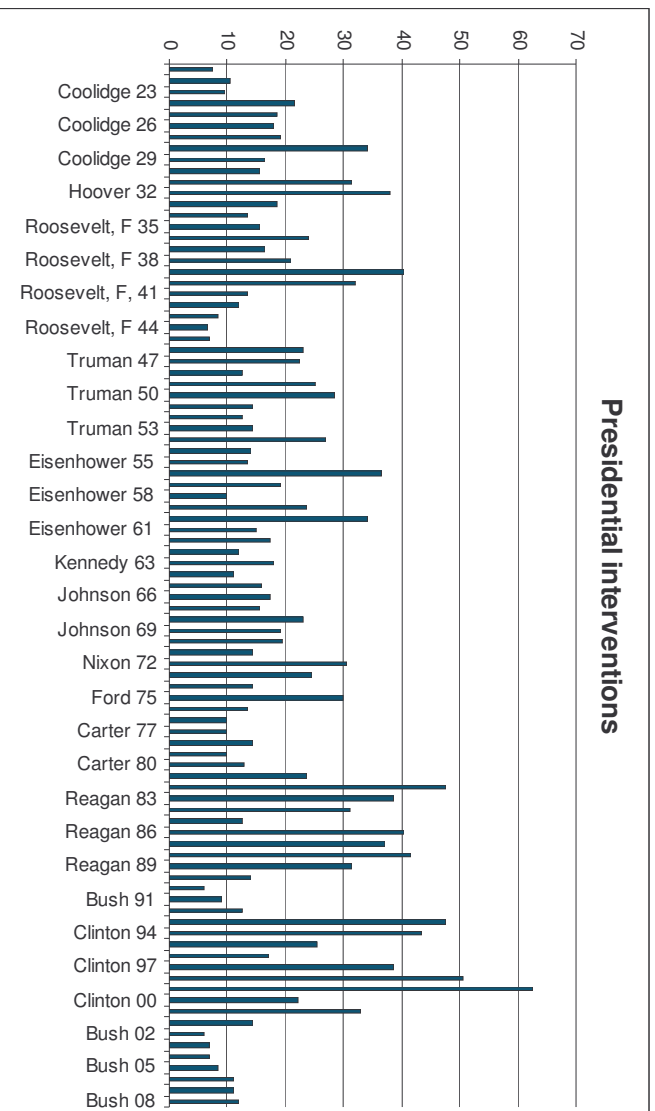
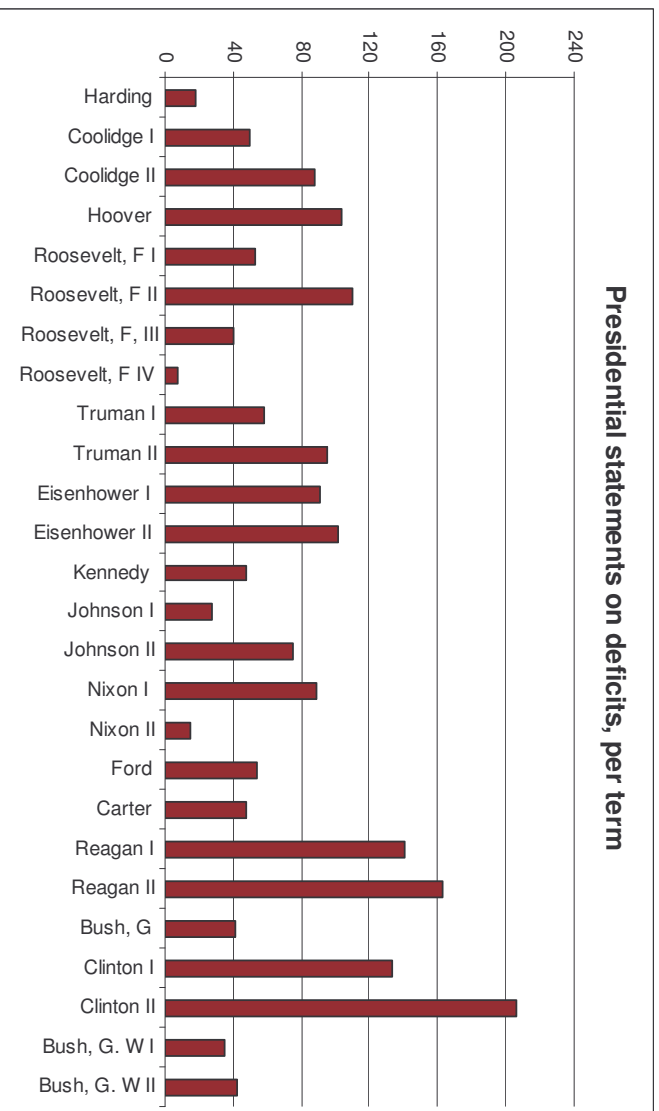


Figure 2



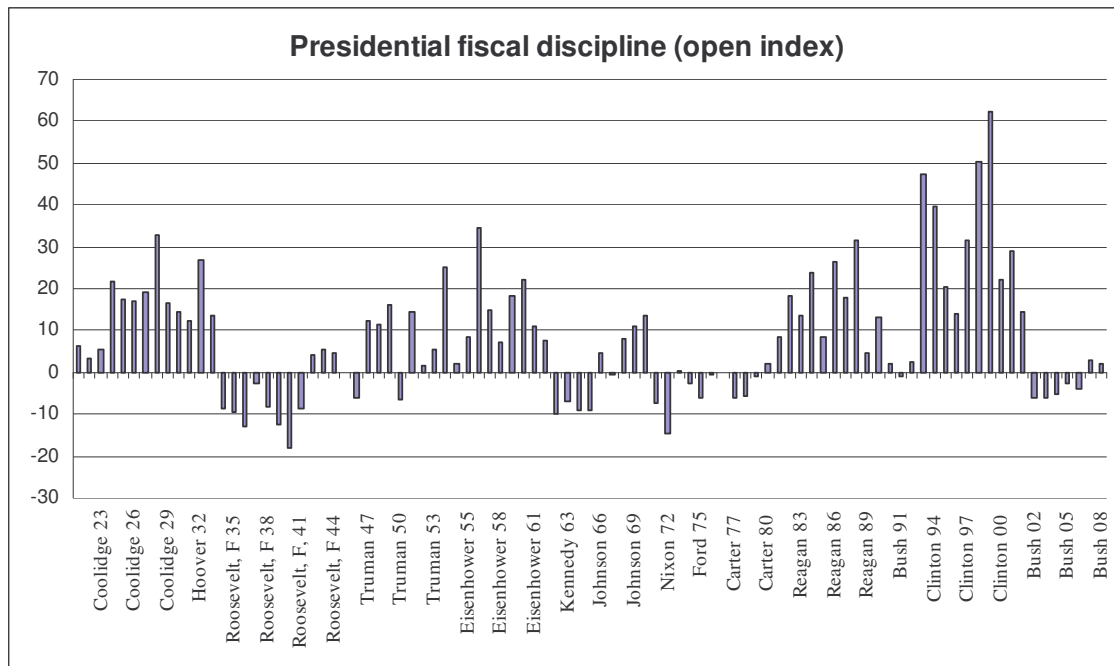
Figures 1 and 2 show a high level of variability concerning the presence of fiscal discipline related declarations in the State of the Union Address and the Presidential Federal Budget Message. Concerning the weight that each President has given to this issue in their main political speeches (figure 2), it does not appear at first sight a clear variable to relate with the intensity of the discourse on deficits. But at least the time series can be separated into two. The first sub series goes from 1920 to 1980. There is not a clear time trend in general, as we observe some time oscillations between 1920 and the beginning of the 1980s, with peaks with Hoover (late 1920s), the second term of Roosevelt (second half of 1930s), Eisenhower presidency (the 1950s) and first Nixon's term (late 1960s). The second part of the time series shows a dramatic increase of the intensity of the debates, affecting all the presidency of Ronald Reagan and Bill Clinton. The opposite occurs with the presidencies of George Bush Sr. and his son George W. Bush. All these results suggest a certain relationship between the intensity of the discourse on fiscal discipline and economic cycle. Thus, periods of economic crisis or slow path of economic growth are linked to higher levels of declarations concerning deficits like the Great Depression (Hoover and Roosevelt I and II), the decade of the 1950s (Truman II and Eisenhower I and II), with a slow rate of GDP growth, and the economic crisis of the beginning of the 80s (Reagan I) and 1990s (Clinton I). A significant exception to this behavior is Jimmy Carter Presidency, under which US and other industrialized economies suffered one of the worst economic shocks, but this seems not to have an impact on his public finance discourse. Moving now back to figure 1, we can appreciate the evolution of the intensity of the discourse on deficit issues for each President. We can investigate the impact of economic cycles on discourse as well as to what extent this kind of discourse is sensible to electoral discourse. According to our results it appears a certain relation between political discourse and political cycle.

We count for each presidential term with three observations concerning the evolution of the intensity of the discourse. The increase of the presence of declarations concerning fiscal discipline tends to be concentrated in the discourses marking the beginning of the second year, with an upward trend in 13 out of 23 cases. The discourses of the third year where the importance of fiscal discipline issues increases related to the precedent year correspond to 9 cases out of 24 recorded. In the last year, which in the US system is fully integrated in the elections campaign, only in 7 cases out of 21, the intensity of the discourse increases and, among them, only in one case it is produced in a significant manner, at the end of George Bush Sr. mandate. These results suggest in one hand that promises and programs concerning deficit control tend to be concentrated at the beginning of the term, to progressively experience a reduction of public exposure, especially in election years. This lack of political interest of making promises for the US President finishing their mandate during the electoral year can have two different sources: because other issues are considered more important or more appealing for voters than issues related with fiscal discipline (fiscal discipline could be not voting rewarding, even if theoretically approved by a vast majority of Americans) or, alternatively, because poor public finance outcome does not deserve a strong defense and political promotion, and political fight is oriented to other more successful issues.

4.2 The Index of Fiscal Discipline

The core result of this paper is shown in figure 3, where we present the open index of political commitment towards deficits for the period 1920-2008. Figure 4 shows the parallel result on the basis of the closed index for values moving between -10 and $+10$.

Figure 3



The data set shows a profile that even if it can surprise at first sight, it is nevertheless quite coherent with the history of the American fiscal policy. This graph is in fact a concentrated snapshot of the political choices on budgetary issues these last 90 years. We can appreciate that, as commonly viewed, there was an undisputed attachment to the principles of fiscal discipline as we have defined them at the beginning of the time period considered (this fact appears clearer in figure 4). The figure shows also that Hoover's attitude remained basically attached to the Classical principles when he faced the first stage of the Great Depression. The picture changes dramatically with Franklin Roosevelt policies, which can certainly be considered as revolutionary in the fiscal sphere, as compared with the precedent references. He is the first President to publicly justify and advocate debt finance. Modern public finance episodes can easily be retraced in the graphic: the movement to higher levels of fiscal discipline with Eisenhower, the first utilization of Keynesian precepts in a period of economic growth under Kennedy and Johnson. Nixon's Presidency is quite interesting, because he is a Republican, and his record presents a clear and almost unique breakpoint inside a

legislature, when he announces in 1971 his Administration adherence to the principles of the full-employment budgeting. The Reagan records are also relevant, as they show the junction of huge and increasing deficits with a political discourse which basically defends the principles of fiscal discipline. Democrat President Bill maintains a high profile of attachment to the principles of fiscal discipline, never seen since the 1920s, in accordance with his deficit reduction policy. The series ends with the change of trend experienced with George W. Bush, as he enters again into the territory of a political discourse non attached to fiscal discipline, thirty years after Nixon, Ford and Carter presidencies. In all these episodes the US Federal Budget assumed large deficits, but the economic framework was substantially different: during the 1970s the US economy endured a prolonged economic crisis, while under George W. Bush presidency the economy enjoyed an unseen and continuous growth period.

Figure 4

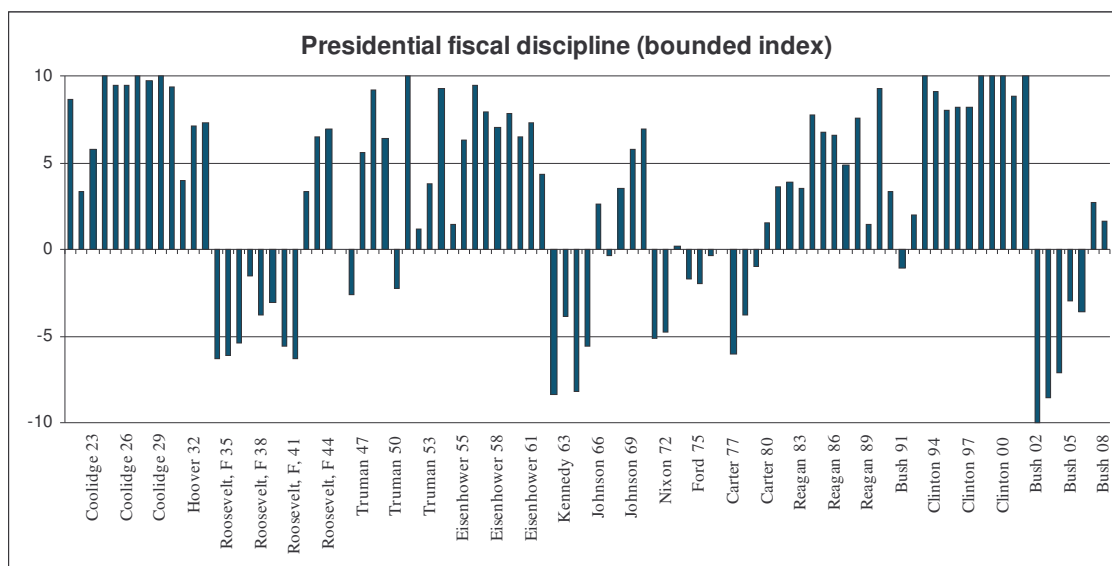
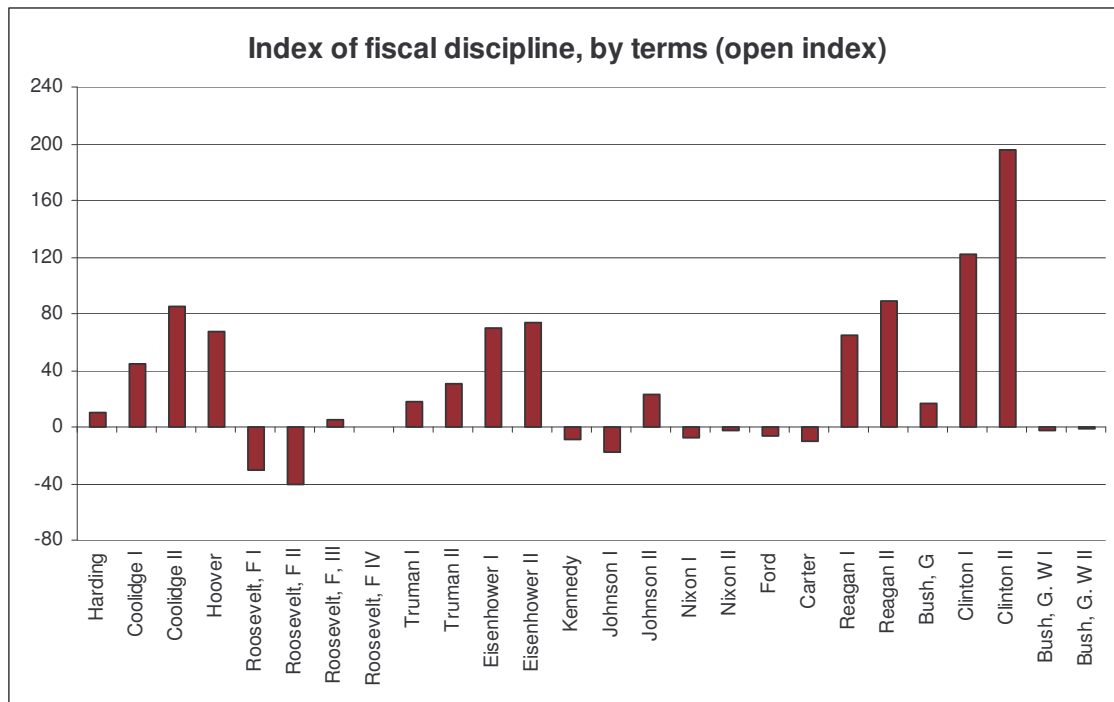


Figure 5 shows the same results as in figure 3, but aggregated by presidential terms.

Figure 5



To our view, the main outcome of these figures is precisely that the resulting picture corresponds basically to what a person having a basic knowledge about recent history of American fiscal policy could predict. This is not a shortcoming of this methodology based on discourse analysis, but, in the opposite, it seems to us that this shows the ability of the methodology in catching the sense and substance of what is behind the political discourse and, secondly, that political discourse seems to be quite internally coherent, as we do not arrive to random or aberrant results.

4.3 The Structure of the Political Discourse

The analysis of the structure of the discourse gives also an important amount of information. The general index shown in the precedent section is built by the addition of different families of normative and positive arguments. It can be thereby disintegrated in its main components. The resulting analysis provides a clear insight of what kind of arguments have been essential in different parts of the period under analysis or the influence of party ideology. Some results can be put in relation with the intensity of the

debate on deficit issues (figures 1 and 2) and with the global index of political attitude towards deficits (figures 3 to 5), enlightening some of the results already achieved in the precedent section.

We analyze first how the general discourse on deficits has been distributed among its two main components: normative and positive arguments.

We find a relative low percentage of normative arguments from 1920 to 1930, around 40% of all arguments. They increase in the early 1930s to 60 to 80%. This surge reflects the ideological battle around the treatment to give to the deficits resulting from the economic recession. During Hoover Presidency the normative arguments used in the public discourse tend to show the dangers associated to deficits (as we see in figure 3 that the attitude during these years is favorable to balanced budget). The opposition option is preferred with Roosevelt arrival. It is interesting to notice nevertheless that the percentage of statements of normative nature used since mid 1930s is significantly lower than precedent and subsequent years. Thus, actual deficits have been basically justified during this period taking advantage of practical positive arguments, more than using theoretical arguments served for instance by the incipient Keynesian proposals. This result tends to confirm the view shared by some experts that Roosevelt never implemented an anti-cyclical and active fiscal policy in a systematic way.

There is a long period comprised between the end of Second World War and the Oil Crisis where the share of normative arguments is maintained in high levels in average, around 60% of all arguments. Figure 3 also tells us that this sub-period has experienced a succession of political attitudes favorable and opposed to towards deficits. The conjunction of both results manifest that the ideological battle concerning the appropriate use of deficit finance has been a matter of this period. By contrast, political debate about deficits since Ronald Reagan Presidency was conducted mainly by

practical positive arguments, as the share of normative arguments reach an historical minimum at second Reagan's term and George Bush Presidency (30%). So, the profile favorable to balanced budgets shown by Reagan when he faced at the same time unprecedented deficits, was conducted basically through practical arguments like, as we will see after, the proposal of a constitutional amendment to forbid deficits, or the attack of Congress lack of willingness to adopt budgetary reforms. The share of normative arguments tends to increase again in second Clinton's term and during George W. Bush terms, to a level of at least 50%.

We look more into detail concerning the structure of the political discourse on deficits by analyzing the use of each specific family of arguments presented in tables 1 and 2. We have regrouped the results by presidential terms, in order to increase the significance of the results.

Concerning the use in public statements of arguments related with equity and the use of debt finance (arguments type A in table 1: equity with future generations, fiscal expansion today at the price of increased debt for the future...). This kind of argument has marked specially the third Franklin D. Roosevelt Presidency, with some 17% of all statements refer to this argument, while it is used in 5% of the cases by the average of all other presidents. It corresponds to the World War sequence. Figure 5 shows that Roosevelt global position on deficit was roughly in positive territory in his last term (favorable to fiscal discipline positions), in sharp contrast with precedent years. This is precisely due to the fact that Roosevelt always used this argument to justify the need to raise special war taxes, in order to minimize the burden that debt could eventually produce in future generations. Surprisingly enough, before the Great Depression breakpoint, this argument was used in a negligible manner by Presidents, maybe because this kind of argument was considered superfluous and taken for granted. This

argument took a certain importance in Eisenhower (favorable to fiscal discipline) and first Johnson term (opposed) discourses. This argument becomes again somehow interesting for presidents in a regular basis since Ronald Reagan, counting in average to some 5% of all statements. George W. Bush uses this argument mainly in the second term concerning the need to control entitlement spending in Social Security and Medicare in order to protect future generations against "three bad options: huge tax increases, huge deficits, huge an immediate cuts in benefits" (H. Doc. No. 110-3, p. H1168) .

The family of arguments related to risks associated to excessive deficits (arguments type C in table 1) is undoubtedly the main singular argument for many of the Presidents under analysis. This argument has been systematically used in the political discourse in order to support balanced budget positions, and only marginally to justify the presence of deficits (Roosevelt, Truman, Kennedy, Johnson and George W. Bush), but never to the point of becoming an argument supportive to deficits (negative value). This is not a surprising result: it is hard to publicly minimize the potential costs of present or future deficits. Being this the case, the best solution to apply when a president is publicly defending the presence of deficits is simply to try to avoid this specific argument. We find in fact that the higher the level of political attachment to fiscal discipline, the higher the share of this argument in the political discourse; and the higher the opposition to fiscal discipline principles, the lower the presence of this argument in the political discourse. The coefficient of correlation between both series is 0.772.

This argument was very visible in the discourse structure before 1930, with some 25% to 30% of all statements, and that it almost disappears during first Roosevelt term. Eisenhower becomes a passionate user of this argument in order to reinforce his fiscal conservative views. He reaches in his second term a historical peak of 38% of all

statements related to the dangers related with excessive deficits. The presence of the argument decreases during the 1960, 1970 and 1980 decades, varying from 5% to 20%. Interestingly, Reagan, George Bush and George W. Bush, with fiscal conservative views, do not support their position taking advantage of this arguments (just 10 to 15% of all statements) and it can be easily understood: it is not too much coherent to constantly speak about the risks and dangers of deficits and debt at the same time that huge amounts of deficits are being proposed for approval to the Congress. The situation changes dramatically with Bill Clinton, whose intensity of use of this argument is only similar to those of Eisenhower and pre-Great Depression presidents (30%).

Then follow the statements related with deficits and business cycle (normative family of arguments *D* in table 1). It has been the defining argument concerning the political attitude towards fiscal discipline for many presidents. As in the precedent case, it is worth to study in parallel the intensity of the use of this argument and index of fiscal discipline in each presidential term concerning the use of this argument.

The presence of this argument in the political discourse was completely marginal before Hoover presidency (just 2% of all statements referred to the business cycle). We can appreciate that this argument was the key one in Hoover and first Roosevelt term, as it concentrated more than 40% of their statements. This result, coupled with the opposite signs of the index of these two presidents, indicate us the intensity of the ideological struggle about the legitimacy of deficit finance. The intensity in the use of this argument decreases in the subsequent Roosevelt terms, around the 30% levels, presenting even a mixed position about the role of deficits in the economic cycle during his third term, coinciding with the Second World War period. The cyclical use of deficits becomes a second order argument during the 1950s, within Truman (20%) and Eisenhower (less than 10%) presidencies. Truman's views on this issue are mixed, even if he is from the

Democrat Party. Eisenhower is the first President since the Great Depression to publicly attack the Keynesian principles. This position is in strong contrast with his successor proposals, as all Kennedy statements on this issue were unambiguously favorable to the use of budget as a means to influence the business cycle. A similar path is followed during first Johnson term, as this argument concentrates 65% of all his statements, which is a series record. As we mentioned in the precedent section, Nixon converted publicly and formally to "full employment balanced budget" principles and the defense of these principles took a significant part of his political discourse, reaching a 50% level. A similar behavior is found under Ford and Carter presidencies. Another change of political option emerges with Ronald Reagan presidency, as this argument is completely passed over in his discourse (not even one statement during all his second term). By contrast, George Bush tends to justify the use of deficits for anticyclical purposes, but this argument occupies a marginal place in his discourse (12%). It is quite interesting to see that a Democrat like Clinton has completely ignored the role of deficit financing on business cycle. This result, maybe facilitated for some years by the favorable economic outlook, tends to confirm nevertheless the strong attachment to fiscal discipline principles, as shown in figure 3 to 5. This argument comes back into the discourses with George W. Bush. During the first term, the need of deficits was advocated as means to fight against recession, in a pure Keynesian style. During the second mandate, deficits were preferred to increases of taxes in order to promote growth. Even if this position is opposed to a fiscal conservative approach, the argument was not anymore based in Keynesian proposals, but in the Supply-Side Economics approach.

The final major normative argument on deficits is related to the choice between tax and deficits: to rise or not to rise taxes in order to eliminate accidental or structural deficits.

This question has been a major open issue between the beginning of the period till the end of the 1960s, with an average use of this argument ranging from 15% to 25% inside this period. The presidents have used this argument in both ways, once supporting, other times attacking with it fiscal conservatism principles.

Concentrating the analysis to the first 40 years of the period, as they are more significant, pre-Great Depression statements systematically favored the increase of taxes option against further deficits, when needed. This position changes again radically with first term Roosevelt proposals, even if he does not tend to give much place to this argument in his discourse. A mixed position follows in second and third term (war finance efforts are partly supported by extraordinary taxes). This argument appears to be crucial in Truman's Presidency, as it represents more than a quarter of total arguments. His position is basically favorable to raise taxes in order to reduce deficits and debt. This attitude is in concordance with a typical post-war implicit public finance contract. Identical position is followed by Eisenhower, who faces also the War of Korea effort. Like with other arguments, we find here a breakpoint with Kennedy Presidency, with a clear change in preferences concerning the relationship between tax and deficits, even if this argument takes a minor share of his discourse. The same happens during Johnson first term, while another turning point appears in his second mandate, as he defends then tax raises in order to limit deficits, inside and anticyclical framework. This argument disappears from Nixon discourse, and it is marginal inside Ford and Carter public interventions. Even if it is not a major argument in Reagan and George Bush discourse, it is again interesting to identify the specificity of their discourse. Those presidencies (altogether with George W Bush discourse) are basically the only cases where there is not a tight relationship between the index of fiscal conservatism of this index and the general index of fiscal conservatism (figure 5). The coefficient of

correlation of both series is 0.625. If we drop from the calculus Reagan, George Bush and George W. Bush observations, the coefficient increases to a value of 0.823, which shows that those observations follow clearly an anomalous behavior. This specific profile is due to the adoption by these Republican presidents in their discourses of the supply-side economics principles and Laffer curb fiscal recommendations. Clinton is clearly opposed to these views.

After having presented the main results concerning the use made by Presidents of normative arguments, we move now into the territory of positive arguments which, as mentioned in section 2, are mainly related with the different stages and elements of the budget process.

The main singular positive argument is in fact a composite argument. It refers to the last family of positive arguments listed in table 2, about the political diagnosis of present and past budgetary situation (argument type *O* in table 2). It can be satisfactory ("thanks to our commitment or the right measures taken, our fiscal position is now favorable") or critical ("because of our past or present wrong decisions, we are now in severe fiscal conditions", and most of the times, "because other present or past wrong decisions, we are now in a severe fiscal condition"). This is a kind of melting pot argument, as the list of specific actual "right" or "wrong" decisions can be as rich as real life is. That is why we do not try to summarize which were the main themes present in the debate during these last 80 years. We just comment how important this argument has been in the structure of the presidential discourse.

This argument reaches a maximum use of 37% of all statements under Roosevelt Presidency. This peak is related with the wrong management of 1937 expansion period which lead to his view to an undue recession the following years. Other relative peaks are attained under last years of Truman Presidency (20% level), who reproached the

lack of support of Congress run by a Republican majority in passing some tax laws proposals considered essential. Another significant mark is reached by Kennedy in 1961 (20% level). It corresponds to Kennedy attacks to Eisenhower fiscal policy choices, as a way to reinforce his unprecedented fiscal proposals. Finally, it is interesting to notice that no one critical diagnosis statement has emerged during the 8 years long Clinton Presidency.

Satisfactory diagnoses were coherently almost absent during the Great Depression years. A higher level of utilization of these arguments appears with first Eisenhower presidential years (some 30% of all diagnosis statements were positive). We find a continuous insistence on this kind of argument under all Reagan Presidency, as half of his diagnosis statements were judged positive. This rhetorical conviction that budgetary decisions and situation were in good shape is quite disconcerting, as it is in sharp contrast with the unstoppable increase of public deficits occurring at that moment. We find again that Reagan political discourse is special under almost all parameters. We find a certain relation, even if not strong between the percentage of statements referring to satisfactory diagnosis and the actual situation of public finance, measured by the ratio deficit/GDP. The coefficient for the period 1930-2008 is 0.141, but it could be clearly higher if we drop from the series the Reagan's observations. The coefficient of correlation reaches then a value of 0.225, which confirms that Reagan discourse choices go against the general trend. President Clinton, with a share of positive diagnosis of 40%, confers also a great importance to this argument in order to support his budgetary decisions. George W Bush does not use almost at all this kind of rhetoric argument in his discourses.

Concerning the other individual positive arguments considered in table 2, we shall comment the figures of those arguments which have been a significant importance in the political discourse at least for some presidents.

The argument related to budget planning and multi-annual adjustment plans (argument *H* in table 2) appears in the political discourse only in the 1970s (with just 2% of all statements), with the introduction of mid-term economic and budgetary forecasts. It was important in second Reagan's term (7%), and crucial during George Bush Presidency (15%). It corresponds to the implementation of different adjustment plans, like OBRA. In spite that the aim of such programs is a progressive deficit reduction and final elimination, our empirical results show that they play an ambiguous role, at least at discourse level. The index of fiscal conservatism associated to this argument is -2.72 for Ronald Reagan, and 0 for George Bush. This means that many times the existence of an adjustment plan has acted more as a way to legitimate actual deficits (because they were in line with the plan) than to use the plan as an extra argument to fight against deficits. These results are coherent with other empirical papers which find a weak relationship between multi-annual budgeting and fiscal discipline. In contrast with his predecessors, Clinton's statements using this argument were effectively oriented to support fiscal discipline (an index of +6.36 during Clinton first term). George W Bush uses again the argument of planned deficit reductions as a way to make present deficits more acceptable.

The argument related to the existence or the call for introduction of budgetary rules whose main aim is to control or to impede deficits (argument *F* in table 2) was present during 1920s political discourse (4% of all statements), and was associated to the repayment of the First World War debt. No more references to this argument will be made during an interval of almost 50 years, with the sole Kennedy exception (1%).

Since Ronald Reagan Presidency, it presents an almost identical profile that the argument analyzed just before, with peaks during Reagan's second term and George Bush (7% of all statements). This increase of interest for this argument reflects Presidents' proposals of a budgetary process reform based on the introduction of a Constitutional Amendment for a Balanced Budget and the introduction of the Presidential line-item veto. This arguments is present in his son's second term discourses, as he also advocated the adoption of the line-item veto and the reform of the so-called earmark practices, those items that according to the President, "are slipped into big spending bills or committee reports, often at last hour, without discussion or debate" (H. Doc. No 110-84, p. H563).

Next argument refers to the call to budgetary tradition (argument *M*, table 2), to past budgetary records in order to fight or, conversely, to justify, present deficits. It has played a certain role in Roosevelt discourse (5% of all statements), always as a means to minimize the extent of problems related to deficits (an index of -10). It was also used by Kennedy and Johnson (ranging between 2% and 6%), also in the same approach opposed to fiscal discipline. The same occurred with Carter, Reagan and George Bush use of this argument, all of them using this argument in some 2% of their statements. Again by contrast, Clinton made reference to this argument in order to maintain the stimulus to struggle against deficits, increasing also its importance in his discourse (8% of all statements).

The argument about budgetary transparency (argument *J* in table 2), refers to how Presidents present budgetary outcomes, trying to show a dark vision of the situation in order to reinforce the need of a fiscal adjustment using the less favorable accounting measure of deficits and debt (pro fiscal discipline approach) or, in the opposite, using an accounting presentation to apparently diminish the extent o actual deficits (statement

against fiscal discipline). This argument can also be used as a critique to political rival's practices (the Congress or past Presidents).

Roosevelt fluctuated during his presidency concerning the intensity of use of this argument as well as for the direction given to the argument in fiscal discipline terms. Eisenhower, during his second term in which he extensively used this argument (6% of all statements), tended to show a more favorable vision of budgetary outcomes than actual. Kennedy, which also referred many times to this argument (2% level), did it in an ambiguous way concerning its effects on fiscal discipline. The same happened with Johnson. Ford used systematically this argument in order to minimize the extent of deficits. This argument has played a minor role since then.

5. Conclusions

We have shown in this paper an important amount of information concerning fiscal policy and preferences from US Presidents since 1920. The lecture and quick interpretation of these results are in strong concordance with prior views to any person familiar with US recent fiscal policy history. The apparent lack of "empirical surprises" in relation with expected results is not a disappointing outcome but is, to our view the main strength and contribution of this paper. We reach this coherence with other researchers' findings in a rather heterodox and strange approach: by analyzing what the main actors of this policy publicly said when they were at office; by using a "read my lips" approach. If the coherence of the results proposed in this paper is convincing enough, this should lead to two parallel corollaries: first, that public political discourse presents a clear internal coherence; second, that the methodology of discourse analysis proposed is able to catch the basic lines of political commitment towards fiscal discipline as publicly manifested by policymakers.

This to our view an exciting outcome, as this research produces measurable values concerning the position of each President related to fiscal discipline and not only merely vague opinions or feelings on what their position was on this issue. The measurability of the results attains even the level of individual family of arguments related to the use of deficits, which clearly reinforces the possibility of understanding the ideological, political and economic determinants of political attitudes toward fiscal discipline. We think that the present paper provides a quite astonishing clear picture of what fiscal discipline attitudes have been reflected during the last crucial 80 years of US budgetary history, and opens the way to further developments based on these results.

As for the nature of the political commitment towards fiscal discipline, it clearly appears that it can not be reduced to a simple deterministic product of economic conditions or President's party affiliation. The long time series under study show us a high number of departure exceptions to this simply relationship. For instance, with presidents from the same party with different fiscal discipline attitudes; presidents who dramatically change the tenure of their discourse one year from another; presidents who differently react to economic slowdowns and recessions, and so on. This is why we are prone to consider that political discourse determinants are much more sophisticated. Being this the case, research strategies where the measure of political commitment or manifested preferences are finally substituted by other proxy variables like party affiliation could then suppose a significant loss of explanatory power or even a loss of pertinence. Even if the measurement of political commitment represents a demanding task, our results suggest that the scientific benefits are probably higher.

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