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# The economic power of veto players – the connection between fiscal policies, and political systems

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## Abstract

The present paper explores the correlation between political systems, and fiscal policies, very much in the footsteps of the seminal work by Roubini and Sachs (1989), thus focusing on the relative dispersion or concentration of political power as the main political characteristic. The principal theoretical goal is to predict those changes in fiscal policy that may be induced by modifications in the partisan structure of political systems, as compared to cross-sectional differences between constitutional systems. Following the distinction between the cash-based, and the accrual based approach to public finance, the paper attempts to study the government's fiscal stance as capital balances, besides treating the current flows. The theoretical model introduced in this paper attempts to define the possible appropriation of liquid assets in the public sector, starting from the basic fiscal equation. Empirical research presented consists of both a quantitative, econometric part, and qualitative case studies. The classification of political systems is based on the distinctions introduced in the Database of Political Systems, as published by the World Bank. Said distinctions regard the possible concentration of power in the hands of a president, and the degree of proportionality in the electoral regime; they form the constitutional frames of the political system. The degree of political polarization regarding economic policy is the main measure of partisan fragmentation. Quantitative research allowed concluding that political systems do differ as for the amount of liquid capital held by the public sector. Three broad clusters of countries were defined, regarding their political systems, and these clusters display a significant disparity as for the observable fiscal stance. Case studies sampled from those clusters lead to conclude that the amount of liquid assets held by the public sector changes in close correlation to political polarization. The main path open for future research is the question whether fiscal variables can indicate pre-emptively the emergence of political veto players, even before their official appearance in the partisan, or the constitutional structure.

## 1 Introduction

Research on fiscal policy encompasses the issue of the so-called structural factors of the government's fiscal stance. The "structural factors" in question refer, to a great extent, to the characteristics of the political system in place. In 1989, Roubini and Sachs introduced the concept of structural debt to GDP ratio, as opposed to the cyclically determined one (Roubini, Sachs 1989<sup>1</sup>). They made a connection between that structural tendency to indebtedness, on the one hand, and the characteristics of the political system in place - more specifically to the relative strength of the government in wage bargaining. The more dispersed political power, the lesser that strength, and the greater proneness to the accumulation of public debt. In empirical terms, that theoretical construct was used to explain increasing, but unevenly increasing public debt in the developed countries over the 1970s and the 1980s.

A substantial body of research focuses mostly on the cyclical factors of fiscal policy, and, in the same time, on the normative approach to said policy. We can designate this approach as macroeconomic optimization of public policies. In this intellectual stream, the main question is: what should the fiscal policy consist in, in order to be optimally or nearly optimally efficient (see for example: Arestis, Sawyer 2003<sup>2</sup>, Arestis 2009<sup>3</sup>).

Macroeconomic optimization of public policies assumes that fiscal policy consists most of all in managing the current macroeconomic forces that impact the fiscal performance. Basic fiscal aggregates – spending, tax revenues and debt – are supposed to be the cumulative effect of a series of current, short term adaptations, on the part of the government, to the macroeconomic situation at hand. In this view, budgetary deficit happens or increases when the government fails to match its spending to tax revenues. An implicit assumption here is that the null fiscal balance, with spending equal to tax revenues, is the fiscal equilibrium. Any departing from that heavenly state is a symptom of disequilibrium. Consequently, public borrowing is a compensatory action on the part of the government, to stay financially liquid when in financial distress.

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<sup>1</sup> Roubini, N., Sachs, J., 1989, Government Spending and Budget Deficits in the Industrialized Countries, *Economic Policy*, 8, pp. 700-32

<sup>2</sup> Arestis, P., Sawyer, M., 2003, *Reinventing Fiscal Policy*, The Levy Economics Institute and the University of Leeds, Working Paper No. 381

<sup>3</sup> Arestis, P., 2009, *New Consensus Macroeconomics: A Critical Appraisal*, The Levy Economics Institute and the University of Leeds, Working Paper No. 564

In political sciences, this approach to fiscal policy is somehow reflected in the so-called “pork barrel theory” (see for example: Weingast et al. 1981<sup>4</sup>), which states that the relative disparity of interests among social groups represented in the political system impacts government expenditure. Just as more different pigs means the necessity of a bigger barrel to feed them, a greater diversity of social interests represented in the political system means more money necessary to satisfy them. That relationship has its source in the phenomenon of political bargaining between various agents inside the government. The “*I-do-something-for-your-voters-if-you-do-something-for-my-voters*” pattern of policy making is widely known, and the pork barrel theory associates it with fiscal policies. Once more, just as in the macroeconomic optimization of fiscal policies, we come to the implied assumption that there is a hypothetically efficient fiscal policy (probably associated with null budgetary deficit). Both the cyclical economic factors, and the political bargaining may deviate the actual fiscal policy from that state of equilibrium.

Both the macroeconomic optimization of fiscal policies, and the pork barrel theory in political sciences refer to the concept of efficiency in public policies. Going even more in depth of their assumptions, one can see that efficiency of public policies is evaluated on the grounds of macroeconomic outcomes. In other words, in this perspective, governments are par excellence subservient to their nations. That, of course, reflects some aspects of public policies, yet not all of those aspects. There is a theoretical stream in macroeconomics, designated sometimes as the theory of endogenous growth, which points at an interesting paradox: governments are systematically counter-rational in their fiscal policies. They conflate their deficits in the times of prosperity, whilst they should benefit of said prosperity to buckle up their accounts a little. Conversely, our rulers consistently try to reduce their deficits in times of cyclical crises, when the last rational thing to do is to cut on government spending (see for example: (np. Barro 1990<sup>5</sup>; King, Rebelo 1990<sup>6</sup>; Turnovsky 2000<sup>7</sup>; Afonso, Claes 2007<sup>8</sup>).

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<sup>4</sup> Weingast, B. R., Shepsle, K. A., Johnsen, C., 1981, The Political Economy of Benefits and Costs: A Neoclassical Approach to Distributive Politics, *The Journal of Political Economy*, vol. 89(4), pp. 642-664

<sup>5</sup> Barro, R., 1990, Government spending in a simple model of endogeneous growth, *Journal of Political Economy*, no. 98, pp. 103-125

<sup>6</sup> King, R., Rebelo, S., 1990, Public policy and economic growth: developing neoclassical implications, *Journal of Political Economy*, no. 98, pp. 126-150

<sup>7</sup> Turnovsky, S., 2000, Fiscal policy, elastic labour supply and endogenous growth, *Journal of Monetary Economics*, no. 45, pp. 185-210

<sup>8</sup> Afonso, A., Claes, P., 2007, The Dynamic Behaviour of Budget Components and Output, European Central Bank, Working Paper Series, no.775, July 2007

Macroeconomic optimization is excellent for normative purposes, to show the most efficient direction for public policies. Yet, it is a poor predictor of actual public policies, as governments consistently depart from the golden path. As the point of any theory is prediction, some theory is needed to predict the actual public policies. Governments are power, governments have power and they use that power for their own, egoistic purposes: this is the point of view to find in the theory of Max Weber, as well as in the systems theory of Niklas Luhmann, and in the theory of discursive legitimation of Jürgen Habermas. Among other components, public policies express egoistic political power in action.

James Buchanan was probably one of the first economists to show a systemic approach to the interaction between fiscal policy and politics, with a focus on the descriptive side of the problem (see: Buchanan 1976<sup>9</sup>; Buchanan, Wagner 1977)<sup>10</sup>. This path of research, attempting to make a theory about that interaction, has been developing steadily over the last three decades, yet staying more or less in the shadow of the cyclically-oriented school in the research about fiscal policy (see for example: Schick 1998a<sup>11</sup>; 1998b<sup>12</sup>).

The main outcome of studies at the frontier of politics and macroeconomics is that the fiscal adaptation to cyclical economic factors is always limited in its breadth and scope by structural attributes of the political system. The works of Alberto Alesina and Roberto Perotti, among others, attempt to delve into the fine details of politics at the level of public finance (see for example: Alesina, Perotti 1995a<sup>13</sup>, 1995b<sup>14</sup>, 1996<sup>15</sup>).

The present paper attempts a contribution to constructing theoretical tools for the prediction of actual fiscal policies, according to the characteristics of the political system in place, and according to the future possible changes in that system. In other words, some kind of fiscal function of the political system looms at the horizon. The first, and probably the most important question is whether at all, and for what reasons should we consider the characteristics of political systems as structural, regarding fiscal policies,

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<sup>9</sup> Buchanan, J., 1976, Barro on The Ricardian Equivalence Theorem, *Journal of Political Economy*, no. 84, April 1976, pp. 337 - 342

<sup>10</sup> Some scholars question the connection between the concept of „Ricardian equivalence”, and David Ricardo’s work. See for example: O’Driscoll, G.P., 1977, The Ricardian Nonequivalence Theorem, *Journal of Political Economy*, no. 85, February 1977, pp. 207 - 210

<sup>11</sup> Schick, A., 1998, A Contemporary Approach to Public Expenditure Management, World Bank Institute

<sup>12</sup> Schick, A., 1998, Why Most Developing Countries Should Not Try New Zealand’s Reforms, *The World Bank Research Observer*, Vol. 13, No. 1 (Feb., 1998), pp. 123-131

<sup>13</sup> Alesina, A., Perotti, R., 1995, Reducing Budget Deficits, May 1995, revised: September 1995, prepared for the conference “Growing Government Debt – International Experiences”, Stockholm, June 1995

<sup>14</sup> Alesina, A., Perotti, R., 1995, Fiscal Expansions and Adjustments in OECD Countries, First version: April 1995, Revised: June 1995, Prepared for the Economic Policy Panel, April 1995

<sup>15</sup> Alesina, A., Perotti, R., 1996, Fiscal Discipline and the Budget Process, *American Economic Association Papers and Proceedings*, vol. 86, no. 2, Balanced – Budget Rules, pp. 401-407

and oppose them to cyclical factors like inflation, exchange rates or unemployment. In other words, are politics really more “structural” than, for example, the patterns observable in the labour market or in the stock exchange? After all, and especially in the case of developed countries, the long terms trends of inflation or unemployment are frequently more predictable than public policies and political institutions.

Three intuitive distinctions seem to underlie the general, theoretical dichotomy between the cyclical and the structural factors of fiscal policies. Firstly, macroeconomic changes impact the actual tax revenues. The same tax base yields different tax revenue, and creates various pressures for public borrowing, according to the rate of inflation, economic growth and unemployment. Secondly, it is possible to demonstrate econometrically that in the overall variance of the actual fiscal balance there is a part clearly attributable to the variance of macroeconomic factors. The remaining residual is called “structural balance”. Thirdly, there is the “exogenous <> endogenous” dichotomy. We tend to consider political factors as structural just because we see them as inherent to the given, national social system. On the other hand, factors that we use to call cyclical (inflation, unemployment etc.) are perceived as at least partly exogenous and imposed by global economic trends.

That last distinction (i.e. endogenous <> exogenous) seems to be the soundest approach, yet there is a theoretical doubt to elucidate. If political factors were considered to be strictly endogenous, there would be no point in any cross-sectional comparison, or in any congruent measurement of political characteristics (see for example: Almond 1956<sup>16</sup>). There is need for some kind of common denominator(s) in political systems. That common denominator is to be found both in the classics, and in the most recent developments. As for the classics, there is an old claim, postulated by Francois Quesnay, Adam Smith, David Ricardo, and Jean Baptiste Say: public spending is rather a form of circulating capital than a financial flow strictly spoken. The assumption that governments manage capital balances rather than flows seem to be constantly present in the discourse about public policy. The French historical school (see for example: Braudel 1981<sup>17</sup>), as well as to its newest developments in economics (e.g. Piketty 2013<sup>18</sup>) claim very much the same. Strangely enough, that assumption can be used for quite disparate argumentations, as, for example, those about the burden created by

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<sup>16</sup> Almond, A.G., 1956, Comparative Political Systems, The Journal of Politics, vol. 18, no. 3, pp. 391 - 409

<sup>17</sup> Braudel, F., 1981, Civilization and Capitalism, Vol. I: The Structures of Everyday Life, rev.ed., English Translation, William Collins Sons & Co London and Harper & Row New York, ISBN 00216303 9

<sup>18</sup> Piketty, T., 2013, Le capital au XXle siècle, Editions du Seuil, Paris

public debt. Both the advocates of debt seen as a burden (e.g. Meade 1958<sup>19</sup>; Modigliani 1961<sup>20</sup>; Diamond 1965<sup>21</sup>), and the partisans of the so-called Ricardian equivalence (Sraffa 1951<sup>22</sup>; Barro 1974<sup>23</sup>, 1979<sup>24</sup>, 1986<sup>25</sup>, 1987<sup>26</sup>, 1989a<sup>27</sup>, 1989b<sup>28</sup>; 1976<sup>29</sup>) implicitly assume that public borrowing creates some sort of additional liquidity in the capital balances of the economy. As far as public debt is concerned, it is interesting to point out that borrowing is essentially a legal tool for facilitating the transfer of capital. Once more, we return to the classics, and to Adam Smith's intuition that massive public borrowing takes place when there is a wealthy class of private owners with substantial financial surpluses to invest. In other words, governments borrow mostly because they can, not because they have to. Over 80% of the global, gross public debt is owed by 6 highly developed economies: United States, Japan, Germany, France, United Kingdom, and Italy. One possible interpretation of this stylized fact is that the biggest economies absorb the major part of global macroeconomic shocks, and thus accumulated the greatest mass of public debt. Still, another explanation is possible. In the times of economic shocks, investors are risk averse; they turn massively away from risky investment in productive assets and shift their investment towards much less risky sovereign debt. Hence, massive accumulation of public debt occurs not only as a symptom of financial distress on the part of the governments, but also as a shift in investment strategies played in financial markets.

Thus, we face those two possible approaches to fiscal policy. It can be viewed as the management of current flows, with the null fiscal balance being the state of equilibrium. Conversely (or complementarily), fiscal policy may be considered as public management of capital balances. Here we come back to the connection between political systems, and fiscal policies. Roubini and Sachs argue that political systems differ in their inherent

<sup>19</sup> Meade, J., E., 1958, Is the National Debt a Burden, *Oxford Economic Papers*, Volume 10, Issue 2 (Jun., 1958), pp. 126 - 150

<sup>20</sup> Modigliani, F., 1961, Long-Run Implications of Alternative Fiscal Policies And the Burden of the National Debt, *Economic Journal*, no. 71, pp. 730 - 755

<sup>21</sup> Diamond, P., E., 1965, National Debt in a Neoclassical Growth Model, *The American Economic Review*, volume 55, issue 5 (Dec., 1965), pp. 1126 - 1150

<sup>22</sup> Sraffa, P., 1951, *The Works and Correspondence of David Ricardo*, Volume IV, Pamphlets and Papers, 1815 - 1823, „Funding System“, Cambridge, Cambridge University Press

<sup>23</sup> Barro, R.J., 1974, Are Government Bonds Net Wealth?, *Journal of Political Economy*, no. 82, November/December 1974, pp. 1095 - 1117

<sup>24</sup> Barro, R.J., 1979, On The Determination of the Public Debt, *Journal of Political Economy*, no. 87, October 1979, pp. 940 - 971

<sup>25</sup> Barro, R.J., 1986, U.S. Deficits Since World War I, *Scandinavian Journal of Economics*, 1986, vol. 88 no.1, pp. 195 - 222

<sup>26</sup> Barro, R.J., 1987, Government Spending, Interest Rates, Prices and Budget Deficits in the United Kingdom, 1701 - 1918, *Journal of Monetary Economics*, September 1987, no. 20, pp. 221 - 247

<sup>27</sup> Barro, R.J., 1989, *The Neoclassical Approach to Fiscal Policy*, w: Barro, R.J. (ed.), 1989, *Modern Business Cycle Theory*, Cambridge, Harvard University Press

<sup>28</sup> Barro, R., J., The Ricardian Approach to Budget Deficits, *The Journal of Economic Perspectives*, Vol. 3, no. 2, Spring 1989, pp. 37 - 54

<sup>29</sup> Buchanan, J., 1976, Barro on The Ricardian Equivalence Theorem, *Journal of Political Economy*, no. 84, April 1976, pp. 337 - 342



aptitude to deal with macroeconomic shocks: countries with more dispersed political power tend to be feebler in their response to such shocks than countries with noticeably more concentrated political power. Conversely, the present paper argues that political systems differ in their fiscal stances mostly because there is a close match between political systems, and the amount of capital those systems need to work. In that respect, the research follows the theoretical path set by Barry Weingast and his claim that political systems work to a large extent as a game of claims on capital, played between public and private agents (see for example: Weingast 1981<sup>30</sup>, 1995<sup>31</sup>). The present paper claims that each individual political system rests on a specific amount of legitimation conferred to public rulers through a long-term, discursive process, as well as on a specific appropriation of capital by the public sector. Jurgen Habermas's theory of politics (Habermas 1975<sup>32</sup>, 1979<sup>33</sup>, 1996<sup>34</sup>), and Nancy Fraser's concept of "strong publics" (Fraser 1990<sup>35</sup>) are an additional theoretical reference in that respect. Appropriation of capital is understood as such a natural possession of capital, which through its duration and autonomy from external claims allows the appropriation of capital rent.

Two interesting intellectual streams have been emerging recently, and they seem quite promising for the purposes of the present research: the theory of veto players, and the initiative known as the Database of Political Institutions. The theory of veto players, as introduced by George Tsebelis (see for example: Tsebelis 2002<sup>36</sup>), characterises the current state of any political system through its relative capacity for policy change, or, conversely, its tendency to preserve the status quo. Any status quo has its counterpart in the so-called winset, which is the set of its realistically taken alternatives. The success of any policy, whether in favour of the status quo, or of its winset, stems from the number and strength of veto players, who support it. Veto players are "*individual or collective actors whose agreement is necessary for a change of the status quo*". The current status quo rests on the unanimity core, or the set of actions that meet common agreement of all the veto players. As they all agree about the policies contained in the unanimity core,

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<sup>30</sup> Weingast, B., 1981, Regulation, Reregulation, and Deregulation: The Political Foundations of Agency Clientele Relationships, Law and Contemporary Problems, Vol.44, No.1, pp. 147 - 177

<sup>31</sup> Weingast, B., 1995, The Economic Role of Political Institutions: Market Preserving Federalism and Economic Development, The Journal of Law, Economics, and Organization, Vol. 11, No.1, pp. 1 - 29

<sup>32</sup> Habermas, J., 1975, Legitimation Crisis, translated by T.McCarthy, Boston, 1975

<sup>33</sup> Habermas, J., 1979, Communication and the Evolution of Society, translated by T.McCarthy, Boston 1979

<sup>34</sup> Habermas, J., 1996, Between Facts and Norms. Contributions to a Discourse Theory of Law and Democracy, MIT Press, Cambridge, Massachusetts, translated by William Rehg, Second Printing

<sup>35</sup> Fraser, Nancy (1990), Rethinking the Public Sphere. A Contribution to the Critique of Actually Existing Democracy, *Social Text*, vol. 25/26, pp. 56-80

<sup>36</sup> Tsebelis, G., 2002, *Veto players: How political institutions work*, Princeton University Press.

non of them supports any change to it. The more veto players are there in the political system, the larger is the unanimity core, and the least is the likelihood of policy change. In other words, more veto players give more inertia to current policies. Veto players can emerge or disappear through a twofold mechanism of institutional change. Firstly, they can be institutional veto players, designated as such through the legal rules of the constitutional order. Secondly, they can emerge as partisan veto players, i.e. political forces that form within the space given to political rivalry by the given set of constitutional rules. Ideological distances between individual veto players are just as important for the formation of policies, as the constitutional division of powers. For example, the ideological distance between the president in office, and the majoritarian party in the parliament may influence the policy making just as strongly, as would do the constitutional partition of powers between the president, and the parliament. A substantial body of research claims that the partisan fragmentation within a given constitutional framework has significant impact upon public policies (Weingast et al. 1981<sup>37</sup>; Mukherjee 2003<sup>38</sup>; Bawn and Rosenbluth 2006<sup>39</sup>; Eslava, Nupia 2010<sup>40</sup>).

The theory of veto players seems to be one of the theoretical pillars of the Database of Political Institutions, (DPI), as published by the World Bank (Beck et al 2001<sup>41</sup>; Keefer 2012<sup>42</sup>). The DPI attempts a long-expected classification of political systems. The main axes of discrimination seem to be internal diversity, and stability. The former refers to variously measured number of distinct veto players, both constitutional and partisan. As for structural stability, it is the opposite of democratic competition in the system.

Constitutional orders change slowly, and not very frequently. On the other hand, the partisan structure of political systems may change much faster. An interesting question appears in that context, namely whether at all and to what extent can a change in the partisan structure within a given constitutional order impact the pattern of capital appropriation in public agents, and what overall changes in fiscal policy can such a change provoke. This is the predictive issue that the present paper attempts to explore.

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<sup>37</sup> Weingast, B. R., Shepsle, K. A., Johnsen, C., 1981, The Political Economy of Benefits and Costs: A Neoclassical Approach to Distributive Politics, *The Journal of Political Economy*, vol. 89(4), pp. 642-664

<sup>38</sup> Mukherjee, B., 2003, Political Parties and the Size of Government in Multiparty Legislatures: Examining Cross-Country and Panel Data Evidence, *Comparative Political Studies*, vol. 36(6), pp. 699-728

<sup>39</sup> Bawn, K., and Rosenbluth, F., 2006, Short versus Long Coalitions: Electoral Accountability and the Size of the Public Sector, *American Journal of Political Science*, vol. 50 (2), pp. 251-265

<sup>40</sup> Eslava, M., Nupia, O., 2010, *Political Fragmentation and Government Spending: Bringing Ideological Polarization into the Picture*, Universidad de Los Andes, Facultad de Economía, Centro de Estudios sobre Desarrollo Económico, ISSN 1657-5334

<sup>41</sup> Beck, T., Clarke, G., Groff, A., Keefer, P., Walsh, P., 2001, New Tools in Comparative Political Economy: The Database of Political Institutions, *The World Bank Economic Review*, vol. 15, no. 1, pp. 165-176

<sup>42</sup> Keefer, P., 2012, Database of Political Institutions: Changes and Variable Definitions, Development Research Group The World Bank, December 2012

## 2 The theoretical model

The theoretical model of the issues studies aims at showing, how exactly does the process of capital appropriation in the public sector take place. The starting point is the basic fiscal equation, namely: *revenues + borrowing = expenditures*. That basic equation is modified for the purposes of the present research, by adding a second component on the right side, namely capital accumulation. Equation (1) formalizes this modified view, where T stands for revenues (which are usually and for the major part made of tax revenues),  $\Delta D$  means current borrowing or the change in the overall gross public debt, E represents gross expenditures of the government, and  $\Delta C$  is the change in capital held by the government.

$$T + \Delta D = E + \Delta C \quad (1)$$

Equation (1) follows the stylized fact that most governments, whatever their current fiscal flows, hold some capital goods other than the strictly spoken financial means necessary to finance current expenses. The right side of the equation represents the numerical outcome of a structure at work. The structure in question is made of four types of public entities, namely: budgetary units, public executive agencies, public targeted funds, and public-private partnerships. Budgetary units are the building blocks of the strictly spoken administrative structure in the public sector. They are fully financed through the current budget of the government, and fully accountable within one fiscal year. They use capital only for financing current expenditures, and their appropriation of capital is based on the “*use it or lose it*” rule within the real budgetary cycle. The latter means that the next year budget is drafted during the second quarter of the preceding fiscal year, and voted in the fourth quarter. Hence, the full cycle of capital appropriation in budgetary units is actually rather two fiscal years than one. The institution of consolidation in current public accounts can create an additional, shorter cycle of capital appropriation in budgetary units. This institution consists in the right, conferred usually to the Minister of Finance or other organ in charge of Treasury matters, to consolidate all the temporarily available, financial balances of budgetary units on one account, and to use that account for short-term, financial placements (e.g. overnight deposits).

Public executive agencies follow specific missions ascribed by specific laws distinct from the budget, and from the regulations of fiscal governance. These laws form the legal basis of their existence. The mission of executive agencies usually consists in carrying out long-term tasks connected to large non-wage expenditures. The distribution of targeted subsidies, or the maintenance of strategic reserves of food or medicines are good examples. Public executive agencies have more fiscal autonomy than budgetary units: they receive subsidies from the current budget, but these subsidies usually do not make the full financial basis of their expenditures. In the same manner, those agencies can retain their current financial surpluses over many fiscal years. In other words, the financial link of executive agencies with the current fiscal flows is fluid and changing from one budgetary cycle to another. The cycle of capital appropriation in executive agencies is essentially equal to their actual lifecycle as separate units.

Targeted public funds are separate public entities in charge of managing specific masses of capital paired with specific public missions to carry out. Just as executive agencies, targeted funds have a separate legal basis of their own. Their specificity consists in quite a strict distinction in their accounts: all the current costs of governance should be covered out of the financial rent of the capital managed, and the possible budgetary subsidies should serve only to back up the financial disbursements directly linked to the mission of the given fund. The distinction between executive agencies and targeted funds may be fluid: some agencies are de facto funds, and some funds are actually agencies. The central assumption to retain is that both appropriate capital quite independently from the current budgetary cycle.

Public-private partnerships are joint ventures, through which private agents are commissioned to carry out specific public missions, in exchange of subsidies, direct payments or specific rights. One of the most obvious examples are contract-based healthcare systems, in which private providers of healthcare services are commissioned to fulfil the constitutional mission of the state to provide for citizens' health. More subtle schemes are possible, of course. Private agents may provide, with their own financial means, for the creation of some infrastructure commissioned by the government, and their payment is the right to exploit said infrastructure.

The point of all that structural specification is to demonstrate that the broad category of fiscal flows that we use to call "public expenditures" (mostly for the sake of convenience) is actually a financial compound. It covers both the expenditures strictly

spoken (i.e. current payments for goods and services), and capital outlays that accrue to many different pockets of capital appropriated by public agents in many different ways. Capital accruals have different cycles, ranging from the ultra-short (days or weeks) cycle of consolidated accounting in budgetary units, passing through the mid-range cycle of appropriation in executive agencies and public-private partnerships, up to the frequently many-decade long cycle of capital appropriation in targeted public funds. Each of those pockets of capital makes a unit of economic power, in the hands of some public agents. Each accrual to or from such a capital pocket means a shift up or down in the actual economic power of those agents. Equation (2) formalizes this step in theoretical development, with the acronyms BU, EA, TF, and PP standing, respectively for: budgetary units, executive agencies, targeted funds, and public-private partnerships. Equation (3) goes further in this path and states that the total stream of financial inflows to public treasury, through current revenues and current borrowing, is congruent with the sum of the strictly spoken public expenditures, and capital accruals in the public sector.

$$E_{BU} + \Delta C_{BU} + E_{EA} + \Delta C_{EA} + E_{TF} + \Delta C_{TF} + E_{PP} + \Delta C_{PP} = E + \Delta C \quad (2)$$

$$T + \Delta D = E_{BU} + \Delta C_{BU} + E_{EA} + \Delta C_{EA} + E_{TF} + \Delta C_{TF} + E_{PP} + \Delta C_{PP} \quad (3)$$

Following the distinction marked in equations (2) and (3), two basic models of budgetary accounting are possible: the cash-based on the one hand, and the accrual based one on the other hand. The cash-based model largely prevails in the world, and allows public agents to record officially their fiscal flows only when, and just when cash is spent or received, respectively as for public expenditures and public revenues. Conversely, the accrual-based model compels public agents to record fiscal flows when the corresponding economic events take place; in other words, it assumes that the emergence of liabilities or claims on the part of public agents is equivalent to actual cash flows. The cash-based system, still applied in the fiscal practice of most countries, allows public agents to keep some bills unpaid until the creditors become impatient in legal terms, thus to create an illusion of good fiscal performance in the meantime, and to pump up gross public indebtedness. Similarly, that system allows leaving some tax claims without actual enforcement, thus creating a discreetly governed system of

unofficial tax crediting for the chosen ones. In terms of the theoretical model of the present research, the cash-based system is the very foundation of all the small, semi-hidden pockets of capital present in the public sector. It also encourages the phenomenon known as budgetary slack, which consists in deliberate, financial underperformance on the part of public agents, in order to obtain or to retain more capital than they actually need to carry out the mission assigned (see for example: Jensen 2003<sup>43</sup>). On the other hand, the accrual-based system creates the obligation to consider liabilities and claims as actual flows, even if cash does not change hands. By the same means, it shaves off most of those little pockets of capital.

As for the left side of the fiscal equation, the present model assumes a deep, qualitative distinction between current public revenues (mostly taxation) and borrowing, understood as accruals. Public revenues are based on unilateral, valid claims on the part of the government. In a balance sheet, those claims are located among the liquid assets held by the public sector. Conversely, borrowing is a form of capital transfer, made on a contractual base. Public debt is a liability, and thus is to be found on the passive side of the balance sheet. Public debt of any given country is a mass of capital that has been transferred to the government, from the private sector. Even if the past borrowing had been spent long ago in cash flow terms, liabilities remain. That can be seen as liquidity transfer from the public sector to the private one: when governments borrow, and spend the capital borrowed, they pay for goods and services supplied by the private sector, but keep on endorsing the liability resulting from borrowing. It is important to remember, among others, that a substantial part of public spending, namely the wages of public officers, are technically paid to private persons employed at the corresponding jobs. Thus, the payroll of the public sector is a cash transfer to the private sector, too.

Summing up, the theoretical model applied in the empirical research presented further, assumes that the fiscal stance of any government represents two different types of financial occurrences: current flows and capital accruals. They can be partly independent from each other, and studied separately.

Any veto player in the political system derives their actual political power from two factors, namely political legitimation, and actual economic power conveyed by the natural possession of capital. Veto players in the political system temporarily

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<sup>43</sup> Jensen, G., 2003, *Zen and the Art of Budget Management: The New Zealand Treasure, Controlling Public Expenditure*, Northampton MA: Edward Elgar, pp. 30-56.

appropriate each capital accrual in the public sector. For the purposes of the present research, it is further assumed that said appropriation is significantly additive, i.e. the more veto players in the system, the more capital they need to support their political legitimization.

### 3 Quantitative empirical research

The basic idea behind quantitative empirical research introduced in this chapter was to verify the assumption that political systems differ with respect to liquid capital balances held by the public sector, and that changes in the partisan structure of the political systems are correlated to changes in those capital balances. The general empirical basis for this research was the Database of Political Institutions, (DPI), as published by the World Bank (Beck et al 2001<sup>44</sup>; Keefer 2012<sup>45</sup>). The DPI was the background, against which fiscal, and macroeconomic data was projected, mostly on the grounds of the World Economic Outlook database (WEO), as published by the International Monetary Fund in April 2015. A sample of countries has been selected so as to cover a broad range of cases, besides just the developed economies. The sample consisted of 77 countries, the list of which, in a structured form, is given in the Appendix (Table 1). Due to the limitations of that database, the general span of observation covered the years 1980 - 2012<sup>46</sup>.

#### 3.1. Classification of political systems

The first, somehow preliminary step of empirical research was to establish a classification of political systems, according to the previously introduced, theoretical distinctions. The classification of political systems for the purposes of the present research starts with the constitutional approach, and follows into the partisan one. In order to represent the basic constitutional structure of political systems, two variables have been selected in the rich structure of the Database of Political Systems. The first is the type of political system according to the presence and powers of the president,

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<sup>44</sup> Beck, T., Clarke, G., Groff, A., Keefer, P., Walsh, P., 2001, New Tools in Comparative Political Economy: The Database of Political Institutions, *The World Bank Economic Review*, vol. 15, no. 1, pp. 165-176

<sup>45</sup> Keefer, P., 2012, Database of Political Institutions: Changes and Variable Definitions, Development Research Group The World Bank, December 2012

<sup>46</sup> The general pattern of presentation in this paper is that the quantitative results in tabular form are grouped in the Appendix, at the end of the document.

coded in the DPI as 'system'. The second is the type of electoral competitiveness in parliamentary elections, covered by the variables 'plurality', and 'proportionality' in the DPI.

The distinction between presidential systems, and the parliamentary ones takes into account two main categories of veto players: institutional, and partisan. In other words, veto players can emerge and change their relative impact upon the system following to patterns: the regulatory, constitutional definition of their role, and the discretionary freedom of political action offered by that role. In presidential systems, the president is a strong veto player, and tends to concentrate power in their hands. Conversely, parliamentary systems are based on diversified and dispersed political power, without that one central veto player in the presidential seat. Systems with assembly – elected presidents are an interesting hybrid of the two, probably prone to balance towards the concentration, or the dispersion of political power, following the personal talents of the president in place.

The general assumption is that regimes with a strong component of electoral plurality favour “winner-takes-it-all” elections. This, in turn, promotes the interests of big, strong political parties, making them strong veto players, and reduces the veto playing positions of small parties. In other words, plural electoral regimes tend to reduce the overall number of partisan veto players, but they confer important impact to the players who manage to enter the scene. On the other hand, proportionality in elections allows a broader representation of small political parties and non-partisan representatives in the legislative body. That creates more veto players with more disparate political power.

As for the partisan structure of the political system, the most general variable in the DPI seems to be political polarization, more specifically: POLARIZ, and POLARIZ\_STRICT. They are compound variables, based partly competitiveness in the appointment of legislators and executives of the government (variables: LIEC and EIEC), and partly upon the maximum difference between the chief executive's party's value (EXECRLC) and the values of the three largest government parties and the largest opposition party. The latter valuation is made on the grounds of the basic distinction of economic programs into: conservative, Christian democratic, communist, socialist, social democratic, and centrist. We have  $POLARIZ = 0$ , when the democratic competitiveness is below a critical level, as well as when the ruling party does not focus on economic issues or when there



is no clear information. Otherwise, and according to doctrinal differences, the variable can take the value of 1 or 2.

The detailed composition of the sample of observations studied is given in the Appendix (Table 2). Here, a few general comments on that structure seem pertinent before passing to properly spoken quantitative analysis. Just as in the full contents of the DPI, the sample studied is dominated by three big clusters: plural electoral regimes in presidential systems with no observable polarization (N = 233 observations), plural electoral regimes in parliamentary systems, with no observable polarization as well (N = 205), and strongly polarized, parliamentary systems with proportional elections (N = 213). This clustering suggests that plural electoral regimes favour the formation of partisan structures around groups of interest rather than around ideological stances. That appears as a logical consequence of the “winner-takes-it-all” principle in plural elections, which favours big electoral funds and robust campaigns, and clearly discourages ideological discords. Those observable clusters are an indication for further quantitative analysis, to consider those three clusters as three dominant types of political systems.

Constitutional orders with assembly – elected presidents are very feebly represented in the sample: 57 observations across both electoral regimes and all the possible cases of partisan polarization. Hence, this category can be treated rather as an exception than an important case. Still, an interesting pattern emerges systems with assembly – elected presidents, namely the absence of moderately polarized partisan structures. This particular class of political systems displays either no polarization at all, or a very pronounced one. Thirdly, and this seems the most important for predictive purposes, countries studied tend to stay quite firmly within one pattern of constitutional order, over the period of observation, yet they frequently move between various cases of partisan polarization. Thus, it confirms one of the theoretical intuitions expressed in the introduction, namely that predicting the fiscal function of partisan political structures might have a greater practical value than the prediction of outcomes brought by constitutional changes.

### 3.2. Political systems and basic fiscal aggregates

The next step of empirical investigation was to follow the disparities of typical fiscal aggregates across political systems. Fiscal aggregates have been divided into two categories, namely current and capital, following the basic intuitions of the present research. The structural fiscal balance, gross public revenues, and gross public expenditures are classified as current aggregates, i.e. rather flows than balances. Conversely, gross and net public debt is considered as capital measures (balances rather than flows). The differential between gross and net debt, namely the amount of financial assets held by the public sector, is included in this category too<sup>47</sup>.

As for gross public revenues, parliamentary systems are clearly tax-greedier than the presidential ones (Table 3, Appendix). They also seem much more sensitive to political polarization: any increase in that respect is connected to significantly higher public revenues. Gross public expenditures follow a similar pattern, and yet, within each constitutional order, they seem much more sensitive than revenues to shifts in political polarization. The observation of structural fiscal balances seems to indicate that the shift from no observable polarization to moderate one has more impact than a further deepening of polarization from moderate to high.

Variables referring to capital accruals in the public sector display a significantly greater disparity across political systems than current flows do. In other words, the empirically observable differences between political systems as for their patterns of capital appropriation are noticeably more pronounced than differences referring to current fiscal management. It proves that the central assumption of the present paper is a material, real distinction worth further research (Table 4, Appendix).

Following the observable clustering of political systems in the sample studies, three “big” types are defined for the purposes of further empirical investigation. They are:

- a) **Cluster #1:** Presidential systems with plural elections, and no observable political polarization: structural balance -2,651% of GDP, gross public indebtedness 55,186% of the GDP, financial assets held by the public sector 9,151% of the GDP

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<sup>47</sup> The author is aware of the conceptual risk connected to that variable. Those financial assets include, for a large part, those held by central banks as monetary reserves. Thus, this could be a monetary variable rather than a fiscal one. Yet, the amount of those financial assets in public hands is not exclusively monetary, in the first place, and, secondly, it impacts significantly the fiscal, borrowing capacity of the government. Hence, this is a variable at the fringe of fiscal policy, and the rest of the economy.

- b) **Cluster #2:** Parliamentary systems with plural elections, and no observable political polarization: structural balance -3,643% of GDP, gross public indebtedness 70,739% of the GDP, financial assets held by the public sector 23,165% of the GDP
- c) **Cluster #3:** Parliamentary systems with proportional elections and high political polarization: structural balance -3,089% of GDP, gross public indebtedness 62,025% of the GDP, financial assets held by the public sector 46,771% of the GDP

The definition of those 3 clusters shows even more sharply the explanatory power of capital appropriation as a characteristic of political systems. The interesting, general observation is that cluster #1, which hosts the least veto players in the system, seems to be the most frugal in fiscal terms, both with respect to current fiscal management, and to capital appropriation. Any shift from this cluster, thus any addition of veto players, through constitutional rules or partisan polarization, is clearly associated to more profusion in fiscal stances. Considering constitutional and partisan distinctions as an overall indicator of the number of veto players in the system, we can roughly consider clusters #1, and #3 as the opposite poles of the scale, with cluster #2 found somewhere in the middle. Cluster #1 has probably the least veto players, cluster #3 has the most of them, and cluster #2 is a medium case. Following this intuition, the presence of more veto players in the political system is associated most of all to a much greater tendency of the public sector to accumulate liquid financial assets.

### 3.3. Socio-economic outcomes of fiscal policies

The next step in empirical research was to assess the impact of fiscal policies upon selected socio-economic phenomena, in different political systems. The phenomena in question are: a) the accumulation of private savings b) the allocation of said savings in productive assets (gross investment) c) the structure of the labour market, and more specifically the relative size of the so-called vulnerable employment d) primary completion rate in the educational system. Five explanatory variables have been selected to be included in a linear, multiple regression model, namely: the structural fiscal balance, gross public debt<sup>48</sup>, the amount of financial assets held by the

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<sup>48</sup> Preemptive, econometric tests showed that gross public debt and net public debt are mutually redundant in this regression. One of these two had to be selected, and the choice was gross public debt. It shows the total amount of capital transferred to the public sector of a country with the help of obligatory contracts.

government, gross public revenues, and gross public expenditures. Each of the explained variables has been regressed on the explanatory ones through the Ordinary Least Squares method. Standardized values of all the variables have been used, to provide for non-stationary trends. As for all the outcome variables, a constant residual was assumed to exist. The software used for statistical computations was Wizard for Mac OS. For each outcome variable, the results of regression in the general sample were compared with the three clusters identified in the previous subchapters<sup>49</sup>.

In the general sample (N = 721), the formation of gross national **savings** (as defined by the International Monetary Fund) in the private sector is under a significant influence of fiscal variables. The constant residual is negative: without the crowding out effect of fiscal policies, savings would display a downward trend. There is a clear, and mostly positive link between the expansion of fiscal aggregates and the accumulation of private wealth. Two interesting phenomena are to notice. Firstly, among all the fiscal aggregates taken into account the structural balance is the only one to display rather a weak link to the formation of private savings. Secondly, gross public revenues are positively linked to private savings, whilst public expenditures display a negative link. In other words, taxation seems to be positively linked to private wealth, whilst public expenditures are rather a substitute to private accumulation.

As the same regression is run in sub-samples defined according to the previously adopted classification of political systems, one central observation is to note: the strength of the econometric connection increases, both at the level of the overall  $R^2$  accuracy, and as for the t Student significance in particular variables. The link between fiscal policies and the formation of private savings seem to be system-specific. Interestingly, the overall explanatory power of fiscal variables grows as the cluster studied moves towards a greater number of veto players. A pattern emerges: the more veto players in the political system, the greater the impact of fiscal policy upon the formation of savings.

As the present research is very much oriented on capital appropriation in the public sector, gross public debt and financial assets held by the public sector deserve a closer look as explanatory factors. In the general sample, both have positive impact upon private savings. The influence of gross public debt seems relatively weak, while the accumulation of financial assets by public agents is a strongly positive and significant

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<sup>49</sup> Detailed results of regression tests are presented in tables 5 – 8, in the Appendix.

factor. When split into the three clusters, the same regression shows really disparate results. In the clusters #1 and #2, gross public debt seems to be rather a disturbing factor regarding private savings, whilst in the cluster #3 it is strongly and positively correlated. The accumulation of financial assets in the public sector changes its impact upon private savings from cluster to cluster as well.

As we pass from the formation of private capital to its allocation in productive assets through investment, the first salient observation is the generally lower explanatory power of fiscal variables. Just as in the case of private savings, that explanatory power grows as we plunge into particular clusters of political systems. Once more, a system – specific response to fiscal policy is to notice. In clusters #1 and #2, fiscal variables seem to be mostly a disturbing factor to private investment, whilst in the cluster #3 the relationship seems to be more stable. In other words, the more veto players in the political system, the more predictable the impact of fiscal policies upon private investment.

The primary completion rate is probably the most “social” and the least “economic” among the four outcome variables studied in this subchapter. It is also the least explained by fiscal variables in the general sample. With an  $R^2$  equal to 0,041, there is hardly any connection. Still, when going into specific clusters, the correlation significantly gains in robustness, and each cluster displays a different pattern of correlation. Just as in the case of private savings, as we move from cluster #1 to #3, thus as we add veto players in the system, the explanatory power of fiscal factors grows.

The rate of vulnerable employment is astride the social and the purely economic outcomes of fiscal policies. In the general sample, the explanatory power of fiscal variables is pretty strong. Differently from the previous outcomes under scrutiny, transferring the analysis to specific clusters does not unequivocally increase that explanatory power. Only the cluster #3 displays stronger correlation than the general sample. Still, one can notice the same phenomenon of the explanatory power gaining in strength, as more veto players are present in the system.

## 4 Case studies

The empirical part of the present research covers a qualitative part too. It consists of case studies connected to the previously signalled identity of three big clusters of political systems. The goal of the present study is contributing to the prediction of changes in fiscal policies that can possibly come out of changes in the partisan structure of the political system. Cases under scrutiny are countries, which migrated to or from any of the three clusters, during the period of observation. The choice of cases was quite intuitive, and the general purpose was to go more in depth of the general patterns observed in quantitative research. The first interesting case is **Bolivia** (see table 9, Appenix). According to the here-adopted classification of political systems, the country ended up in the cluster #1, yet it was its end of the road, so to say. The span of observation as for this particular country ranged from 2000 through 2012. Constitutionally, Bolivia had been a presidential system with plural elections over the whole period studied. At the beginning of the observation span, the political system of Bolivia was a case of recently implemented democratic reforms, mostly referring to the electoral system (Van Cott 2000<sup>50</sup>; Arnold 2004<sup>51</sup>; Laserna 2009<sup>52</sup>). Still, some authors argue that social inequalities and the resulting underrepresentation of large and poor social groups, made those reforms technical rather than fundamental (O'Donnell et al. 2004<sup>53</sup>). Exactly in the middle of the observation span, the country went through deep political change, with the advent in office of the president Evo Morales, in 2006. Since then, some authors call Bolivia “the first post neoliberal democracy in the world”, or a “new socialism” (Kohl, 2010<sup>54</sup>). In 2009, the constitution of the country was changed, with an important reform of land property, and land management, inclusive of a new policy as for hydrocarbons (Postero, 2010<sup>55</sup>). As for the political system, the new constitution claimed to implement a new form of democracy, strongly participatory, and

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<sup>50</sup> Van Cott, D., 2000, *The Liquidation of the Past. The Politics of Diversity in Latin America*, USA: University of Pittsburgh Press

<sup>51</sup> Arnold, D., 2004, *Pueblos indígenas y originarios de Bolivia. Hacia su soberanía y legitimidad electoral*, Bolivia: Corte Nacional Electoral

<sup>52</sup> Laserna, R., 2009, Decentralization, Local Initiatives, and Citizenship in Bolivia, 1994- 2004, in: Selee, Andrew, and Enrique Peruzzotti (eds.), *Participatory Innovation and Representative Democracy in Latin America*, Washington: Woodrow Wilson Center Press

<sup>53</sup> O'Donnell, G., Jorge Vargas Cullell, and Osvaldo Iazzetta. 2004, *The Quality of Democracy. Theory and Applications*, Notre Dame: Notre Dame Press

<sup>54</sup> Kohl, B., 2010, Bolivia under Morales: A Work in Progress, *Latin American Perspectives*, 37, pp. 107-122

<sup>55</sup> Postero, N., 2010, The struggle to create a radical democracy in Bolivia, *Latin American Research Review*, 45, pp. 59-78

communitarian (Schilling-Vacaflor 2010 <sup>56</sup> ). Here comes the first interesting contradiction: the Database of Political Institutions indicates that over the years 2000 – 2002 Bolivia displayed high political polarization (POLARIZ = 2), to pass into the zone of moderate polarization (POLARIZ = 1) from 2003 through 2005, and from 2006 on ended up in cluster #1, with no observable polarization. Thus, one body of literature allows assuming that the number of partisan veto players had increased since 2006, whilst other authors suggest just the contrary.

As for current fiscal flows, both public expenditures and public revenues increased their share in the GDP over the period studied<sup>57</sup>. Unfortunately, data about the structural balance is not available, yet expenditures and revenues allow calculating the primary fiscal balance, which had passed from a dangerously deep deficit between 2000 and 2005 to a significant, yet hesitating surplus from 2006 on. Both gross and net public debt had been quickly growing between 2000 and 2005, to start falling sharply afterwards. Intriguingly, the amount of financial assets held by the public sector had been growing over the whole period studied, still since 2006 that growth was truly spectacular. As a matter of fact, this particular fiscal variable follows the clearest trend among all the here-adopted descriptors of fiscal stance. Gross national savings followed almost just as spectacular a growth, as that of financial assets held by the public sector. Interestingly, the rate of vulnerable employment displays an overall downward trend to amelioration. As for the investment rate, it dropped between 2000 and 2005, to recover afterwards.

The case of Bolivia presents interesting contradictions. On the one hand, we can observe sudden, and controversial, political changes, which find their expression in some of the fiscal variables. On the other hand, Bolivian economy goes through a process of steady accumulation of capital both in private hands, and the public sector. That process seems to be much steadier than other fiscal and political changes. One can intuitively guess of capital accumulation, under the stirring surface.

**United States** (Table 10, Appendix) are the biggest economy in the world, and for the most part of their observation span, namely since 2001 through 2010 remained in the cluster #1, to move to high polarization for the two remaining years studied. The fiscal stance of the U.S. over that period is a deepening negative, structural balance, quickly

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<sup>56</sup> Schilling-Vacaflor, A., 2010, Bolivia's New Constitution: Towards Participatory Democracy and Political Pluralism?, GIGA Research Programme: Legitimacy and Efficiency of Political Systems, Working Paper no. 141

<sup>57</sup> A separate table in the Appendix presents quantitative data about Bolivia.

accumulating public debt, shrinking public revenues and growing expenditures. Interestingly, the wedge between gross and net public debt (or financial assets held by the government), had been growing steadily between 2001 and 2012, which was accompanied by a substantial decrease in the rate of private savings, and that of private investment. Data about vulnerable employment is not available, and one can notice a significant decrease as for the primary completion rate. Summing up, from 2001 through 2012 the United States were an economy in trouble, with a worsening fiscal stance. A few interesting questions emerge. Firstly, was the passage to higher polarization in the matters of economic policy (POLARIZ shifting from 0 to 2) rather the driver of fiscal changes, or the driven one? Both the growing public indebtedness, and the growing amount of financial assets held by the government allow guessing quick capital accumulation in the public sector. Was it just lax fiscal policy, or did that mean that new partisan veto players were progressively coming into the political game and they needed some financial space for themselves? An immediate comparison with the preceding case of Bolivia reveals an interesting dualism, right in the spirit of John Stuart Mill and his canons of logic: those two countries differ in practically every respect as for the variables studied, excepted two. They both witnessed a change in the structure of partisan veto players, and both accumulated more financial assets in the public sector. The change in political polarization was of opposite direction in each case (Bolivia 2 to 0; the U.S. 0 to 2), still a change there was. As case studies allow heuristic inference, a heuristic hypothesis can be formulated, namely that any change in the structure of partisan veto players in the political system is connected to increased accumulation of capital in the public sector, whatever the vector of change.

**Mexico** (Table 11, Appendix), geographically between Bolivia, and the United States, is an interesting case of oscillatory changes with respect to the variables investigated. Within its interval of observation, namely from 1998 through 2012, Mexico started in the cluster #1, left it quite quickly to move towards higher political polarization, but the movement was a wave rather than a trend. Over the period 2001- 2009, political polarization passed from non-existent (POLARIZ = 0), through moderate to high, just to return to moderate from 2010 on. That political oscillation was accompanied, roughly in step, by a wavy change in capital fiscal variables (gross debt, net debt, financial assets), as well as that of the structural balanced. An unequivocally growing share of current fiscal flows in the GDP was to observe, as well as worsening ratios of savings and



investment. Interestingly, the social situation seems to have had improved, as seen through the double lens of primary completion rate, and the rate of vulnerable employment. In general, growing political polarization was accompanied by shrinking indebtedness, both in gross and net terms, and by a growing amount of financial assets held by the government. It looks as if growing political polarization in this case went together with the building – up of borrowing capacity from the part of the public sector. As cases from the cluster #1 are studied, **Poland** (Table 12, Appendix) is an interesting one: it is a case of truly high, structural instability of the political system with respect to the variables studied. Over its interval of observation, namely 1995 – 2012, Poland jumped between the cluster #1 and other groups of political systems, inclusive of changes in the electoral regime, coming and going between plurality and proportionality. At the very beginning of the span of observation, in the late 1990s, Poland had virtually no net public debt, and an extremely inflated pool of financial assets held by the public sector, in the presence of substantial gross public indebtedness. Since then, gross public indebtedness had slightly grown, which took place against a quickly growing net indebtedness, and an overall decreasing trend in the amount of financial assets in the public sector. One can also observe steady decrease in the share of current fiscal flows in the GDP. The rate of private savings had, on the whole, decreased, whilst private investment climbed slightly. On the social side, we can observe a steady improvement both as for the primary completion rate, and the rate of vulnerable employment. Change in political polarization seem to have been the most reflected in the oscillation of gross public indebtedness, and the amount of financial assets held in the public sector: both tend to be lower in the times of lower polarization, and to increase with higher polarization. Poland is a case of the overall steady economic change, in the presence of slight oscillations of capital fiscal variables, seemingly connected to variations in political fragmentation. The steady, long-term change seems to be attached to an outflow of capital from the public sector. Characteristically, that outflow came along with visible social improvement.

With the case of **New Zealand** (Table 13, Appendix), we pass to countries grouped in the cluster #2: parliamentary systems with prevailing plurality in the electoral regime, and no observable political polarization as for the key aspects of economic policy. More specifically, New Zealand remained in the cluster #2 from 1985 through 1994, to leave it for good since then and to pass to high polarization. Over the whole span of observation,

New Zealand went through a deep change in public governance, and a substantial part of that change regarded specifically the fiscal policy. Interestingly enough, observation of New Zealand for the purposes of the present research starts at the very moment when important public reforms began. The entry into force of the Public Finance Act 1989 seems to have been a milestone in the process, introducing a novelty at the global scale, namely passing from cash-based budgetary management to the accrual-based one (see for example: Goldman, Brashares 1991<sup>58</sup>). In New Zealand, the purpose of the systemic change was to minimize consistently the budgetary slack. As the DPI data shows, as those public reforms had been implemented, from 1985 to 1994, no political polarization as for economic policy was observable ( $POLARIZ = 0$ ). From 1995 on, polarization jumped to “high” ( $POLARIZ = 2$ ) and remained such for the rest of the period observed, through 2012.

Quantitative fiscal data about New Zealand, collected for the purposes of the present research, shows clearly that at the beginning of public reforms the public sector was quite greedy, holding over 24% of the GDP in liquid financial assets, and recording a significant gross, and net debt. From 1985 (when our span of observation starts) through 1989 (when the Public Finance Act 1989 was voted), the share of public, financial assets in the GDP shrank significantly, and the structural balance improved. It was probably the most immediate result of passing from cash-based budgetary accounting to the accrual based one. That transition probably terminated a lot of small capital pockets held by public agents through the postponement of cash settlements. The spectacular deflation of public financial assets, and the betterment of the structural balance are the most striking fiscal changes accompanying the reforms. Later on, over the next 15 years, public debt decreased significantly both in gross and net terms. Public financial assets inflated again after 2004, just as public debt, not to the previous levels, though. Interestingly enough, private capital aggregates, namely saving and investment had been changing in close correlation with the public ones. In general, 2003 – 2004 seem to be the moment, when fiscal reforms reached some kind of peak in their quantitative outcomes. Afterwards, the fiscal stance started to revert.

Hence, the following picture emerges. In the 1980s, the political system reached some kind of general agreement about the economic policy to follow, which reflected in the

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<sup>58</sup> Goldman, F., E. Brashares, 1991, Performance and Accountability: Budget Reform in New Zealand, Public Budgeting and Finance, vol.11(4), pp.75-85

absence of political polarization, and in bold constitutional reforms. The state of partisan unanimity had lasted until 1994, when significant disparities in economic programmes appeared. The striking fact is that the beginning of significant political polarization coincided almost perfectly with the first official publication of the government's balance sheet (Dale, Ball 1996<sup>59</sup>).

The case of New Zealand rouses a few interesting remarks. Was it the process of public reforms that triggered the first visible fiscal change, namely the improvement in structural balance and the deflation of public financial assets, or was it the absence of political polarization? Which factor was decisive: the legal change, or the partisan structure of the political system? On the other hand, why did the private capital aggregates change in such a close correlation with the public ones? What was the connection?

Now, we pass to some countries included into **Cluster #3**: parliamentary systems with proportional elections and high political polarization. Two cases seem particularly interesting: Finland, and Israel. **Finland** (Table 14, Appendix), is some kind of fiscal champion in the sample studied, along with other Nordic countries. Observed, in the sample, since 1980 through 2012, Finland maintains a positive fiscal balance, both at the primary, and at the structural level. On the other hand, it combines all the factors of political fragmentation, both constitutional and partisan. Thus, it is a living proof that strongly differentiated political systems can generate high fiscal discipline. Its reserves of public financial assets, combined with a noticeable gross public debt, and a net claim on the rest of the world (negative net debt) call for the metaphor of a bank-country. As for political polarization, Finland jumps in to and out of cluster #3. Still, political polarization as for economic policy never descends below  $POLARIZ = 1$ , which, in turn, means that there is always a significant number of distinct, partisan veto players in the political system. It is to notice that the amount of financial assets held by the public sector, as well as net public debt, both change in close correlation with and proportionally to political polarization. Once more, the more partisan veto players, the more capital held by public agents.

The phenomenon of Finland consists in the fact that the country has developed a whole structure made of the so-called peripheral agencies, i.e. relatively small, and prudently

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<sup>59</sup> Dale, T., Ball, I., 1996, Viewpoint: Reinventing Government in New Zealand. How core government functions benefited from market-type measurement, The World Bank Group, Note No. 97, October 1996

endowed agencies of the government, in charge of carrying out many innovative projects in the broadly spoken field of economic development. Those agencies are staffed with people coming from many political parties and fractions, and are supposed to bring together the different economic programmes into concrete, specific projects (see for example: Breznitz, Ornston 2013<sup>60</sup>). Hence, the Finish political class has managed to turn a curse into a blessing. The well-known mechanism of “my-friend’s-cousin-should-have-that-job-in-your-ministry”, usually bringing about the worst cases of budgetary slack, in this case is used as a tool for improvement and development.

**Israel** (Table 15, Appendix), another country from the cluster #3, presents a different profile. With the political system just as fragmented into veto players, as that of Finland, but very poor a fiscal stance, Israel presents two peculiarities. Firstly, in the presence of relatively high public indebtedness, and substantial current fiscal flows, the public sector of Israel holds very few financial assets, and over the period of observation those assets plunged close to null. Secondly, Israel is one of the rare countries in the whole sample, where the rate of savings has increased over the period studied, and the social situation has clearly improved in spite of the on-going armed conflict. Israel seems to have developed a network of public, peripheral agencies focused on economic development, similarly to Finland (Breznitz, Ornston 2013; Getz, Goldberg 2015<sup>61</sup>), thus finding positive employment for various partisan veto players. As compared to Finland, in the same cluster, Israel seems to have developed some sort of capital transmission from current fiscal flows directly into privately held assets, without bulking financially the public sector.

## 5 Conclusion

The present paper was written with the intention to follow up onto the path indicated by the seminal paper by Roubini and Sachs (1989), namely to explore the intuition that the political system in place is a strong determinant of fiscal policy. Quantitative research suggests strong, cross-sectional disparities between political systems as for their typical fiscal stance, and those disparities seem to refer mostly to the amount of capital held by the public sector, rather than to current fiscal flows. The number of veto

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<sup>60</sup> Breznitz, D., Ornston, D., 2013, The Revolutionary Power of Peripheral Agencies: Explaining Radical Policy Innovation in Finland and Israel, *Comparative Political Studies*, volume 46, issue 10, Oct 2013, pp. 1219 - 1245

<sup>61</sup> Getz, D., Goldberg, I., 2015, Best Practices and Lessons Learned in ICT Sector Innovation: A Case Study of Israel, World Bank, World Development Report 2016, Digital Dividends, Background Paper

players in the political system, as possible to estimate on the grounds of constitutional rules, and of political polarization, seems to be strongly, and positively correlated with the amount of liquid capital held in the natural and temporary possession of public agents.

The more veto players in the political system, the greater seems to be the impact of fiscal policy upon some socio-economic outcomes, such as the formation of private savings, private investment or primary completion rate. Clearly, what we use to designate as efficiency of fiscal policy is very specific regarding the political system in place. In a broader perspective, the present paper comes to a somewhat different conclusion than the seminal work by Roubini and Sachs (1989). Whilst these authors claimed that fiscal discipline clearly varies across political systems, the present research seems to prove that fiscal discipline is pretty homogenous, whilst the ways that public agents adopt to govern capital in their possession, and the outcomes of that governance, are clearly system-specific.

On the other hand, qualitative case studies allow noticing that the capital held by public agents, estimated mostly as public debt and financial assets in the public sector, changes over time in close correlation with changes in political polarization. Still, at the level of case studies, no visible pattern emerges as for cross-sectional correlations in that respect. Any increase in political polarization almost inevitably leads to an increase in public indebtedness and/or the endowment of public agents with financial assets, with decreasing political polarity acting in the opposite way. In some cases, though not in all of them, that change in the appropriation of financial assets goes along with a proportional change in public indebtedness. Yet, national political systems seem to be strongly idiosyncratic as for the exact share of GDP held as capital by public agents.

On the whole, empirical research presented in this paper strongly substantiates the general claims of the pork barrel theory, as formulated by Weingast and others. Still, the theory of veto players, as presented by Tsebelis, seems to add much precision to the pork barrel theory.

Case studies inspire an interesting question, namely that of the relative strength of fiscal, and political factors in the shaping of public policies and constitutional orders. Does the amount of capital appropriated by the public sector adapt to the political system, or, conversely, does the political system adapt to the available capital resources? Moreover, is the fiscal stance of the government informative about the actual, partisan structure of

the political system? In other words, are substantial shifts in the amount of capital held in the public sector informative about the emergence or disappearance of partisan veto players, not officially disclosed as such? Can we assume, for example, that some partisan veto players start appropriating capital in the public sector even before they have officially emerged as political parties?

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## Appendix

**Table 1 Structure of the sample used in empirical research, by country and number of year - observations**

<i>Country</i>	<b>Number of year - observations</b>	<i>Country</i>	<b>Number of year - observations</b>	<i>Country</i>	<b>Number of year - observations</b>
Algeria	12	Hungary	8	Nigeria	13
Australia	24	Iceland	31	Norway	33
Austria	25	Ireland	33	Pakistan	11
Bahrain	23	Iran	17	Panama	10
Belgium	33	Israel	13	Peru	13
Belize	11	Italy	25	Poland	18
Bolivia	13	Japan	33	Portugal	16
Bošnia and Herzegovina	15	Jordan	25	Qatar	23
Brazil	13	Kazakhstan	11	Saudi Arabia	14
Bulgaria	13	Kenya	15	Solomon Islands	10
Canada	33	Korea	12	South African Republic	13
Cape Verde	11	Latvia	13	Spain	28
Chile	20	Liban	13	Swaziland	12
Columbia	14	Lesotho	8	Sweden	20
Denmark	18	Liberia	13	Switzerland	30
Egypt	11	Libya	23	Syria	21
Estonia	17	Lithuania	13	Trinidad and Tobago	13
Ethiopia	21	Malawi	8	Turkey	11
FYR Macedonia	14	Maldives	16	Ukraine	15
Fiji	21	Mali	13	United Arab Emirates	14
Finland	33	Mexico	15	United Kingdom	33
France	30	Morocco	17	United States	12
Germany	22	Namibia	7	Uruguay	10
Ghana	12	Netherlands	18	Yemen	14
Greece	20	New Zealand	28	Zambia	8
Guyana	6	Niger	18		

**Source: author's**

**Table 2 Structure of the sample regarding political systems, following the constitutional, and the partisan partition**

Electoral regime	Political system		
	Presidential	Assembly – Elected President	Parliamentary
<b>Plural elections</b>	<p><b>POLARIZ = 0</b> <b>N = 233</b> Bahrain 2003 – 2012; Bolivia 2006 – 2012; Chile 2002 – 2009; Egypt 2006 – 2011; Ghana 2005 – 2001; Islamic Republic of Iran 1996 – 2012; Jordan 1990 – 2009; Kazakhstan 2009 – 2007; Kenya 1998 – 2007; Korea 2005 – 2012; Lithuania 2000, 2004; Malawi 2005 – 2012; Maldives 1997 – 2009; Mali 2000 – 2002; Mexico 1998 – 2000; Morocco 1996 – 2012; Nigeria 2000 – 2012; Pakistan 2003 – 2008; Panama 2003 – 2012; Poland 1998 – 2007; Swaziland 2007 – 2012; Syria 1990 – 2010; United States 2001 – 2010; Yemen 2000 – 2012; Zambia 2005 – 2011</p> <p><b>POLARIZ = 1</b> <b>N = 35</b> Bolivia 2003 – 2005; Brazil 2007 – 2012; Chile 1993, 2010 – 2012; Korea 2001 – 2004; Mexico 2001 – 2006, 2010 – 2012; Niger 1995, 1996; Poland 2011 – 2012; Ukraine 1998 – 99, 2000 – 2002</p> <p><b>POLARIZ = 2</b> <b>N = 33</b> Bolivia 2000 – 2002; Brazil 2000 – 2006; Chile 1994 – 2001; Ghana 2001 – 2004; Maldives 2010 – 2012; Mexico 2007 – 2009; Poland 2008 – 2010; United States 2011, 2012</p>	<p><b>POLARIZ = 0</b> <b>N = 25</b> Egypt 2004 – 2005; Greece 1980 – 1986; Lebanon 2000 – 2012; Yemen 1999</p> <p><b>POLARIZ = 1</b> <b>No records</b></p> <p><b>POLARIZ = 2</b> <b>N = 4</b> Pakistan 2009 – 2012</p>	<p><b>POLARIZ = 0</b> <b>N = 205</b> Australia 1989 – 2010; Belize 2002 – 2012; Canada 1981 – 2004, 2012; Ethiopia 1996 – 2000, 2006 – 2012; Fiji 2000 – 2001; France 1983 – 1986, 2003 – 2012; Greece 1987 – 1999; Hungary 2007 – 2012; Italy 1995 – 96, 2002 – 2008; Japan 1981 – 83, 1987 – 2012; Lesotho 2000 – 2002, 2008 – 2012; New Zealand 1985 – 1994; Spain 1985 – 93, 2001 – 2004, 2012; Trinidad and Tobago 2001 – 2012; United Kingdom 1980 – 2010;</p> <p><b>POLARIZ = 1</b> <b>N = 12</b> Hungary 2005 – 06; Italy 1994, 1997 – 2001; Latvia 2007 – 2010</p> <p><b>POLARIZ = 2</b> <b>N = 104</b> Australia 1999 – 2012; Canada 1980, 2005 – 2011; France 1987 – 2002; Germany 1991 – 2012; Greece 1993; Italy 2009 – 2012; Japan 1980, 1984 – 86, 1994 – 96; New Zealand 1995 – 2012; 1994 – 2011; Trinidad and Tobago 2000; United Kingdom 2011 – 2012</p>
<b>Proportional elections</b>	<p><b>POLARIZ = 0</b> <b>N = 59</b> Algeria 2003 – 2007; Cape Verde 2002 – 2011; Kazakhstan 2008 – 2012; Liberia 2000 – 2003; Namibia 2006 – 2012; Niger 2010 – 2011; Peru 2000 – 2012; Poland 1998 – 2006; Ukraine 2011 – 2012; Uruguay 2005 – 2012</p> <p><b>POLARIZ = 1</b> <b>N = 17</b> Algeria 2001, 2002, 2008 – 2012; Cape Verde 2012; Israel 2001; Peru 2001 – 2006; Poland 1996 – 97</p> <p><b>POLARIZ = 2</b> <b>N = 7</b> Colombia 1999 – 2002; Israel 2000; Uruguay 2003 – 2004</p>	<p><b>POLARIZ = 0</b> <b>N = 25</b> Bulgaria 2000 – 2001; Estonia 1996 – 1999; Guyana 2007 – 2012; South Africa 2000 – 2012;</p> <p><b>POLARIZ = 1</b> <b>No records</b></p> <p><b>POLARIZ = 2</b> <b>N = 2</b> Estonia 2000 – 2001</p>	<p><b>POLARIZ = 0</b> <b>N = 29</b> Bulgaria 2010 – 2012; Ireland 1980 – 81, 2007; FYR Macedonia 2003 – 2011; Portugal 2006 – 2009; Turkey 2003 – 2012</p> <p><b>POLARIZ = 1</b> <b>N = 62</b> Finland 1991 – 95, 2003 – 2011; Iceland 1988 – 91, 2000 – 2007; Ireland 1988 – 94, 1998 – 2012; Israel 2002 – 2003; Italy 1988 – 1993; Latvia 2000 – 2006</p> <p><b>POLARIZ = 2</b> <b>N = 213</b> Austria 1988 – 2012; Belgium 1980 – 2012; Denmark 1995 – 2012; Finland 1980 – 90, 1996 – 2002, 2012; Iceland 1982 – 99, 2008 – 09; Ireland 1982 – 87, 1995 – 97; Israel 2004 – 2012; Netherlands 1995 – 2012; Norway 1980 – 2012; Portugal 1997 – 2012; Sweden 1993 – 2012; Turkey 2002</p>

Source: Database of Political Institutions

**Table 3 Average values of current fiscal aggregates, % of the GDP**

<b>Gross public revenues</b>			
	<b>Political system</b>		
<b>Electoral regime</b>	<b>Presidential</b>	<b>Assembly – Elected President</b>	<b>Parliamentary</b>
<b>Plural elections</b>	POLARIZ = 0 26,827	POLARIZ = 0 24,471	POLARIZ = 0 36,904
	POLARIZ = 1 26,918	POLARIZ = 2 13,579	POLARIZ = 1 41,829
	POLARIZ = 2 26,736		POLARIZ = 2 40,563
<b>Proportional elections</b>	POLARIZ = 0 29,308	POLARIZ = 0 29,818	POLARIZ = 0 34,338
	POLARIZ = 1 31,545	POLARIZ = 2 35,298	POLARIZ = 1 42,733
	POLARIZ = 2 28,757		POLARIZ = 2 48,972
<b>Gross public expenditures</b>			
	<b>Political system</b>		
<b>Electoral regime</b>	<b>Presidential</b>	<b>Assembly – Elected President</b>	<b>Parliamentary</b>
<b>Plural elections</b>	POLARIZ = 0 29,052	POLARIZ = 0 34,103	POLARIZ = 0 40,072
	POLARIZ = 1 28,707	POLARIZ = 2 20,113	POLARIZ = 1 46,832
	POLARIZ = 2 30,884		POLARIZ = 2 42,453
<b>Proportional elections</b>	POLARIZ = 0 30,156	POLARIZ = 0 31,55	POLARIZ = 0 37,476
	POLARIZ = 1 33,067	POLARIZ = 2 34,134	POLARIZ = 1 45,796
	POLARIZ = 2 32,029		POLARIZ = 2 49,926
<b>Structural fiscal balance</b>			
	<b>Political system</b>		
<b>Electoral regime</b>	<b>Presidential</b>	<b>Assembly – Elected President</b>	<b>Parliamentary</b>
<b>Plural elections</b>	POLARIZ = 0 -2,651	POLARIZ = 0 -16,676	POLARIZ = 0 -3,643
	POLARIZ = 1 -2,155	POLARIZ = 2 n.a.	POLARIZ = 1 -4,305
	POLARIZ = 2 -4,247		POLARIZ = 2 -1,726
<b>Proportional elections</b>	POLARIZ = 0 -1,913	POLARIZ = 0 -2,607	POLARIZ = 0 -4,108
	POLARIZ = 1 -2,676	POLARIZ = 2 n.a.	POLARIZ = 1 -3,159
	POLARIZ = 2 -2,036		POLARIZ = 2 -3,089

Source: author's

**Table 4 Average values of capital fiscal aggregates, % of the GDP**

<b>Gross public debt</b>			
	<b>Political system</b>		
<b>Electoral regime</b>	<b>Presidential</b>	<b>Assembly – Elected President</b>	<b>Parliamentary</b>
<b>Plural elections</b>	POLARIZ = 0 55,186	POLARIZ = 0 112,071	POLARIZ = 0 70,739
	POLARIZ = 1 48,927	POLARIZ = 2 60,978	POLARIZ = 1 75,684
	POLARIZ = 2 55,383		POLARIZ = 2 53,648
<b>Proportional elections</b>	POLARIZ = 0 90,934	POLARIZ = 0 40,553	POLARIZ = 0 42,491
	POLARIZ = 1 39,432	POLARIZ = 2 4,954	POLARIZ = 1 53,612
	POLARIZ = 2 63,105		POLARIZ = 2 62,025
<b>Net public debt</b>			
	<b>Political system</b>		
<b>Electoral regime</b>	<b>Presidential</b>	<b>Assembly – Elected President</b>	<b>Parliamentary</b>
<b>Plural elections</b>	POLARIZ = 0 46,036	POLARIZ = 0	POLARIZ = 0 47,574
	POLARIZ = 1 31,829	POLARIZ = 1 POLARIZ = 2	POLARIZ = 1 65,77
	POLARIZ = 2 41,441		POLARIZ = 2 35,039
<b>Proportional elections</b>	POLARIZ = 0 70,994	POLARIZ = 0 POLARIZ = 1 POLARIZ = 2	POLARIZ = 0 34,581 POLARIZ = 1 18,165 POLARIZ = 2 15,254
	POLARIZ = 1 18,32		
	POLARIZ = 2 56,36		
<b>Financial assets held by the government (gross debt minus net debt)</b>			
	<b>Political system</b>		
<b>Electoral regime</b>	<b>Presidential</b>	<b>Assembly – Elected President</b>	<b>Parliamentary</b>
<b>Plural elections</b>	POLARIZ = 0 9,151	POLARIZ = 0 POLARIZ = 1 POLARIZ = 2	POLARIZ = 0 23,165 POLARIZ = 1 9,915 POLARIZ = 2 18,609
	POLARIZ = 1 17,098		
	POLARIZ = 2 13,942		
<b>Proportional elections</b>	POLARIZ = 0 19,94	POLARIZ = 0 POLARIZ = 1 POLARIZ = 2	POLARIZ = 0 7,91 POLARIZ = 1 35,447 POLARIZ = 2 46,771
	POLARIZ = 1 21,112		
	POLARIZ = 2 6,745		

Source: author's

**Table 5 Results of regression tests as for the explanation of gross national savings, as defined by IMF**

Explained variable: std(Gross national savings, as defined by IMF) SAMPLE: GENERAL N = 721 R <sup>2</sup> = 0,323			
Explanatory variable	Coefficient of regression	Robust standard error	Significance level as given by t Student test
std(Gross public debt, % GDP)	0,08	(0,036)	p = 0,028
std(Gross public expenditures, % of GDP)	- 0,46	(0,072)	p < 0,001
std(Gross public revenues as % of the GDP)	0,473	(0,072)	p < 0,001
std(Structural fiscal balance (% of GDP)	0,035	(0,028)	p = 0,205
std(Financial assets held by the government, % of GDP)	0,2	(0,024)	p < 0,001
Constant	- 0,152	(0,022)	p < 0,001

Explained variable: std(Gross national savings, as defined by IMF) SAMPLE: CLUSTER #1 N = 71 R <sup>2</sup> = 0,408			
Explanatory variable	Coefficient of regression	Robust standard error	Significance level as given by t Student test
std(Gross public debt, % GDP)	0,363	(0,248)	p = 0,147
std(Gross public expenditures, % of GDP)	- 1,73	(0,388)	p < 0,001
std(Gross public revenues as % of the GDP)	1,623	(0,413)	p < 0,001
std(Structural fiscal balance (% of GDP)	- 0,482	(0,138)	p < 0,001
std(Financial assets held by the government, % of GDP)	- 1,114	(0,324)	p = 0,001
Constant	- 0,31	(0,14)	p = 0,031

Explained variable: std(Gross national savings, as defined by IMF) SAMPLE: CLUSTER #2 N = 125 R <sup>2</sup> = 0,551			
Explanatory variable	Coefficient of regression	Robust standard error	Significance level as given by t Student test
std(Gross public debt, % GDP)	- 0,134	(0,099)	p = 0,177
std(Gross public expenditures, % of GDP)	- 0,22	(0,108)	p = 0,044
std(Gross public revenues as % of the GDP)	0,206	(0,104)	p = 0,051
std(Structural fiscal balance (% of GDP)	- 0,027	(0,049)	p = 0,582
std(Financial assets held by the government, % of GDP)	0,393	(0,087)	p < 0,001
Constant	- 0,16	(0,036)	p < 0,001

Explained variable: std(Gross national savings, as defined by IMF) SAMPLE: CLUSTER #3 N = 187 R <sup>2</sup> = 0,574			
Explanatory variable	Coefficient of regression	Robust standard error	Significance level as given by t Student test
std(Gross public debt, % GDP)	0,26	(0,063)	p < 0,001
std(Gross public expenditures, % of GDP)	- 0,672	(0,118)	p < 0,001
std(Gross public revenues as % of the GDP)	0,712	(0,13)	p < 0,001
std(Structural fiscal balance (% of GDP)	0,032	(0,04)	p = 0,418
std(Financial assets held by the government, % of GDP)	0,111	(0,043)	p = 0,012
Constant	0,001	(0,083)	p = 0,988

Source: author's

**Table 6 Results of regression tests as for the explanation of private investment**

Explained variable: std(Private investment) SAMPLE: GENERAL N = 751 R <sup>2</sup> = 0,166			
Explanatory variable	Coefficient of regression	Robust standard error	Significance level as given by t Student test
std(Gross public debt, % GDP)	- 0,062	(0,044)	p = 0,157
std(Gross public expenditures, % of GDP)	- 0,766	(0,086)	p < 0,001
std(Gross public revenues as % of the GDP)	0,589	(0,089)	p < 0,001
std(Structural fiscal balance (% of GDP)	- 0,138	(0,03)	p < 0,001
std(Financial assets held by the government, % of GDP)	- 0,087	(0,028)	p = 0,002
Constant	- 0,01	(0,027)	p = 0,692

Explained variable: std(Private investment) SAMPLE: CLUSTER #1 N = 71 R <sup>2</sup> = 0,472			
Explanatory variable	Coefficient of regression	Robust standard error	Significance level as given by t Student test
std(Gross public debt, % GDP)	- 0,661	(0,527)	p = 0,214
std(Gross public expenditures, % of GDP)	- 0,522	(0,661)	p = 0,443
std(Gross public revenues as % of the GDP)	1,397	(0,508)	p = 0,008
std(Structural fiscal balance (% of GDP)	- 0,452	(0,151)	p = 0,004
std(Financial assets held by the government, % of GDP)	- 2,83	(0,524)	p < 0,001
Constant	- 0,133	(0,234)	p = 0,573

Explained variable: std(Private investment) SAMPLE: CLUSTER #2 N = 125 R <sup>2</sup> = 0,239			
Explanatory variable	Coefficient of regression	Robust standard error	Significance level as given by t Student test
std(Gross public debt, % GDP)	- 0,313	(0,178)	p = 0,080
std(Gross public expenditures, % of GDP)	- 0,334	(0,209)	p = 0,113
std(Gross public revenues as % of the GDP)	0,154	(0,202)	p = 0,450
std(Structural fiscal balance (% of GDP)	- 0,014	(0,102)	p = 0,893
std(Financial assets held by the government, % of GDP)	0,385	(0,152)	p = 0,012
Constant	- 0,069	(0,07)	p = 0,330

Explained variable: std(Private investment) SAMPLE: CLUSTER #3 N = 187 R <sup>2</sup> = 0,252			
Explanatory variable	Coefficient of regression	Robust standard error	Significance level as given by t Student test
std(Gross public debt, % GDP)	- 0,082	(0,08)	p = 0,305
std(Gross public expenditures, % of GDP)	- 0,926	(0,164)	p < 0,001
std(Gross public revenues as % of the GDP)	0,757	(0,195)	p < 0,001
std(Structural fiscal balance (% of GDP)	- 0,224	(0,056)	p < 0,001
std(Financial assets held by the government, % of GDP)	- 0,254	(0,061)	p < 0,001
Constant	0,078	(0,108)	p = 0,468

Source: author's



**Table 7 Results of regression tests as for the explanation of the primary completion rate**

Explained variable: std(Primary completion rate)      SAMPLE: GENERAL N = 449 R <sup>2</sup> = 0,041			
Explanatory variable	Coefficient of regression	Robust standard error	Significance level as given by t Student test
std(Gross public debt, % GDP)	- 0,068	(0,038)	p = 0,071
std(Gross public expenditures, % of GDP)	0,199	(0,075)	p = 0,008
std(Gross public revenues as % of the GDP)	- 0,158	(0,073)	p = 0,032
std(Structural fiscal balance (% of GDP)	0,053	(0,026)	p = 0,045
std(Financial assets held by the government, % of GDP)	0,101	(0,023)	p < 0,001
Constant	0,219	(0,028)	p < 0,001

Explained variable: std(Primary completion rate)      SAMPLE: CLUSTER #1 N = 61 R <sup>2</sup> = 0,208			
Explanatory variable	Coefficient of regression	Robust standard error	Significance level as given by t Student test
std(Gross public debt, % GDP)	- 0,366	(0,247)	p = 0,144
std(Gross public expenditures, % of GDP)	0,6	(0,395)	p = 0,134
std(Gross public revenues as % of the GDP)	- 0,28	(0,366)	p = 0,447
std(Structural fiscal balance (% of GDP)	0,292	(0,147)	p = 0,052
std(Financial assets held by the government, % of GDP)	0,727	(0,358)	p = 0,047
Constant	0,577	(0,211)	p = 0,008

Explained variable: std(Primary completion rate)      SAMPLE: CLUSTER #2 N = 37 R <sup>2</sup> = 0,430			
Explanatory variable	Coefficient of regression	Robust standard error	Significance level as given by t Student test
std(Gross public debt, % GDP)	0,196	(0,066)	p = 0,006
std(Gross public expenditures, % of GDP)	0,128	(0,085)	p = 0,141
std(Gross public revenues as % of the GDP)	- 0,37	(0,105)	p = 0,001
std(Structural fiscal balance (% of GDP)	0,162	(0,05)	p = 0,003
std(Financial assets held by the government, % of GDP)	- 0,174	(0,066)	p = 0,013
Constant	0,451	(0,038)	p < 0,001

Explained variable: std(Primary completion rate)      SAMPLE: CLUSTER #3 N = 109 R <sup>2</sup> = 0,445			
Explanatory variable	Coefficient of regression	Robust standard error	Significance level as given by t Student test
std(Gross public debt, % GDP)	- 0,634	(0,119)	p < 0,001
std(Gross public expenditures, % of GDP)	- 0,075	(0,143)	p = 0,600
std(Gross public revenues as % of the GDP)	- 0,007	(0,191)	p = 0,972
std(Structural fiscal balance (% of GDP)	0,042	(0,059)	p = 0,479
std(Financial assets held by the government, % of GDP)	- 0,023	(0,045)	p = 0,604
Constant	0,384	(0,155)	p = 0,015

Source: author's

**Table 8 Results of regression tests as for the vulnerable employment rate**

Explained variable: std(Vulnerable employment rate)      SAMPLE: GENERAL N = 592 R <sup>2</sup> = 0,419			
Explanatory variable	Coefficient of regression	Robust standard error	Significance level as given by t Student test
std(Gross public debt, % GDP)	0,052	(0,056)	p = 0,354
std(Gross public expenditures, % of GDP)	- 0,212	(0,077)	p = 0,006
std(Gross public revenues as % of the GDP)	- 0,313	(0,079)	p < 0,001
std(Structural fiscal balance (% of GDP)	- 0,15	(0,035)	p < 0,001
std(Financial assets held by the government, % of GDP)	- 0,05	(0,029)	p = 0,081
Constant	0,012	(0,033)	p = 0,721

Explained variable: std(Vulnerable employment rate)      SAMPLE: CLUSTER #1 N = 52 R <sup>2</sup> = 0,244			
Explanatory variable	Coefficient of regression	Robust standard error	Significance level as given by t Student test
std(Gross public debt, % GDP)	- 0,756	(0,451)	p = 0,101
std(Gross public expenditures, % of GDP)	0,327	(0,645)	p = 0,614
std(Gross public revenues as % of the GDP)	- 0,899	(0,618)	p = 0,152
std(Structural fiscal balance (% of GDP)	- 0,163	(0,234)	p = 0,489
std(Financial assets held by the government, % of GDP)	- 1,419	(0,889)	p = 0,117
Constant	- 0,674	(0,459)	p = 0,149

Explained variable: std(Vulnerable employment rate)      SAMPLE: CLUSTER #2 N = 99 R <sup>2</sup> = 0,386			
Explanatory variable	Coefficient of regression	Robust standard error	Significance level as given by t Student test
std(Gross public debt, % GDP)	0,538	(0,205)	p = 0,010
std(Gross public expenditures, % of GDP)	0,596	(0,307)	p = 0,055
std(Gross public revenues as % of the GDP)	- 1,035	(0,324)	p = 0,002
std(Structural fiscal balance (% of GDP)	- 0,037	(0,129)	p = 0,775
std(Financial assets held by the government, % of GDP)	- 0,507	(0,171)	p = 0,004
Constant	- 0,517	(0,046)	p < 0,001

Explained variable: std(Vulnerable employment rate)      SAMPLE: CLUSTER #3 N = 153 R <sup>2</sup> = 0,641			
Explanatory variable	Coefficient of regression	Robust standard error	Significance level as given by t Student test
std(Gross public debt, % GDP)	0,129	(0,056)	p = 0,022
std(Gross public expenditures, % of GDP)	0,009	(0,067)	p = 0,895
std(Gross public revenues as % of the GDP)	- 0,356	(0,106)	p = 0,001
std(Structural fiscal balance (% of GDP)	- 0,111	(0,036)	p = 0,002
std(Financial assets held by the government, % of GDP)	- 0,004	(0,025)	p = 0,871
Constant	- 0,14	(0,097)	p = 0,150

Source: author's

**Table 9 – Bolivia, country profile from the database used in quantitative research**

Year	Structural balance, % of potential GDP	Gross public debt, % GDP	Net public debt, % GDP	Financial assets % of GDP (gross minus net debt)	Gross public expenditures, % of GDP	Gross public revenues as % of the GDP	Gross fiscal balance (% of GDP)
2000	n.a.	66,891	58,93	7,961	29,314	25,586	-3,728
2001	n.a.	59,957	51,729	8,228	31,955	25,135	-6,82
2002	n.a.	69,144	62,116	7,028	33,293	24,505	-8,788
2003	n.a.	74,066	66,444	7,622	31,99	24,114	-7,876
2004	n.a.	89,567	81,006	8,561	32,345	26,801	-5,544
2005	n.a.	80,375	71,088	9,287	33,183	30,938	-2,245
2006	n.a.	55,23	41,886	13,344	29,834	34,304	4,47
2007	n.a.	40,506	27,258	13,248	32,653	34,393	1,74
2008	n.a.	37,155	20,607	16,548	35,333	38,902	3,569
2009	n.a.	39,992	23,144	16,848	35,82	35,834	0,014
2010	n.a.	38,52	18,382	20,138	31,5	33,165	1,665
2011	n.a.	34,687	14,438	20,249	35,377	36,209	0,832
2012	n.a.	33,424	11,059	22,365	36,104	37,861	1,757
Year	Private investment % of GDP	Gross nationals savings % of GDP	Current account balance, % of GDP	Primary completion rate, total (% of relevant age group)	Vulnerable employment, total (% of total employment)	POLARIZ, as in DPI	
2000	18,143	11,019	-5,324	96,041	66,1	2	
2001	14,268	11,252	-3,36	95,85	64,9	2	
2002	16,295	12,319	-4,42	99,17	63,7	2	
2003	13,232	14,59	1,042	97,98	59,2	1	
2004	11,022	17,045	3,694		59,2	1	
2005	14,254	19,877	5,863		60	1	
2006	13,865	26,56	11,225	99,088	61	0	
2007	15,187	28,593	11,396	96,079	57	0	
2008	17,553	28,952	11,859	97,092	57,1	0	
2009	16,971	22,878	4,27	92,345	54,9	0	
2010	17,007	24,969	3,869	92,897		0	
2011	19,562	25,329	0,318	92,293		0	
2012	17,669	25,735	7,812			0	

Source: International Monetary Fund, World Bank

**Table 10 The U.S. country profile from the database used in quantitative research**

Year	Structural balance, % of potential GDP	Gross public debt, % GDP	Net public debt, % GDP	Financial assets % of GDP (gross minus net debt)	Gross public expenditures, % of GDP	Gross public revenues as % of the GDP
2001	-1,682	53,005	33,761	19,244	33,822	32,113
2002	-3,854	55,366	36,342	19,024	34,844	29,774
2003	-4,943	58,507	39,712	18,795	35,395	29,144
2004	-4,971	65,483	46,878	18,605	35,105	29,292
2005	-4,167	64,882	46,259	18,623	35,212	30,645
2006	-3,498	63,635	44,755	18,88	34,972	31,542
2007	-4,327	64,005	44,481	19,524	35,693	31,659
2008	-6,196	72,833	50,435	22,398	37,986	30,174
2009	-7,905	86,054	62,108	23,946	43,121	28,403
2010	-9,745	94,807	69,694	25,113	41,313	28,775
2011	-8,336	99,005	76,223	22,782	40,083	29,049
2012	-6,777	102,355	80,122	22,233	38,718	29,045
Year	Private investment % of GDP	Gross nationals savings % of GDP	Current account balance	Primary completion rate, total (% of relevant age group)	Vulnerable employment, total (% of total employment)	polariz
2001	22,045	19,426	-3,733	100,83	n.a.	0
2002	21,571	18,112	-4,169	100,281	n.a.	0
2003	21,657	17,301	-4,505	100,218	n.a.	0
2004	22,523	17,512	-5,126	98,777	n.a.	0
2005	23,22	17,849	-5,649	97,456	n.a.	0
2006	23,33	19,141	-5,762	96,307	n.a.	0
2007	22,347	17,311	-4,927	98,284	n.a.	0
2008	20,784	15,502	-4,629	97,903	n.a.	0
2009	17,514	14,369	-2,647	98,235	n.a.	0
2010	18,402	15,075	-3,005	97,826	n.a.	0
2011	18,442	15,845	-2,947	97,538	n.a.	2
2012	19,047	16,336	-2,711	97,866	n.a.	2

Source: International Monetary Fund, World Bank

**Table 11 Mexico, country profile from the database used in quantitative research**

Year	Structural balance, % of potential GDP	Gross public debt, % GDP	Net public debt, % GDP	Financial assets % of GDP (gross minus net debt)	Gross public expenditures, % of GDP	Gross public revenues as % of the GDP
1998	-5,424	44,1	37,718	6,382	22,358	16,727
1999	-5,86	46,327	38,785	7,542	22,412	16,917
2000	-4,005	41,857	35,41	6,447	20,908	17,902
2001	-3,152	41,11	35,59	5,52	21,242	18,174
2002	-3,465	43,468	38,067	5,401	22,119	18,764
2003	-2,587	44,747	35,583	9,164	22,497	20,187
2004	-2,067	40,857	32,847	8,01	20,307	19,058
2005	-2,359	39,041	31,52	7,521	21,66	20,429
2006	-2,5	37,777	29,772	8,005	22,569	21,594
2007	-2,512	37,564	29,089	8,475	22,83	21,675
2008	-2,453	42,85	33,169	9,681	25,637	24,668
2009	-4,823	43,945	36,252	7,693	27,207	22,126
2010	-4,549	42,241	36,248	5,993	26,715	22,445
2011	-4,193	43,272	37,524	5,748	26,287	22,942
2012	-4,457	43,284	37,795	5,489	27,162	23,461
Year	Private investment % of GDP	Gross nationals savings % of GDP	Current account balance	Primary completion rate, total (% of relevant age group)	Vulnerable employment, total (% of total employment)	polariz
1998	26,825	23,168	-3,186		34,4	0
1999	25,704	22,355	-2,408	94,628	34,1	0
2000	25,982	22,373	-2,734	94,953	31,8	0
2001	23,382	19,899	-2,443	95,133	32	1
2002	22,608	20,492	-1,906	95,984	32,6	1
2003	21,887	20,718	-1,169	95,373	32,7	1
2004	22,662	21,752	-0,91	96,515	32,4	1
2005	22,284	21,25	-1,034	96,64	31	1
2006	23,457	22,65	-0,806	96,346	29,7	1
2007	23,383	21,977	-1,406	96,517	29,5	2
2008	24,42	22,587	-1,833	95,162	29,2	2
2009	22,887	21,976	-0,911	92,944		2
2010	22,033	21,688	-0,344	92,657		1
2011	22,296	21,244	-1,052	92,722		1
2012	23,242	21,994	-1,248	99,121		1

Source: International Monetary Fund, World Bank

**Table 12 Poland, country profile from the database used in quantitative research**

Year	Structural balance, % of potential GDP	Gross public debt, % GDP	Net public debt, % GDP	Financial assets % of GDP (gross minus net debt)	Gross public expenditures, % of GDP	Gross public revenues as % of the GDP
1995	-5,824	48,989	-3,383	52,372	47,715	43,3
1996	-5,76	43,39	-1,287	44,677	51,006	46,141
1997	-5,818	42,926	0,068	42,858	46,44	41,809
1998	-5,141	38,889	1,434	37,455	44,344	40,068
1999	-2,944	39,567	6,346	33,221	42,718	40,407
2000	-3,995	36,787	6,918	29,869	41,081	38,053
2001	-4,876	37,562	13,9	23,662	43,803	38,532
2002	-5,269	42,16	13,385	28,775	44,258	39,272
2003	-6,034	47,053	17,626	29,427	44,677	38,485
2004	-5,618	45,686	15,146	30,54	42,623	37,239
2005	-3,421	47,088	15,867	31,221	43,44	39,367
2006	-4,796	47,738	14,991	32,747	43,864	40,235
2007	-2,62	44,986	10,218	34,768	42,187	40,306
2008	-4,162	47,106	9,92	37,186	43,23	39,546
2009	-7,133	50,88	14,921	35,959	44,614	37,206
2010	-7,575	54,838	20,502	34,336	45,424	37,567
2011	-5,51	56,218	26,179	30,039	43,436	38,415
2012	-3,803	55,59	27,556	28,034	42,313	38,381
Year	Private investment % of GDP	Gross nationals savings % of GDP	Current account balance	Primary completion rate, total (% of relevant age group)	Vulnerable employment, total (% of total employment)	polariz
1995	18,716	19,33	0,614	94,592	25,9	
1996	20,875	18,792	-2,083	97,51	25,4	1
1997	23,429	19,773	-3,657	98,839	25	1
1998	25,061	21,049	-4,012	97,278	23,4	0
1999	25,26	17,817	-7,442	96,5	23	0
2000	24,85	18,811	-6,039	95,451	23,5	0
2001	20,771	17,648	-3,123	97,113	24,3	0
2002	18,624	15,827	-2,797	96,957	24,4	0
2003	18,742	16,218	-2,524	98,284	23,2	0
2004	20,069	14,829	-5,24	98,918	22,5	0
2005	19,266	16,884	-2,382	96,175	21,8	0
2006	21,052	17,205	-3,848	95,508	20,4	0
2007	24,445	18,214	-6,231	95,322	19,4	0
2008	23,9	17,297	-6,603		18,9	2
2009	20,347	16,371	-3,976	94,791	18,6	2
2010	20,998	15,883	-5,115	95,365	18,6	2
2011	22,058	17,206	-4,853	95,451	18,4	1
2012	20,416	16,911	-3,505		18,2	1

Source: International Monetary Fund, World Bank

**Table 13 New Zealand, country profile from the database used in quantitative research**

Year	Structural balance, % of potential GDP	Gross public debt, % GDP	Net public debt, % GDP	Financial assets % of GDP (gross minus net debt)	Gross public expenditures, % of GDP	Gross public revenues as % of the GDP
1985	-4,962	67,076	42,954	24,122	41,853	35,661
1986	-3,991	71,628	46,897	24,731	42,523	37,826
1987	-2,838	65,834	44,866	20,968	41,823	38,853
1988	-1,193	57,232	43,956	13,276	41,834	40,276
1989	-0,807	57,65	49,079	8,571	43,531	41,719
1990	-0,672	58,179	50,136	8,043	45,052	42,723
1991	-2,421	60,776	53,008	7,768	48,144	42,72
1992	-1,984	61,549	53,888	7,661	47,766	42,22
1993	0,707	57,252	48,311	8,941	42,557	41,321
1994	2,011	51,386	44,081	7,305	38,954	40,918
1995	2,699	45,577	38,61	6,967	37,821	41,331
1996	1,822	39,072	32,245	6,827	36,259	38,742
1997	1,422	36,302	29,538	6,764	35,741	36,998
1998	0,78	36,213	26,949	9,264	36,553	36,25
1999	-0,095	33,57	23,543	10,027	35,713	34,827
2000	0,439	31,573	21,742	9,831	34,922	35,205
2001	1,244	29,553	20,129	9,424	33,885	35,183
2002	1,8	27,698	18,871	8,827	33,45	35,901
2003	2,081	25,9	17,255	8,645	33,321	36,802
2004	2,604	23,572	14,42	9,152	32,832	37,047
2005	3,141	21,755	11,301	10,454	33,681	38,478
2006	2,448	19,306	8,781	10,525	34,427	38,77
2007	2,606	17,18	6,495	10,685	33,863	37,283
2008	1,229	20,119	7,369	12,75	35,4	36,886
2009	-1,01	25,731	11,64	14,091	37,075	35,54
2010	-4,017	31,937	16,947	14,99	40,036	34,921
2011	-3,652	36,975	22,08	14,895	39,74	34,873
2012	-0,942	37,487	25,33	12,157	36,395	34,804
Year	Private investment % of GDP	Gross national savings % of GDP	Current account balance	Primary completion rate, total (% of relevant age group)	Vulnerable employment, total (% of total employment)	polariz
1985	26,594	19,254	-7,288	n.a.		0
1986	24,104	19,255	-6,395	n.a.		0
1987	22,445	18,586	-4,803	n.a.		0
1988	20,005	18,398	-0,924	n.a.		0
1989	22,038	18,157	-3,665	n.a.		0
1990	20,478	16,884	-3,465	n.a.		0
1991	16,193	14,402	-3,047	n.a.	12,7	0
1992	17,576	14,477	-4,397	n.a.	13	0
1993	20,003	17,03	-4,115	n.a.	13,1	0
1994	21,532	18,817	-3,98	n.a.	12,7	0

1995	22,508	19,662	-4,953	n.a.	12,8	2
1996	22,684	18,262	-5,813	n.a.	13,4	2
1997	21,667	16,755	-6,162	n.a.	12,8	2
1998	20,127	15,757	-3,635	n.a.	12,7	2
1999	21,199	15,249	-6,05	n.a.	13,6	2
2000	21,763	16,73	-4,596	n.a.	13,5	2
2001	20,861	19,625	-2,256	n.a.	12,6	2
2002	22,383	19,991	-3,619	n.a.	12,3	2
2003	22,535	20,755	-2,478	n.a.	12,1	2
2004	24,157	19,437	-4,616	n.a.	12,1	2
2005	24,532	17,088	-7,158	n.a.	11,9	2
2006	23,021	15,929	-7,234	n.a.	12,1	2
2007	23,88	16,513	-6,91	n.a.	11,8	2
2008	22,742	15,345	-7,799	n.a.	12,1	2
2009	18,978	16,683	-2,274	n.a.		2
2010	19,239	16,956	-2,256	n.a.		2
2011	18,926	16,009	-2,892	n.a.		2
2012	20,189	16,051	-4,115	n.a.		2

Source: International Monetary Fund, World Bank

Table 14 Finland, country profile from the database used in quantitative research

Year	Structural balance, % of potential GDP	Gross public debt, % GDP	Net public debt, % GDP	Financial assets % of GDP (gross minus net debt)	Gross public expenditures, % of GDP	Gross public revenues as % of the GDP
1980		10,823	-177,082	187,905	44,611	46,919
1981		11,477	-175,615	187,092	45,331	49,539
1982		13,76	-161,868	175,628	47,216	49,008
1983		15,308	-153,105	168,413	49,11	48,828
1984		15,124	-152,463	167,587	48,466	50,518
1985		15,803	-159,856	175,659	50,458	52,372
1986		16,416	-164,49	180,906	51,138	53,843
1987		17,622	-164,47	182,092	52,104	52,147
1988		16,514	-172,02	188,534	50,654	54,907
1989		14,275	-196,067	210,342	47,927	54,515
1990		13,839	-208,271	222,11	48,142	54,207
1991		21,9	-200,579	222,479	57,107	56,664
1992		39,361	-146,494	185,855	62,371	56,615
1993		54,226	-94,942	149,168	65,203	56,171
1994		56,532	-96,843	153,375	64,063	56,714
1995		55,518	-23,998	79,516	61,802	54,922
1996		55,723	-39,912	95,635	60,123	56,145
1997		52,854	-44,515	97,369	56,568	54,93
1998		47,619	-86,782	134,401	52,921	54,506
1999	0,835	45,664	-50,277	95,941	51,789	53,445
2000	5,33	43,793	-31,092	74,885	48,416	55,359
2001	3,937	42,46	-31,65	74,11	47,997	53,076
2002	3,65	41,468	-31,318	72,786	49,04	53,147
2003	2,252	44,511	-38,443	82,954	50,336	52,776
2004	1,341	44,387	-46,674	91,061	50,24	52,489
2005	1,685	41,703	-58,591	100,294	50,348	53,038



2006	2,236	39,632	-69,424	109,056	49,195	53,274
2007	2,069	35,158	-72,521	107,679	47,389	52,728
2008	1,599	33,939	-52,292	86,231	49,212	53,557
2009	0,182	43,522	-62,848	106,37	56,122	53,406
2010	-1,22	48,664	-65,561	114,225	55,794	52,984
2011	-0,994	49,193	-54,255	103,448	55,267	54,113
2012	-1,126	53,616	-55,422	109,038	56,61	54,446
Year	Private investment % of GDP	Gross nationals savings % of GDP	Current account balance	Primary completion rate, total (% of relevant age group)	Vulnerable employment, total (% of total employment)	polariz
1980	30,141	27,364	-2,726			2
1981	27,328	26,238	-0,803			2
1982	27,445	24,876	-1,702			2
1983	27,01	24,444	-2,087			2
1984	25,909	25,308	0,074			2
1985	25,418	24,345	-1,338			2
1986	24,347	24,086	-0,934			2
1987	25,059	23,676	-1,904	104,13		2
1988	27,43	25,931	-2,521	105,881		2
1989	30,44	25,398	-4,943	105,588		2
1990	28,46	23,658	-5,02	101,788		2
1991	22,129	16,33	-5,355	97,388		1
1992	18,765	13,655	-4,618	96,741		1
1993	16,308	14,758	-1,288	96,113		1
1994	17,501	18,064	1,087	97,197		1
1995	18,19	21,663	4,09	100,636	12,1	1
1996	17,775	20,679	4,01	101,391	12,7	2
1997	19,171	23,753	5,566	100,522	10,9	2
1998	20,364	24,786	5,612	98,154	10,8	2
1999	19,506	24,656	5,342	95,983	9,6	2
2000	20,814	28,59	7,776	96,332	9,2	2
2001	20,425	28,779	8,354	102,291	9	2
2002	19,101	27,56	8,459	101,012	8,9	2
2003	19,371	24,199	4,828	102,075	8,7	1
2004	19,949	26,147	6,198	100,35	8,3	1
2005	21,798	25,149	3,351	100,36	8,8	1
2006	21,264	25,421	4,157	96,908	8,8	1
2007	22,852	27,117	4,265	98,161	8,6	1
2008	22,224	24,839	2,615	98,562	9	1
2009	18,518	20,286	1,769	97,428	9,6	1
2010	18,447	19,964	1,517	97,965	9,2	1
2011	20,537	19,036	-1,5	97,424	9,3	1
2012	19,849	17,787	-1,663	99,262	9,6	2

Source: International Monetary Fund, World Bank

**Table 15 Israel, country profile from the database used in quantitative research**

Year	Structural balance, % of potential GDP	Gross public debt, % GDP	Net public debt, % GDP	Financial assets % of GDP (gross minus net debt)	Gross public expenditures, % of GDP	Gross public revenues as % of the GDP
2000	-6,375	81,402	71,6	9,802	49,189	45,387
2001	-7,001	85,969	76,8	9,169	51,487	45,303
2002	-6,53	93,072	85	8,072	52,928	45,315
2003	-5,558	95,567	87,6	7,967	51,577	43,737
2004	-4,38	94,116	87,6	6,516	48,653	42,701
2005	-3,595	90,626	83,8	6,826	47,369	42,47
2006	-1,815	81,627	74,8	6,827	45,695	43,136
2007	-1,727	74,622	69,2	5,422	43,956	42,434
2008	-3,699	72,925	69,1	3,825	43,215	39,471
2009	-5,736	75,269	70,8	4,469	43,074	36,743
2010	-4,906	71,451	69,1	2,351	42,177	37,623
2011	-4,431	69,706	68	1,706	41,883	37,712
2012	-5,396	68,202	67,4	0,802	41,012	36,378
Year	Private investment % of GDP	Gross nationals savings % of GDP	Current account balance	Primary completion rate, total (% of relevant age group)	Vulnerable employment, total (% of total employment)	polariz
2000	21,583	19,993	-1,59		7,1	2
2001	20,886	19,291	-1,594		6,9	1
2002	19,423	18,325	-1,098	104,484	7	1
2003	18,541	19,055	0,514	104,555	7,3	1
2004	18,516	20,154	1,637	108,145	7,2	2
2005	19,472	22,432	2,96	104,141	7,5	2
2006	19,683	24,346	4,662	102,726	7,9	2
2007	20,45	23,627	3,177	103,486	7,4	2
2008	20,053	21,494	1,441	100,204	7,2	2
2009	17,624	21,471	3,846	103,292		2
2010	18,126	21,221	3,095	101,597		2
2011	20,184	21,445	1,261	100,975		2
2012	20,677	21,006	0,33			2

Source: International Monetary Fund, World Bank