# Impacts of Budget Transparency on Economic and Political Outcomes: A Review of Empirical Evidence

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The goal of this article is to provide a systematic review of the available empirical research on the impacts of budget transparency on economic and political outcomes at various levels of government and in various countries worldwide. Additionally, consideration is given to the definitions of both budget and fiscal transparency and the various measurements of them used in the reviewed literature. After a systematic desk review of the literature published online, in English, during the 2000–2021 period, two important observations can be made: (i) there is a lack of research into the impact of budget transparency on economic and political outcomes, particularly at subnational government levels, and (ii) there is a heterogeneity in the definition and

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measurement of some variables that can lead to contradictions and inconsistencies in the results obtained.

Keywords: budget transparency, impacts on economic and political outcomes, empirical review, subnational governments

### 1. Introduction<sup>1</sup>

Enormous pressure is put on governments to increase their transparency and improve communication with citizens. Increasing attention has been paid particularly to fiscal and budgetary transparency (OECD, 2017). There is a wide range of international advocates for greater openness of public budgets, the most prominent being the International Budget Partnership (IBP), Global Initiative for Fiscal Transparency (GIFT), Open Government Partnership (OGP), Organisation for Economic Co-operation and Development (OECD), International Monetary Fund (IMF), World Bank (WB), United Nations (UN), and Public Expenditure and Financial Accountability (PEFA). This process was substantially enhanced by the advent of the internet, which not only allowed for large budget data series to be published but also eased communication among stakeholders. Focus on the impacts of budget transparency is very important as its improvements lead to more efficient spending (Alt, Lassen & Skilling, 2002; Vicente, Benito & Bastida, 2013), better planning (Onyango-Delewa, 2016; Ríos et al., 2017; Elberry & Goeminne, 2020), lower debt levels (Alt & Lassen, 2003; 2006b; Arbatli & Escolano, 2012; Gerunov, 2016; Jarmuzek, 2006; Montes, Bastos & Oliveira, 2019), and less corruption (Lindstedt & Naurin, 2010; Benito, Guillamón & Bastida, 2015; Bauhr & Grimes, 2017; De Simone et al., 2017; Chen & Neshkova, 2020). All these impacts might be particularly important in these times of the global pandemic - and war in Ukraine - induced crises which are additionally stretching governments' budgets.

Consequently, there is a need to systematise the most important literature on the impact of budget transparency on economic and political outcomes. The goal of this article is to single out quantitative studies to

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understand and identify the key impacts of budget transparency at national (central) and subnational - state, provincial, regional, and local - levels of government published online during the 2000-2021 period. The unified search engine Discovery Service Summon for all electronic sources of academic publications was used, the search being restricted to papers published in English and focusing on online disclosure. Although the initial intention was to focus solely on subnational governments, the article also includes the national level, as there was a shortage of papers at subnational levels. This is why the article emphasises the importance of this research at lower levels and puts greater focus on these studies. Likewise, as only a few studies focus explicitly on budget transparency, this review includes studies that include at least one budgetary dimension in the transparency index. No appropriate books were found about the impacts of budget transparency on economic and political outcomes. presumably because it is a relatively new topic, insufficiently researched, and books tend not to be available online. Finally, 37 studies published in journals are included in this review, first by the measure of transparency index and then by impacts of budget transparency.<sup>2</sup> Only research with significant results is considered in detail throughout the article (see Tables 1 and 2 for details and all nonsignificant results).

The first systematic review of published evidence on the impacts of fiscal transparency and participation in government budgeting by de Renzio and Wehner (2017) takes account of 38 empirical studies published during the 1991–2015 period. The authors claim that "increased budgetary disclosure and participation", which they call fiscal openness, "are consistently associated with improvements in the quality of the budget, as well as governance and development outcomes" (de Renzio & Wehner, 2017, p. 1). Including only the studies with country or cross-country analysis, they establish (i) macro-fiscal, (ii) allocation and service delivery, (iii) governance, and (iv) development outcomes. In contrast to their review, which presents only articles exploring the impacts of budget transparency at central government level, this article considers studies available online in English, for a longer period, dealing with impacts of budget transparency on economic and political outcomes at the national and subnational government levels. It also includes measures of transparency indices and provides detailed tables with impacts of budget transparency on economic and political outcomes.

<sup>&</sup>lt;sup>2</sup> A detailed table with measurements of budget/fiscal transparency indices, methods of estimating, time period and sample used in all considered papers is available upon request.

This article is organised as follows. Chapter 2 presents various definitions of budget/fiscal transparency and their measurement at different government levels in various countries. These measurements reveal that they vary across countries and how they are constructed in response to the focus of the research and the availability of data. The methodology used in the papers is presented as well as a detailed presentation of the economic and political impacts of budget transparency. Chapter 3 describes the impacts of budget transparency on economic and political variables. Because of the contradictory results in some papers, measurements of the impacts of budget transparency are also presented. Chapter 4 contains conclusions and recommendations for future research.

## 2. Budget Transparency Definition

It is not easy to make a strict distinction between fiscal and budget transparency, often used as synonyms. Fiscal transparency refers to the publicly available information about the government's fiscal policy-making process; it refers to the clarity, reliability, frequency, timeliness, and relevance of public financial reporting and the openness of such information (IMF, 2018). One of the most often mentioned, comprehensive definitions of fiscal transparency is given by (Kopits & Craig, 1998; 1): "Fiscal transparency is defined as openness toward the public at large about government structure and functions, fiscal policy intentions, public sector accounts, and projections. It involves ready access to reliable, comprehensive, timely, understandable, and internationally comparable information on government activities - whether undertaken inside or outside the government sector - so that the electorate and financial markets can accurately assess the government's financial position and the true costs and benefits of government activities, including their present and future economic and social implications." On the other hand, budget transparency means being fully open with people about how public money is raised and used; some of the most important benefits of budget transparency are accountability, integrity, inclusiveness, trust, and quality (OECD, 2017). There are different definitions and measurements of budget transparency but this concept has been defined quite clearly and with a good degree of consensus among different actors, like e.g. "Transparency or openness is a characteristic of governance. It refers to the availability of information to the public on the transactions of the government and the transparency of decision-making processes" (Premchand, 1993, p. 17) or "Budget transparency implies providing an insight into complete, accurate, timely and understandable budget information. It enables citizens to participate and affect the efficiency of public funds collection and spending, to demand more accountability from the Government and local government authorities and, consequently, to reduce opportunities for corruption" (Ott et al., 2019, p. 2). Different definitions of budget transparency lead to a confused understanding of this topic, with consequently different approaches in its measurements, not only among but even within countries.

# 2.1. Various Approaches to Measuring Budget Transparency

This section presents various approaches to measuring budget transparency in the literature within and among countries, at subnational and national government levels.

Subnational governments. The first research on the impacts of subnational government transparency comes from the USA, where it has been common to use the same government transparency measure based on questionnaires sent to the budget officers of all 50 states, based on the data from the National Association of State Budget Officers and the National Conference of State Legislatures (Alt, Lassen & Skilling, 2002; Alt & Lowry, 2010; Wang et al., 2014). These questionnaires have nine items regarding budget procedure issues: Generally Accepted Accounting Principles (GAAP) reporting, multi-year expenditure forecast, annual budget cycle, binding revenue estimates, legislative revenue forecasts, single appropriation bill, nonpartisan staff drafting, no open-ended appropriations, and performance measures reporting (Alt, Lassen & Skilling, 2002).

The most recent research on subnational government transparency comes from Spain, using a government transparency measure calculated by Transparency International (TI) Spain for 110 out of 8,122 Spanish municipalities (Benito, Guillamón & Bastida, 2015; Ríos et al., 2017; Vicente, Benito & Bastida, 2013). The TI Spain questionnaire measures five dimensions: (a) information about the municipal corporations, (b) relations with citizens and society, (c) economic and financial transparency, (d) transparency in the contracting of services, and (e) transparency of urban planning and public work (Benito, Guillamón & Bastida, 2015).

Similarly, Aguiar-Conraria, Magalhåes and Veiga (2019) use the government transparency measure calculated by TI Portugal, for all 308 Portuguese municipalities firstly presented in the paper by da Cruz and

colleagues (2016) as the municipal transparency index (MTI) grouping indicators in seven dimensions: (a) organisational information, social composition, and operation of the municipality (executive and representative bodies), (b) plans and planning, (c) local taxes, rates, service charges, and regulations, (d) relationship with citizens as customers, (e) public procurement, (f) economic and financial transparency, and (g) urban planning and land use management (da Cruz et al., 2016).

Onyango-Delewa (2016) uses the fiscal transparency index operationalised by the budgetary process, financing mechanisms, regulation, and tax policy from various resources for a sample of 350 local units of Uganda. Chen and colleagues (2016) use government financial information disclosure from the Fiscal Transparency in China report by the Finance and Public Policy Research Center of Shanghai University.

Bronić, Stanić and Prijaković (2022) use the Open Local Budget Index (OLBI) developed by the Institute of Public Finance, for all 576 local governments in Croatia (20 counties, 128 cities, and 428 municipalities). The OLBI takes a value from 0 to 5, depending on the number of key budget documents (year-end report, mid-year report, enacted budget, budget proposal, and citizens budget) published at local governments' websites.

Budget/fiscal transparency indices for subnational governments show a lack of agreement regarding the indicators for measuring transparency, due to the political context of the country, its laws, needs, etc. Most authors use indices with numerous and various indicators to check the characteristics of budgets, resulting in various kinds of transparency indices.

Central governments. Studies of the impacts of budget transparency on economic and political outcomes at national government levels use various budget/fiscal transparency indices and various samples of countries. Some studies include cross-country comparison, often using the Open Budget Index (OBI), published by the IBP (Albassam, 2015; Bisogno & Cuadrado-Ballesteros, 2021; Blume & Voigt, 2013; Chen & Neshkova, 2020; Cuadrado-Ballesteros & Bisogno, 2021; De Simone at al., 2019; Elberry & Goeminne, 2020; Gerunov, 2016; Montes & da Cunha Lima, 2018; Montes, Bastos & Oliveira, 2019; Ríos, Benito & Bastida, 2016; Sedmihradska & Haas, 2012). The OBI is constructed from 140 survey questions about the quality and timeliness of the publication of key budget documents: prebudget statement, budget proposal, enacted budget, citizens budget, inyear reports, mid-year review, end-year report, and audit report.

Some studies measure government budget procedures from questionnaires sent to budget officers of 19 OECD countries, grouping measures regarding transparency into four broad criteria: more information in fewer

documents, independent verification, non-arbitrary language, and more justification (Alt & Lassen, 2003; Alt & Lassen, 2006a; Alt & Lassen, 2006b). The OECD/WB Budgeting Database (OWD) is the main source of data for Bastida and Benito (2007) and Benito and Bastida (2009) and their index, which contains forty dummy variables organised in three parts: (a) Budget Reports, (b) Specific Disclosures and Integrity, and (c) Control and Accountability.

Different measures of fiscal/budget transparency are used in cross-country analyses, which all consider at least one budgetary dimension in their transparency indices. The most used IBP OBI is unfortunately not consistent over the years, as more countries and more questions have been included. Papers on central governments' budget transparency often include cross-country analyses, mostly thanks to the availability of the IBP OBI, while papers on subnational governments include only the withincountry analyses. Therefore, as with the OBI, the development of a standardised measure of budget transparency at the subnational government level might be helpful in enabling analyses and comparisons among subnational governments of multiple countries.

## 2.2. The Methodology Used in Papers at the Subnational Level

The methodology, time periods, and samples used in papers on budget transparency at subnational levels are explained below. The lack of research on the impacts of budget transparency at the subnational government level is probably due to the complexity of collecting and measuring data for numerous subnational units. This review highlights three papers due to their focus on the budget transparency of subnational governments, credible and strong evidence, and strictly used methodology: Benito, Guillamón and Bastida (2015) for 110 largest Spanish municipalities during 2000-2009, Ríos and colleagues (2017) for the 100 largest Spanish municipalities during 2008–2014, and Bronić, Stanić & Prijaković (2022) for 576 Croatian local governments during 2014–2019. The first two papers use unique panel data for municipalities, employing the OLS and OLM or 2SLS regression analysis, while the third uses unique panel data for all cities and municipalities, employing the system generalised method of moments (GMM). Other papers discussing the subnational level, e.g. Vicente, Benito and Bastida (2013) for the 97 largest Spanish municipalities during 1999–2009 use balanced panel data employing the GMM method,

while Aguiar-Conraria, Magalhåes and Veiga (2019) for 308 Portuguese municipalities for only one year (2013) use the OLS method. Studies in the US use regression analysis, 2SLS, and 3SLS regression (Alt, Lassen & Skilling, 2002; Alt & Lowry, 2010).

From these cases, it could be concluded that for the analysis of the impact of budget transparency on economic and political outcomes at the subnational levels of government, it might be useful to use panel data for longer periods, with OLS, 2SLS and GMM methods for determining the possibility of a two-way causal relationship between variables.

# 3. Impacts of Budget Transparency on Economic and Political Variables

Besides presenting the impacts of budget transparency on economic and political variables, this chapter also provides different measures of economic and political variables in the reviewed literature (see Tables 1 and 2).

The most used economic variables are:

- Budget balance the difference between government revenues and expenditures, i.e. positive (surplus) or negative balance (deficit),
- Debt accumulation of yearly deficits,
- Expenditures overall public spending carried out by the government.

The most used political variables are:

- Corruption i.e. abuse of entrusted power for private gain (Benito, Guillamón and Bastida, 2015),
- Government effectiveness captures perceptions of the quality of public services, the quality of the civil service, and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies (WB, 2020).

### 3.1. Economic Variables

The following part explains the most important economic variables used in the reviewed literature, while the remaining ones are presented in detail in Table 1.

Budget balance. Many papers look at how budget transparency affects the budget balance, but with various measures and inconsistent results. Some have found a significant, positive relationship between the transparency index and budget balance, which implies that more transparent governments reach better budgetary results (Hameed, 2005; Ríos et al., 2017). For the budget balance measure, Hameed (2005) uses primary fiscal balance minus interest payments to GDP ratio, while Bronić, Stanić and Prijaković (2022) and Ríos and colleagues (2017) use the share of nonfinancial revenue minus nonfinancial expenditures in nonfinancial revenue. Sedmihradska and Haas (2012) found a weak but significant negative relationship between budget transparency and budget balance measured by the difference in the general government gross debt to GDP ratio. Bronić, Stanić and Prijaković (2022) found a negative and significant relationship between budget transparency index and budget balance, a higher probability of achieving deficits especially in poorer local governments and in pre-election years. Arbatli and Escolano (2012) show that the primary fiscal balance is positively related to the IMF's ROSCs (Report on the Observance of Standards and Codes) both in advanced economies and in the full sample. Alt and Lassen (2006a) use the surplus to GDP ratio, separately in pre-election years, post-election years, and in the political budget cycle (PBC),3 finding that deficits are slightly larger in election than in nonelection years and that there are larger deficits in low transparency than in high transparency countries. PBC suggests that opportunistic incumbents increase government spending and decrease taxes before elections to enhance their chances of re-election (Vicente, Benito & Bastida, 2013), a feature common in countries with lower levels of transparency.

One can conclude that in many papers balanced budgets are associated with higher transparency, implying mostly a positive relationship. Some papers use the interaction of the variable pre-election, election, and post-election years with transparency concluding that budget deficits are higher in pre-election/election years and in lower/poorer transparency countries.

<sup>&</sup>lt;sup>3</sup> PBCs are cycles in some component of the government budget induced by the electoral cycle. More specifically, the term most often refers to increases in government spending or deficit or decreases in taxes (including changes relative to long-term trends) in an election year, which are perceived as motivated by the incumbent's desire for re-election for himself or his party (Drazen, 2008).

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Table 1: Economic variables, measurements, and correlation with the transparency index

Nonsignificant		High transparency countries		Post-election with transparency		High transparency countries	Alt & Lassen (2006b)		ROSC for developing economies OBI for developing, advanced and full sample	
Negative		Low transparency countries					-		1	Bronić, Stanić & Prijaković (2022)
Positive	Alt & Lassen (2006a)	Pre-election year with transparency	Alt & Lassen (2006a)	Low transparency countries	Alt & Lassen (2006a)	Low transparency countries		Arbatli & Escolano (2012)	ROSC for advanced economies and full sample	
Measurement				Surplus to GDP ratio			Annual government fiscal surplus/deficit	Average primary fiscal balance to GDP ratio		Share of nonfinancial revenue minus nonfinancial expenditures in nonfinancial revenue (surplus/deficit)
Variable	Surplus in a pre-elec-	tion year	Surplus in the post-	election year	Surplus in cycle		Electoral cycle in surplus/deficits	Primary balance		Budget balance
Impacts					CE	BALAN	NDCEL	В		

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Primary budget balance	Primary budget balance to GDP ratio	1	1	Gerunov (2016)
-	Budget balance to GDP ratio		1	Gerunov (2016)
_	Fiscal balance minus interest payments to GDP ratio	Hameed (2005)	-	
	Share of nonfinancial revenue minus nonfi-	Ríos et al. (2017)		
	nancial expenditures in nontinancial revenue (surplus/deficit)	Financial transparency index (FII)	-	Preelection year with Transparency
	Difference between two years of general government gross debt to GDP ratio	-	Sedmihradska & Haas (2012)	-
	Gross debt to GDP ratio	-	Alt & Lassen (2003)	-
	Average change in gross debt to GDP ratio		Alt & Lassen (2003)	
	General government debt to GDP ratio		Alt & Lassen (2006b)	
	Gross debt to GDP ratio	Arbatli & Escolano (2012)		
			ROSC for advanced economies	ROSC for developing economies and for full sample OBI for developing, advanced and full sample

	Gross government debt	Gross government debt to GDP ratio	-	Gerunov (2016)	
	Debt accumulation	Debt to GDP ratio	-	Jarmuzek (2006)	1
	Debt to GDP	Gross debt to GDP ratio		Montes, Bastos & Oliveira (2019) Full sample and sample of developing countries	
	Cost of government	Mean and median rates of urban construc-	Chen et al. (2016)		
COSL OF DEBT	debt	tion investment bonds issued in a given area	Government intervention index and government audit prevention function index with transparency index	Transparency index	
)	Municipal bond issuance cost	State municipal borrowing costs – true interest cost	Wang et al. (2014)		1
Sŧ	Credit ratings	Alphabetical credit ratings from Fitch,	Arbatli & Escolano (2012)		
ont ratinc		Moody's, and Standard and Poor's	ROSC and OBI for developing economies and for the full sample	1	ROSC and OBI for advanced economies
CKEL			Hameed (2005) Yu et al. (2021)	1	

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	ROSCs Publication of Article IV Staff Reports with ROSCs SDDS with ROSCs	1		Blume & Voigt (2013)		Alt & Lowry (2010)
	Publication of Article IV Staff Reports; SDDS	-	ı			
Glennerster & Shin (2008)	Publication of Article IV Staff Reports with Special Data Dissemination Standard (SDDS)	Alt, Lassen & Skilling (2002)	Alt, Lassen & Skilling (2002)		Bronić, Stanić & Prijak- ović (2022)	
Quarterly average of log daily sovereign	credit spread, using the level of credit spread in basis point	Measured in constant dollars and pc terms, including general and total spending	Measured in constant dollars and pc terms including general and total spending, deflated by the regional consumer price index	Total government expenditure to GDP ratio	Total budget expenditures pc, and as share of total budget expenditures in average residents' income	Fiscal scale variable is the two-year rate of changes in taxation, based on the sum of real, pc personal, and corporate income and general and selective sales tax revenue
Credit spreads		Nominal pc general spending	Real pc total spend- ing	Budget institutions and government expenditures	Budget expenditures	Tax growth
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Elberry & Goeminne (2020)				Pre-election year with Transparency			ar ncy		,
1	ı	-		FTI		FTI	Pre-election year with Transparency	1	ı
	Onyango-Delewa (2016)	Onyango-Delewa (2016)	Ríos et al. (2017)		Ríos et al. (2017)			Baldrich (2005)	Baldrich (2005)
Aggregate budget credibility index contains 4 indicators: comparison between aggregate expenditure outturn and the original approved budget, comparison between the composition of expenditure outturn and the original approved budget, comparison of the aggregate revenue outturn and the original approved budget, and measuring and monitoring the stock of expenditure payment arrears	Budget estimation is measured using scales in Ghonkrokta and Lather (2007)	Budget forecasting is measured using scales in Kyobe and Danninger (2005)	Deviation in tax revenues ((budgeted – ac-	tual//budgeted in %)	Deviation in current expenditures ((budgeted	– actual/budgeted in %)		Log GDP pc	Log GDP per labourer
Budget credibility	Budget estimation	Budget forecasting	Budget forecast	deviation in tax revenues	Budget forecast	deviation in current expenditures		Economic perfor- mance	
ИС	INNYTo	NCIPF I	FINA					OR-	MYN beke econg

						Blume & Voigt (2013)
	Montes & da Cunha Lima (2018)	Montes & da Cunha Lima (2018)	Montes & da Cunha Lima (2018)	Montes & da Cunha Lima (2018)	1	
Alt, Lassen & Skilling (2002)					Bellver & Kaufmann (2005)	
Measured in constant dollars and pc terms including general and total revenues	CPI index, data from IMF in percentage	Expected inflation for the following year is the simple average of expected inflation for the CPI in the spring and autumn	Volatility of inflation	Volatility of inflation expectations	Life expectancy, female literacy, and immunisation from World Development Indicators	Natural logarithm of total factor productivity, calculated based on a Cobb-Douglas function following the model of Hall and Jones (1999)
Nominal pc total revenue	Inflation rate	Inflations expecta- tions	Volatility in inflation	Volatility in expected inflation	Human Development	Budget institutions and total factor productivity
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Source: Author.

Government debt, its cost, and credit rating. Budget transparency may also affect government debt and its costs. While there are different names for variables, they usually refer to the same measurement – gross government debt to GDP ratio. Authors usually find a significant and negative relationship between government debt and transparency index, i.e. higher fiscal transparency levels are associated with lower debt (Alt & Lassen, 2003; 2006b; Arbatli & Escolano, 2012; Gerunov, 2016; Jarmuzek, 2006; Montes, BAstos & Oliveira, 2019). Arbatli and Escolano (2012) found a negative relationship between ROSCs and gross debt to GDP ratio in a sample of advanced economies and the full sample (advanced and developing countries). Additionally, fiscal transparency and average debt changes are in negative and significant relation, which suggests that improving the degree of fiscal transparency is an important element of improving financial performance and that fiscal institutions do affect fiscal outcomes (Alt & Lassen, 2003).

On the other hand, as fiscal transparency increases, borrowing costs fall, and beyond an optimal point, higher transparency leads to increased borrowing costs (Wang et al., 2014). Likewise, a higher degree of government financial information disclosure is associated with a lower debt financing cost (Chen et al., 2016). Glennerster and Shin (2008) show that borrowing costs statistically decline when countries choose to become more transparent. Furthermore, more transparent countries have better credit ratings (Hameed, 2005), both in the full sample and a sample of developing countries and for both transparency indices – OBI and ROSC (Arbatli & Escolano, 2012). Using 2SLS regression, Yu et al. (2021) found that fiscal transparency has a positive effect on the credit ratings of state governments in the US. Lower government debt is associated with higher transparency, which implies a negative relationship between budget transparency and debt. As a country becomes more transparent, the costs decrease and borrowing becomes cheaper. Credit ratings are better for higher transparency countries, implying a positive relationship between budget transparency and credit ratings.

Expenditures. Alt, Lassen and Skilling (2002) show that higher fiscal transparency is associated with a higher nominal pc general spending and real pc total spending, i.e. more transparent governments on average are higher spenders. Bronić, Stanić and Prijaković (2022) use total budget expenditures pc and share of total budget expenditures in average residents' income, showing that expenditures are significant and positively related to the budget transparency index OLBI. That implies that higher budget transparency makes public goods and services more interesting to voters, ultimately increasing public expenditures. Vicente, Benito and

Bastida (2013) use total and capital spending pc with various interaction variables, such as pre-election, election, and post-election years, in both low and high transparency countries. The results suggest a high impact of the electoral cycle on total spending in subnational governments with a low level of financial transparency. Such an impact does not appear in more transparent subnational governments. However, the magnitude of electoral cycles on capital spending does not vary among less and more transparent subnational governments.

In short, more transparent governments show higher expenditure levels, which confirms a positive relationship between government transparency and expenditure levels. Again, electoral cycles in spending are more pronounced in subnational governments with lower levels of transparency.

Financial planning. Financial planning measured as budget estimation and forecasting is positively related to government transparency (Onvango-Delewa, 2016). Better estimation/forecasting is associated with more transparent governments. Ríos and colleagues (2017) claim that budget forecast deviations in tax revenues and current expenditures are negatively related to budget transparency. Less transparent municipalities overestimate their revenues, which enables them to provide more public services without an immediate increase in taxes. Local governments that are aware of the overestimation of their revenues may spend less than they budgeted, while more transparent municipalities seem to be more reasonable in their revenue estimations since they underestimate their revenues, meaning they can spend more than projected. Budget credibility is nonsignificant with the transparency index in Elberry & Goeminne (2020), who for budget credibility indicators include comparisons between: (1) aggregate expenditure outturn and the original approved budget, (2) the composition of expenditure outturn and the original approved budget, (3) aggregate revenue outturn and the original approved budget, and (4) measuring and monitoring the stock of expenditure payment arrears.

To summarise, improved government transparency has a positive impact on budget estimating and forecasting. In line with this, deviations in tax revenues and current expenditures are negatively associated with transparency, which implies that more transparent governments underestimate, while less transparent ones overestimate their revenues and expenditures. *Economic performance*. Economic performance is measured in various ways, such as the logarithm of GDP pc, logarithm of GDP per labourer, or nominal total revenue pc. These measurements are positively and significantly related to the budget transparency index (Alt, Lassen and Skilling, 2002; Baldrich, 2005). Baldrich (2005) points out that fiscal transparency

is positively related to GDP pc. Higher transparency positively affects GDP and government revenues.

Inflation. Montes and da Cunha Lima (2018) analyse the impacts of fiscal transparency on various measurements of inflation finding that countries with higher levels of fiscal transparency tend to have lower inflation rates and lower inflation volatility, as well as lower inflation and less volatility in inflation expectations. Briefly, higher transparency is generally associated with lower inflation.

Various studies of the economic impacts of budget transparency generally show that more transparent governments are associated with better budget balance, credit ratings, budget estimation, and forecasting. Higher budget transparency is also associated with higher expenditures and revenues, underestimation of revenues and expenditures, lower borrowing costs, debt, and inflation. All economic outcomes found in the reviewed literature are presented in detail in Table 1.

### 3.2. Political Variables

The impact of budget transparency on political variables is a less studied topic. The most used political variable is corruption, which is negatively correlated with budget transparency, meaning that an increased level of budget transparency means less corruption. Some studies also use government effectiveness, government quality, gubernatorial approval, magnitude of the budget cycle, public participation, incumbent retention, and vote share. All political outcomes are presented in detail in Table 2.

Corruption. Numerous papers explore the impact of budget transparency on corruption. The generally accepted definition of corruption is usually the same, i.e. abuse of entrusted power for private gain (Benito, Guillamón & Bastida, 2015); however, studies use different measures. Benito, Guillamón and Bastida (2015) enumerate three measures of corruption at the macro level: (1) general or target-group perception, (2) incidence of corruption activities, and (3) reported bribes. The corruption index for different countries has been also measured by various organisations, e.g. Transparency International, World Bank, European Commission, and Heritage Foundation. While numerous papers are published with crosscountry analyses, those on subnational governments are rather scarce. Some studies have found a positive and significant relationship between the control of corruption and the transparency index, implying that more transparent countries generally have better control over corruption (Bellver & Kaufmann, 2005; Hameed, 2005), i.e. lower levels of corruption.

Table 2: Political variables, measurement, and correlation with the transparency index

Nonsignificant	-		Political rights with institutional transpar- ency	1			-	
Negative	Bauhr & Grimes (2017)		1	ı	1	Benito, Guillamón & Bastida (2015)	-	Chen & Neshkova (2020)
Positive	-	Bellver & Kaufmann (2005)	Overall transparency Political rights with politi- cal transparency	Hameed (2005)	Bellver & Kaufmann (2005) Economic/institutional transparency Political transparency Overall transparency	-	Blume & Voigt (2013)	
Measurement	Various forms of corruption: petty (bribe paying), grand (irregular payments and diversion of funds), WB corruption measure		Index from Kaufmann et al. (2004) and the WB. Regularly updated and available online. See Kaufmann et al. (1999) for the development of the index		Bribe frequency is drawn from the Executive Opinion Survey, published by the World Economic Forum and measured by communication of policy, transparency in political funding, free press	Corruption index – Cases of urban political corruption from TI Spain	Graft, according to the CI of the WB focuses on perceptions of corruption	Corruption Perception Index is perceived corruption in a country based on expert assessments from TI
Variable	Corruption	Control of corruption			Composite bribery	Corruption	Graft - Budget institu- tions and corruption	Corruption
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Chen & Neshkova (2020)	Chen & Neshkova (2020)	De Simone et al. (2017)		Economic and Institutional Transparency Index Political Transparency Index Education Newspaper circulation Electoral democracy Rule of law with transparency
	-		Lindstedt & Naurin (2010)	
CoC is perceived corruption in a country based on expert assessments from World- wide Governance Indicators (WGI) and WB Standaert	Bayesian Corruption Index is a Bayesian estimate of a composite index of the perceived corruption	Political corruption, government corruption, public sector corruption	Three various indices: WB GI Dataset,	(ICRG)
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w BT	VA, RQ, CoC, GE	teros (2021)			1				Political transparency		Islam (2003)	Islam (2003)
Albassam (2015)-high vs. low BT		Bisogno & Cuadrado-Ballesteros (2021)	VA, PS, GE, RQ, RoL, CoC	WGI-Aggregated index of VA, PS, GE, RQ, RL, and CoC	Bellver and Kaufmann (2005)	Economic/institutional transparency	Political transparency	Bellver & Kaufmann (2005)	Economic/institutional transparency	Political rights with political transparency		
Measured by WB Group's set of six WGI:	Voice and Accountability (VA), Political Stability (PS) and Absence of Violence (AoV),	Government Effectiveness (GE), Regulatory Quality (RQ), Rule of Law (RoL) and	Control of Corruption (CoC)		Governance includes indicators: GE, VA, CoC from KKZ			Global Competitiveness Index			Measured with more indicators: ICRG, Corruption, RoL, Bureaucracy Quality, Contract Repudiation, and Expropriation Risk	Measured with more indicators: VA, Political Instability and Violence, GE, Regulatory Burden. RoL. and Graft
Governance quality					Governance			Global Competitive-	ness Index		ICRG index	Kaufmann, Kraay, and Zoido-Lobaton (KKZ) index
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	ı	,	Alt & Lowry (2010) Budget transparency index Tax growth with budget transparency	
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Montes, Bastos & Oliveira (2019) Full sample and sample of developing countries	De Simone et al. (2019) Transparency index Democracy with transparency index Montes, Bastos & Oliveira (2019) Full sample and sample of developing countries	Blume & Voigt (2013)		Alt, Lassen & Skilling (2002)
Government Effectiveness Indicator from the WGI project-provided by the WB Group	Public spending performance measured by the World Economic Forum's Global Competitiveness Report data	Government effectiveness according to the Governance Indicators of the WB; combines perceptions of the quality of public service provision, quality of the bureaucracy, competence of civil servants, independence of the civil service from political pressures, and credibility of the government's commitment to policies	Retention is a dummy variable coded one if an incumbent governor is re-elected	Popularity data for state governors (survey data)
Government effectiveness	Government spending efficiency	Budget institutions and government effectiveness	Incumbent retention	Gubernatorial approval
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Magnitude of the budget cycle			Akhmedov & Zhuravskaya (2004)	
Share of votes for	Vote share obtained by the party of the	Aguiar-Conraria, Magalhåes & Veiga (2019)	: & Veiga (2019)	
incumbent parties	incumbent mayor of the municipality	Current expenditures and wage growth with transparency index	Transparency index Exam grades with transparency index	Investment expenditures and budget deficit with transparency index
Public Participation	Public participation in the budget process	Ríos, Benito & Bastida (2016)		
PBC – total spending	Total spending pc in euro	Vicente, Benito & Bastida (2013)	2013)	
oc.		Pre-election year/election year/post-election year with high transparency municipalities Election year with low transparency municipalities ties	Election year with the FTI Post-election year with the FTI	Pre-election year with the FTI Pre-election year/ post-election year with low transparency municipalities

PBC – capital spend-	Capital spending pc in euro	Vicente, Benito & Bastida (2013)	2013)	
ng pc		Pre-election year with the FTI Pre-election year/election year with high transparency municipalities Election year with low transparency municipalities ties	Post-election year with high transparency municipalities	Election year with the FTI Post-election year with the FTI Pre-election year/ post-election year with low transparency municipalities
PBC – taxes pc	Tax and fee revenues pc in euro	Vicente, Benito & Bastida (2013)	2013)	
		Pre-election year with the FTI Pre-election year/ post-election year with high transparency municipalities In a post-election year with low transparency municipalities	Election year with high transparency municipalities Election year with low transparency municipalities	Election year with the FTI Post-election year with the FTI Pre-election year with low transparency municipalities

Source: Author.

Furthermore, some papers found a negative relationship between fiscal transparency and corruption levels (Bauhr & Grimes, 2017; Benito, Guillamón & Bastida,2015; De Simone et al., 2017; Lindstedt & Naurin, 2010). Bellver & Kaufmann (2005) found a positive relationship between economic/institutional and political transparency<sup>4</sup> and composite bribery. Benito et al. (2015), using the corruption index, calculated as cases of urban political corruption in Spain, found that higher municipal transparency reduces corruption. Chen and Neshkova (2020) found a negative and significant relationship of three various corruption indices (corruption perception index, control of corruption index, and Bayesian corruption index) with the transparency index.

In general, authors use various measures of corruption. Bauhr and Grimes (2017) distinguish petty (bribe paying), grand (irregular payments and diversion of funds), and WB corruption measures, finding that transparency reduces corruption levels. De Simone and colleagues (2017) use three kinds of corruption – political, government, and public sector – as dependent variables, and all of them found a negative, significant relationship between fiscal transparency and corruption levels. Agent-controlled and non-agent-controlled transparency<sup>5</sup> have significant and negative effects on corruption, confirming that higher transparency reduces corruption (Lindstedt & Naurin, 2010). They also stress that being more transparent will not prevent corruption if the conditions for accountability and publicity are weak, i.e. when there are low levels of citizen education and media

<sup>&</sup>lt;sup>4</sup> This is an aggregate transparency index with two sub-components. The first, "Economic and Institutional Transparency", assesses the degree of accessibility and usefulness of the information provided by public institutions or self-imposed accountability within the state machinery. It covers economic transparency, e-government, access to information laws, transparency in the budget process, transparency of policy, and transparency of the public sector. The second, "Political Transparency", includes elements such as transparency of political funding, openness of the political system, and freedom of the press to monitor the government's performance and express the people's voice (Bellver & Kaufmann, 2005).

<sup>&</sup>lt;sup>5</sup> "Agent-controlled transparency", refers to information released by the agent in response to freedom of information laws and to other requirements for releasing information about its activities. Such requirements may have been externally imposed by the principal in order to increase control, or they may have been self-imposed by the agent with the purpose of increasing its legitimacy in the eyes of the principal. "Non-agent-controlled transparency", rather than making life more complicated for corrupt actors, makes it more dangerous. Investigative reporters and other whistle-blowers are not restricted to public records but may also, if successful, release secret files and witnesses documenting the agent's behaviour. This information may include actual instances of corruption. If whistle-blowers are able to give publicity to such information, and if there are accountability mechanisms available to the principal, the agent may have to face the costs of accountability (Lindstedt & Naurin, 2010).

reach. Generally, higher transparency is related to lower corruption, i.e. higher control of corruption.

Governance quality and effectiveness. There are numerous measurements showing that more transparent governments govern better. Islam (2003) uses indicators such as voice and accountability, political instability and violence, government effectiveness, regulatory burden, rule of law, graft, ICRG, corruption, bureaucracy quality, contract repudiation, and expropriation risk, finding a negative relation to the transparency index. Albassam (2015) and Bisogno and Cuadrado-Ballesteros (2021) use indicators such as voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption. Albassam (2015) found a negative, while Bisogno and Cuadrado-Ballesteros (2021) found a positive and significant relation to the transparency index. Blume and Voigt (2013) used the WB indicator of government effectiveness, which combines perceptions of the quality of public service provision. quality of the bureaucracy, competence of civil servants, independence of the civil service of political pressures, and credibility of the government's commitment to policies in a single indicator and found a positive relationship with the transparency index. Bellver and Kaufmann (2005) showed a positive and significant relationship between economic/institutional and political transparency with various governance indicators. Higher transparency is associated with a higher index of governance quality, which implies better governing. De Simone and colleagues (2019) and Montes, Bastos and Oliveira (2019) found a positive, significant relationship between the transparency index and government spending efficiency. The positive impact of budget transparency on government spending efficiency, government effectiveness, and government quality is supported in all the research reviewed. Papers that examine the relationship between transparency and governance quality tend to show that higher transparency positively affects the quality of governance as well as government effectiveness. Other political variables. Vicente, Benito and Bastida (2013) showed that in municipalities with lower levels of transparency the electoral cycle has an impact on total spending, whereas no such impact appears in more transparent municipalities. However, the magnitude of cycles in capital spending and taxes does not vary between low and high transparency municipalities. In this context, the PBC suggests that opportunistic incumbents increase government spending and decrease taxes before elections to enhance their re-election chances. Akhmedov and Zhuravskaya (2004) also showed that the magnitude of the PBC decreases with higher transparency of the government.

Ríos, Benito and Bastida (2016) showed that the level of budget transparency has a positive impact on the opportunities for public engagement in the central government process. And vice versa, public participation calls for higher budget transparency. Alt, Lassen and Skilling (2002) showed that in states with higher fiscal transparency the governor receives more favourable job approval ratings (greater gubernatorial approval). With more transparency, governors are more popular, public participation is higher and there is no PBC. Aguiar-Conraria, Magalhåes, and Veiga (2019) showed using a sample of 308 Portuguese municipalities that in more transparent ones, voters will more likely reward outcomes producing long-term benefits like education but will less likely show approval of, for instance, increases in wages.

To summarise, the highest proven political impact of budget transparency is on corruption. Higher levels of transparency are connected with a lower perception of corruption, i.e. better control of corruption, but also with better government quality, effectiveness, and spending efficiency, plus more popular governors and higher public participation (see Table 2 for more details on political variables outcomes).

## 4. Conclusion

The literature on budget transparency can be divided into four categories: definition, measures, determinants, and impacts. Most of it is focused on the budget transparency of national governments, probably because of the problems of measurement at subnational levels. This article provides a review of 37 empirical studies on the impacts of budget transparency on economic and political outcomes, published in English, online, during the 2000–2021 period. Its specific contribution is visible in Tables 1 and 2, which systematise economic and political outcomes and their various measures found in the reviewed literature and the possibility of using them in further research.

Among the economic variables, the most pronounced impact of budget transparency is on government budget balance, debt, and expenditures. It means that governments with higher budget transparency are associated with better budget balance, credit ratings, budget estimation, and forecasting. They are also associated with higher expenditures and revenues, underestimation of revenues and expenditures, lower borrowing costs, government debt, and inflation. The highest proven political impact of

budget transparency is on corruption. Governments with higher levels of budget transparency are perceived as less corrupt, having better control of corruption, as well as higher government quality, effectiveness, and spending efficiency. Moreover, they have more popular governors and higher public participation.

For future research, one could recommend the standardisation of budget transparency measurements at subnational government levels (something similar to OBI) and analysing the impacts of budget transparency on various economic and political variables to find their (positive or negative) relationships. It would also be interesting to find out more about its impact on government reforms, public participation, cultural values, gender of members of the legislature and executive branches of government, etc. Although determinants are beyond the scope of this research (for a review of determinants see Stanić, 2018), there are some that match – debt and the budget balance – which could be further analysed, especially in country-specific contexts, as could other variables mentioned in the reviewed papers.

Possible limitations of this article might be that it considers only studies published after 2000 and only those that are empirical without meta-analytic studies; the latter are actually not numerous in this field. However, because of the narrow focus of the available literature, it might be the basis of and motivation for further research. The most important observations derived from this thorough review are that there is a lack of research into the impact of budget transparency, particularly on the economic and political outcomes and particularly at subnational government levels. Also, there is a heterogeneity in the definitions and measurement of some variables that, if not recognised and addressed, can lead to misinterpretation, contradictions and inconsistencies in the results obtained. These observations might be used as guidelines for further research in this interesting and ever more important field.

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## IMPACTS OF BUDGET TRANSPARENCY ON ECONOMIC AND POLITICAL OUTCOMES: A REVIEW OF EMPIRICAL EVIDENCE

### Summary

This article focuses on a review of literature on the impacts of budget/fiscal transparency on economic and political outcomes. It also considers the definitions and measurements of budget/fiscal transparency indices used in the literature reviewed – thirty-seven papers published in English, online, during the 2000– 2021 period. The reviewed papers mostly deal with budget transparency at the national (central) government level, probably due to the problems of measurement at subnational – state, provincial, regional, local – government levels. Tables 1 and 2 systematise the economic and political outcomes and their various measures found in the reviewed literature, and the possibility of using them in further research. Among economic variables, the most pronounced impact is on government budget balance, debt, and expenditures. Governments with higher budget transparency are associated with better budget balance, credit ratings, budget estimation and forecasting, as well as with higher expenditures and revenues, underestimation of revenues and expenditures, lower borrowing costs, government debt, and inflation. The highest proven political impact of budget transparency is on corruption. Governments with higher levels of budget transparency are perceived as less corrupt, i.e. having better control of corruption, as well as higher government quality, effectiveness, and spending efficiency. Moreover, they have more popular governors and higher public participation.

Keywords: budget transparency, impacts on economic and political outcomes, empirical review, subnational governments

### UTJECAJI PRORAČUNSKE TRANSPARENTNOSTI NA EKONOMSKE I POLITIČKE REZULTATE: PREGLED EMPIRIJSKIH ISTRAŽIVANJA

### Sažetak

Ovaj se rad fokusira na pregled literature o utjecajima proračunske/fiskalne transparentnosti na ekonomske i političke rezultate. Također razmatra definicije i mjerenja indeksa proračunske/fiskalne transparentnosti korištenih u pregledanoj literaturi - trideset i sedam radova objavljenih na engleskom jeziku, online, od 2000. do 2021. Pregledani radovi većinom se bave proračunskom transparentnošću na nacionalnoj (središnjoj) razini vlasti, vjerojatno zbog problema mjerenja proračunske transparentnosti na podnacionalnoj - državnoj, pokrajinskoj, regionalnoj, lokalnoj - razini vlasti. U tablicama 1. i 2. sistematizirani su ekonomski i politički rezultati i način njihova različitog mjerenja te postoji mogućnost njihova korištenja u daljnjim istraživanjima. Među ekonomskim varijablama najizraženiji je utjecaj na proračunski saldo, dug i rashode. Vlade s većom proračunskom transparentnošću povezuju se s boljim proračunskim saldom, kreditnim rejtingom, procjenom i predviđanjem proračuna, kao i s većim rashodima i prihodima, podcjenjivanjem prihoda i rashoda te nižim troškovima zaduživanja, dugom i inflacijom. Najveći dokazani politički učinak proračunske transparentnosti jest na korupciju. Vlade s višom razinom proračunske transparentnosti smatraju se manje korumpiranima, tj. imaju bolju kontrolu nad korupcijom kao i veću kvalitetu vlade, efektivnost vlade i efikasnost trošenja. Štoviše, imaju popularnije političare na vlasti i veće sudjelovanje iavnosti.

Ključne riječi: proračunska transparentnost, utjecaji na ekonomske i političke rezultate, pregled empirijskih istraživanja, podnacionalne vlasti