State of the Evidence: Debt Transparency

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Introduction

The Costs and Benefits of Public Debt

While public debt may sound undesirable, borrowing allows governments to invest in important public goods and services. For low- and middle-income countries especially, public debt can allow governments to further develop transportation infrastructure, healthcare, and industrial capacity.

However, if countries become unable to meet their debt repayments and obligations, the debt becomes unsustainable and may lead to default, which occurs when a country is unable to pay back a loan (and the associated interest).[1] The consequences of default vary but are often costly for borrowing countries. Countries that default or are at risk of default must negotiate with creditors to restructure their debt.[2] Debt restructuring can involve a variety of mechanisms, including reducing the percentage of a loan a country is required to pay back (a "haircut") and extending debt maturity (delaying the final repayment date). These negotiations can be long and expensive, and some scholars argue they can lead to exclusion from international markets for defaulting countries.[3] This in turn can lead to severe economic decline, and inflation is likely in countries that rely on imported goods.[4]

This risk of default has become a growing problem over the last two decades as countries have taken on increased amounts of debt, which they have struggled to repay because of economic recessions.[5] At the same time, the quality of public debt management in many countries has decreased, exacerbating repayment challenges.[6]

In addition to repayment requirements, international financial institutions (IFIs) often require that borrowing countries undertake reforms to bring their economic policy and governance practices in line with these institutions' standards. The goal of this conditional lending is ostensibly to strengthen borrowing countries' capacity so as to reduce the need for additional borrowing in the future.[7] Critics of loan conditionality, however, argue that the conditions imposed on borrowing

1 "Back to Basics: What Is Debt Sustainability? – IMF F&D," IMF, accessed January 6, 2023, https://www.imf.org/en/Publications/fandd/issues/2020/09/what-is-debt-sustainability-basics.

2 S.M. Ali Abbas and Alex Pienkowski, "What Is Sovereign Debt?," IMF, accessed January 21, 2023, https://www.imf.org/en/Publications/fandd/issues/2022/12/basics-what-is-sovereign-debt.

3 Daniel Kurt and Michael Boyle, "Why and When Do Countries Default?," Investopedia, accessed January 21, 2023, https://www.investopedia.com/articles/investing/102413/why-and-when-do-countries-default.asp.

4 "Sovereign Default: Definition, Causes, Consequences, and Example," Investopedia, accessed January 21, 2023, https://www.investopedia.com/terms/s/sovereign-default.asp.

5 Daniel Pelz, "Africa's Debt Crisis Grows amid COVID-19 Pandemic," *DW*, November 13, 2020, https://www.dw.com/en/africas-debt-crisis-grows-amid-covid-19-pandemic/a-55590042; Irene Garcia Perez, "European Debt Defaults Seen Surging in Echo of Covid Turmoil," *Bloomberg*, January 4, 2023, https://www.bloomberg.com/news/articles/2023-01-04/european-debt-defaults-seen-surging-in-echo-of-covid-turmoil; Chavon Sutton, "Greece, Portugal Debt Downgraded by S&P," *CNN*, April 27, 2010, https://money.cnn.com/2010/04/27/news/international/Greece_debt_downgraded/.

6 Shanta Devarajan, Indermit Gill, and Kenan Karakulah, "Stressful Speculations about Public Debt in Africa," *Brookings* (blog), June 19, 2019, https://www.brookings.edu/blog/future-development/2019/06/19/stressful-speculations-about-public-debt-in-africa/.

7 "IMF Conditionality," IMF, accessed January 30, 2023, https://www.imf.org/en/About/Factsheets/Sheets/2016/08/02/21/28/IMF-Conditionality.

countries put strain on the state and often result in increased poverty and inequality.[8] In many cases, the terms of conditional loans resemble those imposed on developing countries through the structural adjustment programs of the 1980s.[9]

For some countries, these challenges make borrowing from IFIs and Western lenders undesirable and, in some cases, difficult to sustain. Concurrent to the challenges, however, is the need for governments to continue providing public goods and services. To do so, countries have begun to turn to alternative lenders that demand less from borrowing countries up front. The most well-known lenders in this regard are China and its state-run banks. Over the last two decades, China has operated using a resource-backed lending model in which, rather than repaying debt over a set period, borrowing countries commit future natural resource revenues (and in some cases, the resources themselves) to pay off loans from Chinese creditors.[10] These loans often bring significant benefits for borrowing countries. In particular, they allow developing countries to invest in costly but necessary public works projects—including roads, rail lines, ports, and other infrastructure—on a shorter timeline and without the requirements imposed by other lenders. For example, with the help of Chinese lending, Kenya expanded and modernized its international airport and made improvements to highway and road infrastructure.[11]

However, the terms and repayment policies of these deals are often secretive, likely inadequate, and potentially harmful.[12] Although borrowing countries do not owe anything on signing a loan, Chinese lenders often require countries to make steep concessions or cede control of their resources to China as compensation for the risk of investing.[13] And, due to opaque lending practices, borrowers are sometimes caught off guard by these demands. Policy makers from some countries with Chinese debt have spoken negatively about lenders' practices. For example, in 2022, Kenya was at high risk of debt distress, and Kenyan Treasury Secretary Kipchumba Murkomen said that servicing Chinese loans had "put the economy in a chokehold."[14] Across Africa, 39 countries have outstanding Chinese debt and Chinese lending accounts for 12 percent of Africa's external lending.[15] In total, 22 African countries are experiencing debt distress or are at high risk of debt distress.[16]

8 Liz Nelson, "The Damage of International Monetary Fund 'Conditionality': Call for Urgent Rethink," Tax Justice Network, July 6, 2018, https://taxjustice.net/2018/07/06/the-damage-of-international-monetary-fund-conditionality-call-for-urgent-rethink/.

9 Nicolas Van de Walle, *African Economies and the Politics of Permanent Crisis, 1979-1999* (Cambridge University Press, 2001).

10 Zainab Usman, "What Do We Know About Chinese Lending in Africa?," Carnegie Endowment for International Peace, June 2021, https://carnegieendowment.org/2021/06/02/what-do-we-know-about-chinese-lending-in-africa-pub-84648.

11 Joseph Onjala, "China's Development Loans and the Threat of Debt Crisis in Kenya," *Development Policy Review* 36, no. S2 (2018): O710–28, https://doi.org/10.1111/dpr.12328.

12 Weizhen Tan, "China's Loans to Other Countries Are Causing 'Hidden' Debt. That May Be a Problem," *CNBC*, accessed January 6, 2023, https://www.cnbc.com/2019/06/12/chinas-loans-causing-hidden-debt-risk-to-economies.html.

13 Tan, 2023.

14 David Herbling, "Kenya Wants China to Extend Repayment Period for $5 Billion Debt," *Bloomberg*, October 19, 2022, https://www.bloomberg.com/news/articles/2022-10-19/kenya-wants-china-to-extend-repayment-period-for-5-billion-debt.

15 Pearl Risberg, "The Give-and-Take of BRI in Africa," Center for Strategic and International Studies, 2019, https://www.csis.org/give-and-take-bri-africa; Antony Sguazzin, "China May Have Created Trap for Itself With African Lending," *Bloomberg*, December 18, 2022, https://www.bloomberg.com/news/articles/2022-12-18/china-created-trap-for-itself-with-african-lending-chatham-says.

16 Alex Vines, Creon Butler, and Yu Jie, "The Response to Debt Distress in Africa and the Role of China," Chatham House, December 15, 2022, https://www.chathamhouse.org/2022/12/response-debt-distress-africa-and-role-china.

How can countries better manage existing and future debt challenges? Some lenders and civil society activists have proposed debt transparency as a tool to ensure debt sustainability,[17] which is when "a government is able to meet all its current and future payment obligations without exceptional financial assistance or going into default."[18] Transparency, they argue, can help policy makers in borrowing countries and creditors make informed decisions about new debt instruments and potential restructuring of existing debt.[19] Are these propositions empirically true? This report assesses the empirical evidence on the consequences of debt transparency to understand its potential use as a tool to combat continued challenges to debt sustainability.

What is Debt Transparency?

In broad terms, debt transparency entails the publication of debt data and information about borrowing processes. Debt reporting includes the timely and regular publication of public sector-level information.[20] This includes strategically important documents such as public sector balance sheets, medium-term debt management strategies, breakout of creditors, intended purpose and use of resources, collateralized financing, terms and conditions of loans, structure and performance of the agency in charge of debt management, national process to assume debt (legislative approval, executive veto, and so on), and fiscal risk statements.[21] Information about borrowing practices is also publicly accessible and shielded from political interference.[22] It may also benefit citizens and civil society by allowing them to monitor government financial decisions.[23]

For more information on what types of debt information should be made available and recommended processes for doing so, see the United States Agency for International Development's (USAID) **Debt Transparency Monitor**.[24] The **G-20 Operational Guidelines for Sustainable Financing** include a diagnostic tool that policy makers can use to evaluate the strength of current debt practices and to improve them.[25]

17 Jessica Hickle, "Debt Transparency: An Open Government Solution to Mitigating Debt Crises," Open Government Partnership, February 8, 2021, https://www.opengovpartnership.org/stories/debt-transparency-an-open-government-solution-to-mitigating-debt-crises/; Diego Rivetti, *Debt Transparency in Developing Economies* (World Bank, Washington, DC, 2021), https://documents1.worldbank.org/curated/en/743881635526394087/pdf/Debt-Transparency-in-Developing-Economies.pdf; Mark Gallagher et al., *Debt Transparency Monitor* (United States Agency for International Development, January 2022), https://pdf.usaid.gov/pdf_docs/PA00Z727.pdf.

18 "Back to Basics."

19 Hickle, "Debt Transparency," 2021.

20 Rivetti, 2021.

21 Gallagher et al., 2022.

22 Rivetti, 2021.

23 Rivetti, 2021.

24 Gallagher et al., 2022.

25 Mark Flanagan et al., *G-20 Operational Guidelines for Sustainable Financing* (International Monetary Fund and the World Bank, November 15, 2019), https://www.imf.org/external/np/g20/pdf/2019/111519.pdf.

Methodology

The review surveys studies on debt management and transparency published between 2000 and 2022. For this, the researcher conducted keyword searches of relevant terms using Yale University Library's online catalog search, which comprises English-language books, academic articles, unpublished doctoral theses, and newspaper and magazine articles. The researcher limited her search to academic articles, doctoral theses, and electronic books since these sources were both easily accessible and most likely to use empirical methods. For each keyword, the researcher collected the first 50 titles the catalog returned. Separately, the researcher used the Google search engine and the same list of keywords to search for studies conducted by international and civil society organizations. As with the search for academic sources, the first 50 websites were collected, and the search was limited to English-language resources. The following are the keywords the researcher used for the initial search.

- Debt transparency
- Hidden debt
- Debt trap diplomacy
- Sovereign debt
- Public debt management
- Public debt reporting
- Sovereign debt reporting
- Sovereign debt management
- Sovereign debt transparency
- Borrowing capacity public debt
- Debt service transparency
- Foreign investment debt
- Access to credit debt
- Creative accounting debt
- Debt open data
- Debt transparency public service
- Transparent bond pricing
- Public debt management strategy
- Fiscal risk transparency
- Debt transparency corruption
- External borrowing transparency
- Debt maturity composition
- Debt capacity transparency

The researcher then reviewed the abstracts and/or summaries of all collected sources to determine whether they were evidence-based and relevant to debt transparency and management. While maintaining a focus on empirical research, the researcher included a few studies that employ game-theoretic research methods because of their direct relevance to the topic. During this phase, many dozens of the sources were discarded. The remaining sample of literature included empirical research published in academic journals as well as impact evaluations and case studies conducted by international and civil society organizations. The researcher conducted an in-depth review of the sources in the sample as well as the sources listed in each's bibliography. The sources were then categorized roughly according to the dependent variable each measured and the region or country studied. This categorization informed the general structure and content of this report.

State of the Evidence

Many studies have examined the causes and consequences of fiscal transparency, but relatively few studies have focused on the implications of debt transparency specifically. The research that does focus on sovereign debt has largely examined whether and in what composition borrowing by governments enables economic growth and development.[26] Because debt transparency is relatively understudied, this report cites many analyses that evaluate the effects of fiscal transparency more broadly. In each of these cases, the researcher verified that the indicators used to measure fiscal transparency included measures of debt transparency.

The relative scarcity of evidence of the effects of debt transparency is likely due, in part, to the fact that debt transparency has only recently become a priority of the international donor community and few governments have implemented reforms focused on debt transparency.[27] A 2022 analysis of 102 low- and middle-income countries found that most countries publish limited information about the national debt or none at all.[28] For example, 86 percent of countries published some information on the size of the national debt, but less than half of countries published their public sector balance sheets (a comprehensive means of reporting the assets and liabilities of the public sector) or disclosed their financial risks.[29] When countries do report information about debt, it is often difficult to find and lacks detail.

The literature explores the consequences of debt and fiscal transparency on a variety of topics. There is much evidence exploring the relationship between debt transparency and other debt-related phenomena, such as the cost of borrowing, access to credit, and level of indebtedness. A smaller subset of the literature investigates macroeconomic trends, such as levels of investment and economic growth and development. A limited number of studies also examine the relationship between debt transparency and governance indicators, such as government effectiveness, public service delivery, and public opinion. The sections of this report are organized loosely according to these three subsets of the literature.

Studies of debt transparency tend to involve quantitative analysis across many countries. Consequently, most of the studies cited here discuss macro-level trends, rather than the results of particular countries' policies and practices. Most studies are global, using data from dozens of countries collected by international organizations such as the World Bank, the International Budget Partnership, and the Organisation for Economic Cooperation and Development (OECD). Other studies adopt a regional focus. The most common regions for analysis are Africa and, to some extent, Europe. Other studies group countries by income level; for example, several studies focus on OECD countries.

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26 See for example: Siong Hook Law et al., "Public Debt and Economic Growth in Developing Countries: Nonlinearity and Threshold Analysis," *Economic Modelling* 98 (May 1, 2021): 26–40, https://doi.org/10.1016/j.econmod.2021.02.004; Victor Owusu-Nantwi and Christopher Erickson, "Public Debt and Economic Growth in Ghana," *African Development Review* 28, no. 1 (2016): 116–26, https://doi.org/10.1111/1467-8268.12174; Zhongmin Liu and Jia Lyu, "Public Debt and Economic Growth: Threshold Effect and Its Influence Factors," *Applied Economics Letters* 28, no. 3 (February 2021): 208–12, https://doi.org/10.1080/13504851.2020.1740157; Yılmaz Toktaş, Ali Altiner, and Eda Bozkurt, "The Relationship between Turkey's Foreign Debt and Economic Growth: An Asymmetric Causality Analysis," *Applied Economics* 51, no. 26 (June 15, 2019): 2807–17, https://doi.org/10.1080/00036846.2018.1558360.

27 Rivetti, 2021.

28 Gallagher et al., 2022.

29 Gallagher et al., 2022.

Most of the empirical literature on the impacts of debt transparency is published in economics and finance journals. In addition, the World Bank, the International Monetary Fund (IMF), and other governmental and non-governmental organizations have published policy recommendations, measurement tools, and summaries of the status quo in various countries and regions. Roughly two-thirds of the studies referenced here—from both academic and non-academic outlets—have been published in the last five to six years. Most of the remaining studies were published between 2006 and 2014 and analyze economic and financial trends during and in the wake of the global recession.

Debt Transparency and Good Governance

Debt transparency reduces opportunities for misuse

Increased transparency enables the public and civil society to monitor the government and can reduce corruption by empowering the public to hold policy makers accountable. In a study of the 32 state governments in Mexico, researchers explored the effect of public debt on fiscal accountability (the appropriate and lawful spending of public funds).[30] In Mexico, like in other countries with decentralized political and fiscal arrangements, subnational governments can finance local projects, often with loans. The researchers collected a variety of data on state debt management policies, including official documents and reports from states and local entities and the Ministry of Finance. They found that most state governments report on the amount of public debt they hold, their creditors, and maturities of the debt. However, governments do not keep or publish information about the destination and use of these resources. The researchers argue that this creates opportunities for misuse and corruption that could be avoided if this information were collected and published transparently.[31]

Other studies confirm that opaque debt also contributes to the problem of political corruption, which is itself associated with a host of issues, including the reduced ability of the state to provide public goods and services.[32] In two recent studies, scholars used empirical evidence to show that fiscal transparency reduces perceptions of government corruption. For example, an analysis of 95 countries between 2006 and 2014 found that fiscally transparent countries tend to be perceived as less corrupt.[33] The authors measured fiscal transparency using scores from the Open Budget Index, which includes indicators for whether countries publish information about debt, such as the expected and actual interest rates on debt instruments, debt maturity, and whether the debt is domestic or external. The study uses data from the Bayesian Corruption Index to measure perceived corruption. In addition to the negative association between transparency and perceived corruption, the study also found that transparency in the latter stages of the budget process has the most significant effect on perceived corruption. The authors posit that the information released

[30] "Who Is Accountable? To Whom? For What? How?," U.S. Government Accountability Office, accessed January 15, 2023, https://www.gao.gov/products/112501; Marcela Astudillo Moya, Andrés Blancas Neria, and Francisco Javier Fonseca Corona, "Transparency and Accountability, Mechanisms to Limit Subnational Public Debt? (Transparencia y Rendición de Cuentas ¿mecanismos Para Limitar La Deuda Pública Subnacional?)," *Contaduría y Administración* 63, no. 3 (July 2018): 1–25, https://doi.org/10.22201/fca.24488410e.2018.1335.

[31] Astudillo Moya et al., 2018.

[32] Frederico Gil Sander, "'One Hundred Percent in My Pocket' Transparency, Debt and Development," ProQuest Dissertations and Theses (Ph.D., Princeton University, 2009), https://www.proquest.com/docview/304989910/abstract/CBC6D4AB7F334D8DPQ/1; Gabriel Caldas Montes and Paulo Henrique Luna, "Fiscal Transparency, Legal System and Perception of the Control on Corruption: Empirical Evidence from Panel Data," *Empirical Economics* 60, no. 4 (April 2021): 2005–37, https://doi.org/10.1007/s00181-020-01849-9; Can Chen and Milena I. Neshkova, "The Effect of Fiscal Transparency on Corruption: A Panel Cross-Country Analysis," *Public Administration* 98, no. 1 (2020): 226–43, https://doi.org/10.1111/padm.12620.

[33] Chen and Neshkova, 2020.

in the final stages of the budget process is more impactful because it compares actual spending to the targets in the enacted budget. Thus, transparency at this stage allows citizens to directly evaluate the government's performance, creating greater accountability for potential corruption.

A second study found a similar relationship using different data to measure perceived corruption.[34] The analysis suggested that there is a correlation between fiscal transparency, including debt transparency and the "Control of Corruption" indicator from the World Governance Indicators, which tracks the perceived extent of both petty and grand corruption and state capture by state elites and private interests. The authors assert that these findings support the idea that fiscal transparency reduces corruption by both lowering the discretionary power of public officials and increasing the cost of engaging in corrupt practices (by increasing accountability).

Debt transparency increases government efficiency in democracies

Debt transparency can also contribute to government efficiency via the mechanism of reducing political corruption (discussed above). Multiple studies of developing and developed countries have found that fiscal transparency improves the effectiveness of government policies and makes public spending more efficient by reducing corruption.[35] Montes, Bastos, and de Oliveira (2019) used data from 82 countries in 2006 and 2014 to examine the relationship between fiscal transparency, which many governments adopted following the global financial crisis, and government effectiveness.[36] Similar to other studies on this topic, the authors measured fiscal transparency using scores from the Open Budget Index. They found that between 2006 and 2014, 80 percent of countries improved their fiscal transparency scores. These increases in transparency were associated with higher levels of efficiency, measured using the World Bank's World Governance Indicators.[37]

However, the improvements to government efficiency may be muted in non-democracies. A second study built on these findings to assess whether the positive effects of fiscal transparency maintained across democratic and non-democratic countries. Using the same sample of 82 countries, the study confirmed a positive relationship between fiscal transparency and government efficiency but found that the effect was only observed in highly democratic countries. In non-democratic countries, the public are rarely able to sanction politicians for their conduct. As a result, transparency does not increase leaders' accountability and therefore does not create incentives for state actors to spend more efficiently.[38] By contrast, authors of both studies theorize that, where positive effects are observed, these results can be explained by the fact that government actors are incentivized to spend more efficiently and implement policy more effectively when they know that citizens may hold them accountable for wasteful or corrupt spending.[39]

34 Montes and Luna, 2021.

35 Gabriel Caldas Montes, Júlio Cesar Albuquerque Bastos, and Ana Jordânia de Oliveira, "Fiscal Transparency, Government Effectiveness and Government Spending Efficiency: Some International Evidence Based on Panel Data Approach," *Economic Modelling* 79 (June 1, 2019): 211–25, https://doi.org/10.1016/j.econmod.2018.10.013; Elina De Simone et al., "The Effect of Fiscal Transparency on Government Spending Efficiency," *Journal of Economic Studies* 46, no. 7 (2019): 1365–79, https://doi.org/10.1108/JES-03-2019-0123.

36 Montes, Bastos, and de Oliveira, 2019.

37 Montes, Bastos, and de Oliveira, 2019.

38 De Simone et al., 2019.

39 Luís de Sousa, Pedro C. Magalhães, and Luciano Amaral, "Sovereign Debt and Governance Failures: Portuguese Democracy and the Financial Crisis," *American Behavioral Scientist* 58, no. 12 (November 1, 2014): 1517–41, https://doi.org/10.1177/0002764214534666.

Citizen preference for debt transparency

Other studies confirm this finding by showing the effect of debt transparency on public opinion and voter preferences. These studies showed that voters tend to have a neutral to positive response to debt transparency. For example, Beetsma et al. found that receiving information about the actual debt level did not affect voters' electoral preferences.[40] In their theoretical model, voters cared about government competence and ability to deliver public goods and services and valued the transparency of information related to government competence. However additional transparent information, including information about public debt, had little effect on voter preferences.

There is also some evidence of the counterfactual: a lack of fiscal transparency contributes to public dissatisfaction with government. A study in Portugal used evidence from public opinion survey data to show that the poor management of the mid-2000s sovereign debt crisis contributed to rising discontent with the government and the performance of democracy more generally.[41] While Portuguese citizens' satisfaction with government has fluctuated for the last several decades, following the debt crisis, aggregate satisfaction with democracy fell to its lowest levels ever recorded. This dissatisfaction appears to have contributed to widespread political disaffection, which persisted among Portuguese citizens at least a decade after the crisis.

Debt Transparency and Borrowing

In recent years, several major international lenders have begun to prioritize debt transparency. IFIs, such as the World Bank and the IMF, publish reports emphasizing a commitment to encouraging debt transparency and offering recommendations for borrowing countries to implement such reforms.[42] The IMF has encouraged debt transparency since at least 1998 when they published a paper arguing that international financial markets are likely to demand lower premia—the additional cost of borrowing over and above the standard price—from governments that are forthcoming about their fiscal position.[43] In debt markets, creditors tend to charge higher premia when there is greater risk that the borrowing country will be unable to repay the debt in full. Increased information about a country's finances reduces this risk.

Does data on lending support these statements by donors? In general, yes. Numerous studies have examined the relationship between transparency, access to credit, and the cost of borrowing. Most of these found that transparent debt practices have significant, quantifiable benefits for borrowing countries.

40 Roel Beetsma, Xavier Debrun, and Randolph Sloof, "The Political Economy of Fiscal Transparency and Independent Fiscal Councils," *European Economic Review* 145 (June 1, 2022): 104118, https://doi.org/10.1016/j.euroecorev.2022.104118.

41 de Sousa, Magalhães, and Amaral, 2014.

42 Rivetti, 2021.

43 George Kopits and J. Craig, *Transparency in Government Operations* (Washington, D.C.: International Monetary Fund, 1998), https://doi.org/10.5089/9781557756978.084.

Transparency signals creditworthiness

Several studies have examined the effects of debt transparency on credit ratings and the cost of borrowing. A 2015 study found that fiscal transparency, measured using countries' overall scores from the Open Budget Index and the IMF's *Reports on the Observance of Standards and Codes*, had a significant and positive effect on credit ratings.[44] This result holds in both developed and developing countries (although the effect is larger for developing countries). Specifically, the study showed that fiscal transparency can increase credit ratings by between 0.7 and 1 notches (or steps in the credit rating scale). In developing countries, fiscal transparency affects credit ratings directly by reducing lenders' uncertainty about a country's fiscal and financial policies. By contrast, in advanced economies, the effect occurs indirectly; a more transparent system incentivizes policy makers to adopt more sound policies, raises the political cost for pursuing poor policies, and reduces the risk of corruption in borrowing. The reduced risk of corruption in borrowing in turn reduces the risk of default and improves credit ratings.[45]

Additional research confirms a similar causal link between fiscal transparency and creditworthiness in the United States.[46] The study examines the impact of fiscal transparency on the credit ratings of state governments, which the authors argued is also an appropriate indicator for gauging each state's risk of default. The authors used a variety of indicators to measure fiscal transparency, including transparency of budget information, budget processes, and legislative oversight of the budget. They also used Standard & Poor's scores to measure credit rating. The study found that fiscal transparency had a positive effect on state governments' credit ratings. Specifically, as the level of transparency increased from low to high, the predicted probability of a state receiving the highest possible credit rating increased from 20 to 80 percent. The authors posited that this relationship also indicates a positive relationship between fiscal transparency and government performance and accountability more broadly.

Another study demonstrates that debt transparency may be a better predictor of creditworthiness than other prominent determinants, namely regime type.[47] While conventional wisdom suggests that democracies are more creditworthy than non-democracies, evidence from a survey of 63 developing countries indicates that debt transparency—encompassing transparent debt data, forward-looking debt management strategies, and public financial processes—improves sovereign creditworthiness. These policies are not dependent on democratic governance and may outweigh the detrimental effects of nondemocratic governance on creditworthiness.[48]

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44 Elif Arbatli and Julio Escolano, "Fiscal Transparency, Fiscal Performance and Credit Ratings," *Fiscal Studies* 36, no. 2 (2015): 237–70.

45 Arbatli and Escolano, 2015.

46 Jinhai Yu, Wenchi Wei, and J. S. Butler, "Fiscal Transparency and Government Credit Quality: Evidence from the U.S. States," *Public Performance & Management Review* 44, no. 2 (March 4, 2021): 378–403, https://doi.org/10.1080/15309576.2020.1807368.

47 Ben Cormier, "Democracy, Public Debt Transparency, and Sovereign Creditworthiness," *Governance* (December 14, 2021), https://doi.org/10.1111/gove.12668.

48 Cormier, 2021.

Debt transparency reduces the cost of borrowing

The bulk of the literature on debt transparency focuses on its effect on the cost of borrowing and debt. The cost of borrowing refers to the additional amount a borrowing country is required to pay to the creditor beyond the amount of the loan. Commonly, these costs reflect interest payments but can also include fees and other costs. Lenders may charge high costs in exchange for their investment in a risky or unstable government. Thus, the reduction of such costs provides a direct benefit to governments, which can use these savings in more effective ways, such as public service spending or repayments of existing debt. Across the board, studies of this relationship have found that debt transparency has a negative effect on the amount of debt accrued and the cost of borrowing,[49] in line with the stated lending policies of major international donors.

A 2008 survey of 103 countries examined the effects of a variety of factors, including transparency, citizen trust in politicians, and corruption, on the cost of sovereign debt, measured by the ratio of total government interest payment to total government debt.[50] To measure fiscal transparency, the authors used data from the OECD and World Bank Budgeting Database, as well as countries' scores on the Open Budget Index. The authors found that better fiscal transparency was associated with a lower cost of sovereign debt while higher levels of corruption were associated with high interest payments. This finding lends support to the theory that increased transparency signals stability and competence in fiscal management and reduces the perception of risk among lenders.

A 2016 study of OECD and BRICS[51] countries yielded similar results but found that these were conditional on the global economic context.[52] The analysis evaluated the impact of transparency, financial indicators, and credit ratings on public debt interest. Like in the previous study, transparency was measured using country scores from the Open Budget Index, and interest was measured using the ratio of total interest payments to total debt. The study showed that increased transparency was correlated with a decrease in interest rates, but this pattern was conditional on the country's fiscal situation more broadly. When the authors compared results from 2008 and 2012, they found that transparency was correlated with reduced borrowing costs at the beginning of the global financial crisis (2008). However, in 2012, after countries experienced the effects of the crisis more fully, their fiscal situation (specifically the budget balance and current account balance, rather than transparency) explained decreased interest rates. The authors posited that when the economy is strong, lenders are less conscious of risk and prioritize good governance (here, transparency) in lending decisions. However, in times of crisis, lenders are less willing to take risks and prioritize economic factors in their decisions.

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[49] Hai-feng Zha and Wei Li, "Digital Finance, Fiscal Transparency and Government Debt Risk," *Journal of Risk Analysis and Crisis Response* 12, no. 4 (December 31, 2022), https://doi.org/10.54560/jracr.v12i4.341.

[50] Francisco Bastida, María-Dolores Guillamón, and Bernardino Benito, "Fiscal Transparency and the Cost of Sovereign Debt," International Review of Administrative Sciences 83, no. 1 (March 1, 2017): 106–28, https://doi.org/10.1177/0020852315574999.

[51] The countries are Brazil, Russia, India, China, and South Africa.

[52] Bernardino Benito, María-Dolores Guillamón, and Francisco Bastida, "The Impact of Transparency on the Cost of Sovereign Debt in Times of Economic Crisis," *Financial Accountability & Management* 32, no. 3 (2016): 309–34, https://doi.org/10.1111/faam.12090.

A third study examined the relationship between governments' transparency about their country's private financial sector and the cost of sovereign borrowing among 31 high-income countries that are members of the OECD.[53] While the study did not measure debt transparency directly, it found that governments that were more willing to release information about their financial system had lower borrowing costs.

Although not directly generalizable to government-held debt, there is also evidence from Europe, North America,[54] and South Africa[55] that increased corporate transparency—measured using a number of indicators, including short- and long-term debt—reduced the cost of debt for companies. Scholars posit that this relationship operates similarly to the one between debt and creditworthiness: debt transparency reduces lenders' uncertainty about borrowers' ability to repay debt, and thus they charge the borrowing country a lower interest rate than they may have otherwise.[56]

Other studies have evaluated the relative cost of opaque debt practices. Additionally, a recent World Bank working paper quantified the benefit of transparency for countries in sub-Saharan Africa. The region as whole could have reduced the cost of borrowing by up to 14.5 basis points (0.145%) and decreased its debt burden by US $405.4 million by increasing data transparency, as measured by the World Bank's statistical capacity indicator and the IMF's Special Data Dissemination Standard.[57] The effect would also be significant for individual countries. For example, Angola could have reduced its debt burden by nearly US $75 million.[58] In Europe, creative accounting—the practice of using regulatory loopholes to make the debt burden appear smaller than it is—is associated with higher risk premia, which make debt payments more expensive.[59] Another study found that increased transparency reduced risk premia by 15 percent in emerging economies.[60] Like the studies on creditworthiness, these results indicate that financial markets penalize governments that do not publish debt information and data, and reward transparent borrowers.

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53 Mark Copelovitch, Christopher Gandrud, and Mark Hallerberg, "Financial Data Transparency, International Institutions, and Sovereign Borrowing Costs," *International Studies Quarterly* 62, no. 1 (March 1, 2018): 23–41, https://doi.org/10.1093/isq/sqx082.

54 Raf Orens, Walter Aerts, and Denis Cormier, "Web-Based Non-Financial Disclosure and Cost of Finance," Journal of Business Finance & Accounting 37, no. 9–10 (2010): 1057–93, https://doi.org/10.1111/j.1468-5957.2010.02212.x; D. G. DeBoskey et al., "Corporate Political Transparency and the Cost of Debt," *Review of Quantitative Finance and Accounting* 57, no. 1 (July 2021): 111–45, https://doi.org/10.1007/s11156-020-00941-6.

55 Achraf Guidara, Hichem Khlif, and Anis Jarboui, "Voluntary and Timely Disclosure and the Cost of Debt: South African Evidence," *Meditari Accountancy Research* 22, no. 2 (2014): 149–64, https://doi.org/10.1108/MEDAR-09-2013-0042.

56 Copelovitch, Gandrud, and Hallerberg, 2018.

57 Megumi Kubota and Albert Zeufack, *Assessing the Returns on Investment in Data Openness and Transparency* (World Bank, Washington, DC, 2020), https://doi.org/10.1596/1813-9450-9139.

58 Kubota and Zeufack, 2020.

59 Kerstin Bernoth and Guntram B. Wolff, "Fool the Markets?: Creative Accounting, Fiscal Transparency and Sovereign Risk Premia," CESifo Working Paper Series, 2006; "Prima de Riesgo," Banco Santander, accessed January 15, 2023, https://www.bancosantander.es/en/glosario/prima-riesgo.

60 Yuko Hashimoto and Sangyup Choi, *The Effects of Data Transparency Policy Reforms on Emerging Market Sovereign Bond Spreads* (IMF, 2017), https://www.imf.org/en/Publications/WP/Issues/2017/03/28/The-Effects-of-Data-Transparency-Policy-Reforms-on-Emerging-Market-Sovereign-Bond-Spreads-44772.

Debt Transparency and Debt Sustainability

Several studies investigate whether debt transparency affects the sustainability of that debt, finding that, in general, debt transparency improves debt sustainability and reduces the risk of financial crisis as a result of debt. According to the IMF, debt is considered sustainable if "the government is able to meet all its current and future payment obligations without exceptional financial assistance or going into default."[61]

While sovereign borrowing has many benefits and is not inherently harmful, taking on high amounts of debt unsustainably presents many risks. As such, governments should seek to keep their total debt burden at manageable levels. The precise amount of debt that is sustainable will depend on a country's particular political and economic circumstances. However, we can generally assume that, all else equal, a low amount of debt is more sustainable than a high amount for a given country. There is some evidence that debt transparency can help lower overall debt levels.

Debt transparency is associated with reduced overall debt

In addition to reducing the cost of borrowing, debt and fiscal transparency can help to reduce overall debt. For example, a 2006 study showed that among OECD governments, those with higher levels of fiscal transparency (including debt) are associated with lower public debt and deficits.[62] The authors did not measure debt transparency specifically. Instead, they measured fiscal transparency using data from the OECD, which included data on the amount of fiscal information published, whether it was independently verified, and whether budget transparency was legally mandated. The findings lend credence to their theory that voters want politicians to be competent, which creates an incentive for incumbents to use debt to appear competent when they are not. In nontransparent democratic systems, incumbents might take on debt in order to provide these goods and appear competent. When debt is transparent, however, incumbents know that voters may punish them for increasing public debt and therefore do not use that strategy to signal competence.[63]

Relatedly, another 2006 study found that, in low-income countries, the quality of policies and institutions is one determinant of debt distress—a consequence of unsustainable debt in which a country is unable to fulfill its financial obligations.[64] While institutional quality and debt transparency are not equivalent, the analysis measured institutional quality using the World Bank's Country Policy and Institutional Assessment, which includes related indicators, such as transparency in the public sector, the quality of budget and financial management, and the quality of debt and fiscal policy.[65] In addition to institutional quality, the study also showed that the overall debt burden and economic and political shocks contribute to episodes of debt distress. The authors asserted that these findings suggest that policy makers should consider institutional quality as a factor in determining how much they can sustainably borrow. A country with strong

61 "Back to Basics."

62 James E. Alt and David Dreyer Lassen, "Fiscal Transparency, Political Parties, and Debt in OECD Countries," *European Economic Review* 50, no. 6 (August 1, 2006): 1403–39, https://doi.org/10.1016/j.euroecorev.2005.04.001.

63 Alt and Lassen, 2006.

64 Aart Kraay and Vikram Nehru, "When Is External Debt Sustainable?," *The World Bank Economic Review* 20, no. 3 (2006): 341–65.

65 Kraay and Nehru, 2006.

and transparent institutions may be able to sustain more debt than if the same country had weaker institutions. Countries seeking to improve public service delivery and access to resources through borrowing should therefore consider transparency as a vehicle for securing additional funding.

Debt transparency decreases the risk of debt distress

Transparency can also contribute directly to debt sustainability by reducing the risk of default. A case study of subnational governments in Pakistan illustrated exposure to both currency risk and "stock-flow" risk—or problems of opaque debt.[66] Subnational governments in Pakistan are authorized to raise finance through foreign borrowing up to a certain amount, which is set by the federal government. Because of the federal limit, subnational debt remains relatively low, around 4 percent of GDP.[67] However, much of the debt is denominated in foreign currency, which exposes provinces to exchange rate risk.

This risk is exacerbated by the fact that Pakistan maintains inconsistent and opaque records of its provinces' debt levels. There is no central, audited information on each province's debt levels over time. And, while each province's Auditor General's office maintains internal financial records and shares them with the federal Auditor General, these are not centrally audited or made publicly available.[68] As a result, if the Pakistani rupee depreciated significantly, the costs of debt repayment could cause debt distress.[69] Without a reliable record of provincial debt, the federal government—whose role it would be to bail out the provincial governments—lacks the information needed to analyze both the likelihood of this occurring and the extent of the crisis it would cause. This leaves them unable to adequately avoid this possibility or at least prepare for how to manage it.

This possibility is a reality for subnational governments around the world. For example, in the United States, Jefferson County, Alabama faced a crisis when in 2008, it teetered on the brink of default and bankruptcy.[70] Years earlier, the county had taken on debt in order to finance a badly needed upgrade to the sewer system. However, due to a lack of transparency and oversight in the management of this debt, corrupt county officials spent much more than the project's expected budget. As a result, the county had to refinance the debt, which came with exorbitant fees, worsening the crisis and tanking county credit ratings. In investigating how and why the county found itself in this crisis, researchers argued that repeated accountability and transparency failures were to blame.[71]

66 Martin Melecky, Hidden Debt: Solutions to Avert the Next Financial Crisis in South Asia (The World Bank, 2021), https://doi.org/10.1596/978-1-4648-1667-3.

67 Melecky, 2021, 141.

68 Melecky, 2021, 142.

69 Melecky, 2021, 142.

70 Michael E. Howell-Moroney and Jeremy L. Hall, "Waste in the Sewer: The Collapse of Accountability and Transparency in Public Finance in Jefferson County, Alabama," Public Administration Review 71, no. 2 (2011): 232–42.

71 Howell-Moroney and Hall, 2011.

Debt Transparency and Investment

Debt transparency is not only a cost-saving measure; there is also evidence that it can encourage domestic and foreign investment and spur economic growth. Evidence suggests that debt transparency is also a better strategy for attracting foreign investment, all else equal.

Data from 131 sovereign bond issuers indicates that global capital markets behave cyclically. While investors may be less averse to risky investments during times when markets are flush, they are more likely to invest where institutions are transparent and predictable when liquidity is low.[72] A related body of research examined the relationship between a history of defaulting on debt and foreign direct investment (FDI). For example, one study found that countries that defaulted on their debt experienced significantly reduced FDI in the years following.[73] This effect increased for countries with a history of default (i.e. countries that have defaulted multiple times). This indicates that investors consider default as a sign of an unstable or risky economic environment. Although not directly related to debt transparency, this suggests that unsustainable debt and inadequate debt management have negative implications for investment.

Debt transparency also presents favorable implications for overall economic growth. A study of Brazil found that increased fiscal opacity led to a decrease in economic growth expectations.[74] For this, researchers used Brazilian data on the forecasted budget deficit and economic growth collected monthly between 2004 and 2018. Researchers then constructed a measure of fiscal opacity based on the difference between the forecasted deficits, which were estimated by private sector institutions, and the actual deficit, which was collected and reported by the Central Bank of Brazil. When the difference between these two figures is large, researchers assume high levels of fiscal opacity. When it is small, researchers assume greater fiscal transparency. The results indicate that greater fiscal transparency enables the private sector to have greater certainty in investment decisions and can therefore promote economic growth through their investments. These findings appear to be generalizable.

There is some additional evidence that competence in public sector management can help to maintain high levels of economic growth. In a cross-country study, researchers showed that increased amounts of public debt were associated with lower rates of economic growth.[75] However, the results varied depending on institutional competence, which the authors measured using the World Bank's index of public sector management. The index includes five factors: property rights, the quality of budget and financial management, the efficiency of revenue mobilization, the quality of public administration, and transparency and accountability in the public sector. In countries with strong public sector institutions, higher levels of debt were associated with increased economic growth, while in countries with weak institutions, higher levels of debt were associated with a reduction in growth. In other words, in the presence of strong public sector

[72] Cameron Ballard-Rosa et al., "Contingent Advantage? Sovereign Borrowing, Democratic Institutions and Global Capital Cycles," *British Journal of Political Science* 51, no. 1 (January 2021): 353–73, https://doi.org/10.1017/S0007123418000455.

[73] Miguel Fuentes and Diego Saravia, "Sovereign Defaulters: Do International Capital Markets Punish Them?," *Journal of Development Economics* 91, no. 2 (March 1, 2010): 336–47, https://doi.org/10.1016/j.jdeveco.2009.06.005.

[74] Helder Ferreira de Mendonça and Vítor Ribeiro Laufer Calafate, "Lack of Fiscal Transparency and Economic Growth Expectations: An Empirical Assessment from a Large Emerging Economy," *Empirical Economics* 61, no. 6 (December 2021): 2985–3027, https://doi.org/10.1007/s00181-020-02000-4.

[75] Kelbesa Megersa and Danny Cassimon, "Public Debt, Economic Growth, and Public Sector Management in Developing Countries: Is There a Link?," *Public Administration and Development* 35, no. 5 (2015): 329–46, https://doi.org/10.1002/pad.1733.

institutions, taking on debt does not inhibit economic growth. Although the study did not measure debt transparency directly, it is reasonable to assume that debt transparency could contribute to—or is at least associated with—higher scores on the index of public sector management, specifically in the categories of quality financial management and transparency in the public sector.

Conclusion

Does the Evidence Support Debt Transparency Reforms?

The research discussed in this review provides strong evidence that opaque debt information and data can ultimately hurt borrowing countries and that debt transparency can improve both economic and governance outcomes. The main findings are summarized below and support the conclusion that debt transparency is an effective type of open government reform.

- **Debt transparency reduces opportunities for corruption and makes governments more efficient.** While research in this area is still relatively limited, a few studies have explored the relationship between debt transparency and governance outcomes. Researchers found that debt transparency enabled greater accountability for public officials, which can both reduce corruption and improve public spending efficiency.[76]
- **Debt transparency reduces the cost of borrowing.** Numerous studies provide evidence of the link between debt transparency and the cost of borrowing and access to credit.[77] Studies have found that transparency reduces investors' perceived risk, and as a result, interest rates and other costs associated with borrowing are decreased.
- **Debt transparency protects governments from debt distress and default.** A few studies examined cases where governments experienced or were at risk of experiencing financial crises due to an inability to repay debt. These studies concluded that, among other factors, a lack of debt transparency and oversight contributed to the problem, and increased transparency might help other governments avoid the same result.[78]
- **Debt transparency encourages investment and economic growth.** A smaller but still significant body of research examined the effect of debt transparency on investment and economic growth. These studies found that debt transparency encourages domestic and foreign investment and increases economic growth.[79] By contrast, debt opacity decreases economic growth.[80]

[76] Gil Sander, 2009; Beetsma, Debrun, and Sloof, 2022; de Sousa, Magalhães, and Amaral, 2014; Montes, Bastos, and de Oliveira, 2019; Montes and Luna, 2021.

[77] Cormier, 2021; Fuentes and Saravia, 2010; Arbatli and Escolano, 2015; Copelovitch, Gandrud, and Hallerberg, 2018; Kubota and Zeufack, 2020.

[78] Melecky, 2021t; Howell-Moroney and Hall, 2011.

[79] Astudillo Moya, Blancas Neria, and Fonseca Corona, 2018; Megersa and Cassimon, 2015; Hashimoto and Choi, 2017; Fisayo Fagbemi and Olufemi Solomon Olatunde, "Domestic Investment in Africa: Why the Emerging Public Debt Spiral Matters?," *Review of Finance & Banking* 11, no. 2 (December 2019): 91–101, https://doi.org/10.24818/rfb.19.11.02.04.

[80] de Mendonça and Calafate, 2021.

Avenues for Further Research

Compared to other open government policy areas, research on debt transparency is still relatively limited in both scope and quantity. Further research is needed to understand the full extent of its effects.

First, additional research is needed in each of the areas discussed in this review. While the results summarized here are robust and important, many rely on measures of fiscal transparency that aggregate a variety of indicators to create a composite independent variable. In these cases, we cannot say with certainty whether debt transparency or other aspects of fiscal transparency (or, most likely, some combination) are responsible for the observed findings. In addition to disaggregating debt transparency from fiscal transparency, there is room to disaggregate debt transparency itself. There is a difference between different types of transparency—debt service, debt stock, collateralization, and contract publication. Future research should focus on particular aspects of debt and fiscal transparency to understand their specific effects.

Second, this review found numerous studies that examined the relationship between debt transparency and various economic and financial outcomes. However, relatively few studies have investigated the effects of debt transparency on governance outcomes, such as public participation, public service spending, and political corruption for example. Additional research could further explore this area.

Finally, many of the studies in this review evaluated the effects of debt transparency using large-N regression analysis with data from dozens of countries. While these methods are certainly helpful for illuminating global trends, they are less useful for learning about the mechanisms by which debt transparency changes outcomes. Future research could complement these studies by examining the effects of debt transparency on particular communities. Employing process tracing more often in this type of research could also help to elucidate the mechanisms by which debt transparency effects change.

Appendix: Bibliography

Author(s)	Study Title	Year	Countries or Regions Covered	Methods
James Alt, David Dreyer Lassen	Fiscal transparency, political parties, and debt in OECD countries	2006	OECD countries	Quantitative and game theoretic model
Elif Arbatli and Julio Escolano	Fiscal Transparency, Fiscal Performance and Credit Ratings	2015	Global	Quantitative
Marcela Astudillo Moya et al.	Transparency and accountability, mechanisms to limit subnational public debt?	2018	Mexico	Quantitative and case study
Cameron Ballard-Rosa et al.	Contingent Advantage? Sovereign Borrowing, Democratic Institutions and Global Capital Cycles	2021	Global	Quantitative
Roel Beetsma et al.	The political economy of fiscal transparency and independent fiscal councils	2022	N/A	Game-theoretic model
Bernardino Benito et al.	The Impact of Transparency on the Cost of Sovereign Debt in Times of Economic Crisis	2016	BRICS countries	Quantitative
Bernardino Benito et al.	Fiscal transparency and the cost of sovereign debt	2017	Global	Quantitative

Author(s)	Study Title	Year	Countries or Regions Covered	Methods
Kerstin Bernoth and Guntram Wolff	Fool the markets?: Creative accounting, fiscal transparency and sovereign risk premia	2006	Europe	Quantitative
Can Chen and Milena Neshkova	The effect of fiscal transparency on corruption: A panel cross-country analysis	2020	Global	Quantitative
Sangyup Choi and Yuko Hashimoto	The Effects of Data Transparency Policy Reforms on Emerging Market Sovereign Bond Spreads	2017	Global	Quantitative
Mark Copelovitch et al.	Financial Data Transparency, International Institutions, and Sovereign Borrowing Costs	2018	OECD countries	Quantitative
Ben Cormier	Democracy, public debt transparency, and sovereign creditworthiness	2021	Global	Quantitative
D.G. Deboskey et al.	Corporate political transparency and the cost of debt	2021	United States	Quantitative
Helder Ferreira de Mendonca and Vitor Ribeiro Laufer Calafate	Lack of fiscal transparency and economic growth expectations: an empirical assessment from a large emerging economy	2021	Brazil	Quantitative

Author(s)	Study Title	Year	Countries or Regions Covered	Methods
Miguel Fuentes and Diego Saravia	Sovereign defaulters: Do international capital markets punish them?	2010	Global	Quantitative
Frederico Gil Sanders	“One hundred percent in my pocket” Transparency, debt and development	2009	N/A	Game-theoretic Model
Achraf Guidara et al.	Voluntary and timely disclosure and the cost of debt: South African evidence	2014	South Africa	Quantitative
Michael Howell-Moloney and Jeremy Hall	Waste in the Sewer: The Collapse of Accountability and Transparency in Public Finance in Jefferson County, Alabama	2011	United States	Qualitative Case Study
Kady Keita et al.	Do Financial Markets Value Quality of Fiscal Governance?	2021	Europe	Quantitative
Aart Kraay and Vikram Nehru	When Is External Debt Sustainable?	2006	Developing countries	Quantitative
Megumi Kubota and Albert Zeufack	Assessing the Returns on Investment in Data Openness and Transparency	2020	Sub-Saharan Africa	Quantitative

Author(s)	Study Title	Year	Countries or Regions Covered	Methods
Kelbesa Megersa and Danny Cassimon	Public Debt, Economic Growth, and Public Sector Management in Developing Countries: Is There a Link?	2015	Global	Quantitative
Martin Melecky	Hidden Debt: Solutions to Avert the Next Financial Crisis in South Asia	2021	Pakistan	Qualitative Case Study
Gabriel Caldas Montes et al.	Fiscal transparency, government effectiveness and government spending efficiency: Some international evidence based on panel data approach	2019	Global	Quantitative
Gabriel Caldas Montes and Paulo Henrique Luna	Fiscal transparency, legal system and perception of the control on corruption: empirical evidence from panel data	2021	Global	Quantitative
Joseph Onjala	China's development loans and the threat of debt crisis in Kenya	2018	Kenya	Policy Case Study
Raf Orens et al.	Web-Based Non-Financial Disclosure and Cost of Finance	2010	North America and Continental Europe	Quantitative

Author(s)	Study Title	Year	Countries or Regions Covered	Methods
Elina de Simone et al.	The effect of fiscal transparency on government spending efficiency	2019	Global	Quantitative
Luís de Sousa et al.	Sovereign Debt and Governance Failures: Portuguese Democracy and the Financial Crisis	2014	Portugal	Quantitative
Jinhai Yu et al.	Fiscal Transparency and Government Credit Quality: Evidence from the U.S. States	2021	United States	Quantitative
Hai-feng Zha and Wei Li	Digital Finance, Fiscal Transparency and Government Debt Risk	2022	China	Quantitative