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Public Sector Efficiency: exploring (some)
reasons for why it's needed

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Policy Papers

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1. Introduction

The performance of a country is significantly influenced by the size and efficiency of its public sector, as well as how effectively it utilizes its often-limited resources. Evaluating the performance of the public sector and understanding the factors driving its efficiency are crucial from both economic and policy perspectives. This evaluation enables the maximization of societal welfare and the optimization of investment projects, thereby stimulating economic growth. The literature has long debated the role and size of government, particularly due to the considerable variations in government spending across countries.¹ This debate gains even more significance in times when governments face stringent budget constraints, especially amidst prolonged periods of low economic growth and limited public resources. (Afonso and Schuknecht, 2019).

Public sector efficiency is a cornerstone of effective governance, representing the capacity of governmental organizations and institutions to fulfill their mandates, deliver services, and achieve desired outcomes while making the most efficient use of available resources. This concept is crucial in ensuring that taxpayer money is utilized effectively, public services are delivered in a timely manner, and citizens' needs are adequately addressed. Over the years, researchers and policymakers have extensively explored various dimensions of public sector efficiency, aiming to understand its measurement, determinants, and avenues for improvement.

Why should we care about Public Sector efficiency? Public sector efficiency holds paramount importance across various dimensions, underpinned by its multifaceted impacts on governance, economics, and society. Firstly, optimal resource utilization within the public sector ensures taxpayer funds are judiciously managed, thereby yielding cost savings and maximizing returns on investment (OECD, 2014). This efficiency translates into improved service delivery, where timely and responsive provision of essential services is facilitated, fostering citizen satisfaction and well-being (World Bank, 2019). Moreover, efficient public sector operations contribute significantly to economic performance, creating an environment conducive to business investment, innovation, and productivity growth (Besley and Ghatak, 2007). By streamlining processes and reducing bureaucratic inefficiencies, governments can enhance their capacity to catalyze economic

¹ Several studies assessed public sector efficiency looking at different sample and time spans but most tend to focus on OCDE and European countries (Adam at al., 2011; Dutu and Sicari, 2016; Afonso and Kazemi, 2017; Antonelli and de Bonis, 2019). Much less evidence is available about government relative efficiency in other areas of the world such as Africa, Asia or Latin America. That said, some studies report some first empirical explorations for Latin American and Caribbean countries (see e.g. Afonso et al., 2013). Two key results emerge from this literature: i) public spending efficiency can be improved; and ii) specific factors are associated with efficiency.

development and competitiveness (Acemoglu and Robinson, 2012). Additionally, public sector efficiency plays a pivotal role in nurturing trust and confidence in government institutions (Rothstein, 2013). When citizens perceive that their government operates efficiently and transparently, it fosters a sense of legitimacy and strengthens the social contract between the state and its constituents (Treisman, 2007). Efficiency in resource allocation ensures equitable distribution of public goods and services, thereby mitigating social disparities and promoting inclusivity (Stiglitz, 2012). Prioritizing areas of greatest need and allocating resources based on merit and impact contribute to the realization of social justice objectives (Sen, 1999). Furthermore, efficient governance practices can advance environmental sustainability goals by promoting resource conservation and sustainable development initiatives (Stern, 2007). For instance, policies that encourage energy efficiency and renewable energy adoption contribute to climate change mitigation efforts (IPCC, 2014). Lastly, fostering fiscal responsibility through efficient public sector management is crucial for maintaining fiscal discipline and sustainability (Barro, 1990). By minimizing waste, fraud, and corruption, governments can ensure prudent management of public finances, reducing the risk of budget deficits and financial instability (Fischer et al., 1996).

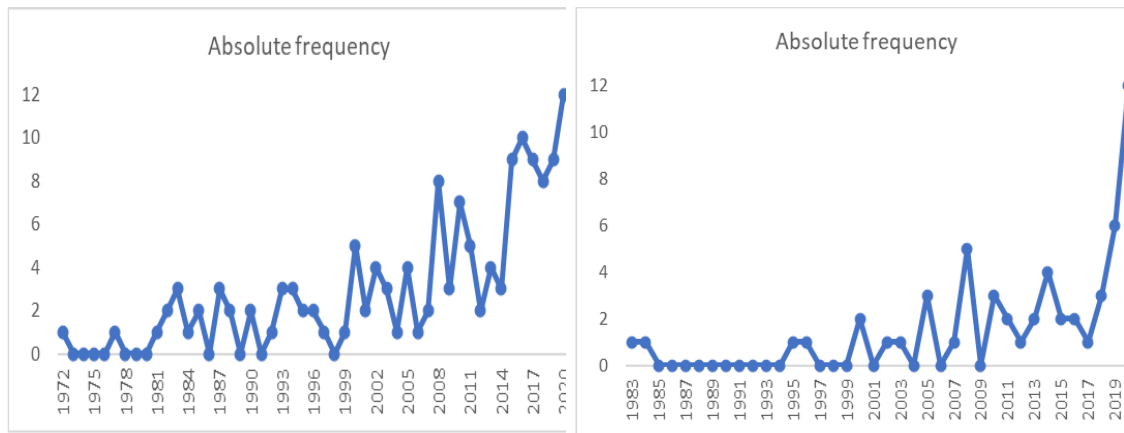
To have a sense of the growing interest in this particular area, Figure 1 shows the number of academic publications published per year, using two sets of queries: i) with “public sector efficiency” in the title, and ii) with “public sector” or “efficiency” in the title and “public sector efficiency” in the title, text, abstract, or keywords.² We observe an increasing trend in publications since 2000, with peaks in the period 2008-2010 and in the period 2019-2020.

² As a result of the search, a total of 142 and 55 articles were identified for queries i) and ii) respectively. Out of curiosity, journals that more frequently show up in the abovementioned sample extractions are *Applied Economics*, *European Journal of Operational Research*, *European Journal of Political Economy*, *Journal of Public Economics*, and *Public Choice*.

Figure 1 – Yearly publications on the topic of Public Sector Efficiency in Web of Science

A. Query with public sector efficiency in the title

B. Query with public sector efficiency in the title, text, abstract and keywords



Source: Afonso et al. (2023) using Web of Science data.

Measuring public sector efficiency is a complex endeavor, often involving the assessment of inputs, outputs, and outcomes across different governmental activities (see Section 2). Ebel and Yilmaz (2002) outlined several methodologies for measuring efficiency, ranging from parametric approaches like Data Envelopment Analysis (DEA) to non-parametric methods like Stochastic Frontier Analysis (SFA). They emphasized the importance of considering factors such as institutional quality, governance structures, and managerial capabilities, which can significantly impact efficiency outcomes. Additionally, Duygun et al. (2016) conducted a comprehensive survey of efficiency measurement techniques, highlighting the challenges associated with data availability, quality, and comparability across different jurisdictions.

Understanding the determinants of public sector efficiency requires examining a wide array of factors that shape organizational performance and service delivery. Political economy perspectives offer valuable insights into the interplay between political institutions, bureaucratic incentives, and efficiency outcomes (see e.g. Myint, 2000 and Herzfeld and Weiss, 2003). Moreover, the advent of information technology (IT) has emerged as a potent tool for enhancing public sector efficiency. Hwang and Kim (2022) investigated the impact of IT adoption on efficiency, finding empirical evidence suggesting that technology-driven solutions can lead to improvements in government service delivery and organizational performance. By leveraging IT systems for automation, data analytics, and citizen engagement, governments can streamline

processes, reduce administrative burdens, and enhance the overall efficiency of public service delivery.

This paper is not about determinants of public sector efficiency, but rather its effects. In particular, public sector efficiency exerts significant influence on financial markets and trust, with implications spanning economic stability, investor confidence, and societal cohesion.

First, efficient public sector operations play a pivotal role in shaping financial market dynamics. A well-managed public sector signals to investors a commitment to fiscal responsibility and prudent governance, which can enhance investor confidence and lower borrowing costs for governments (Alesina and Perotti, 1995). Research by Reinhart and Rogoff (2010) highlights that countries with more efficient public sectors tend to experience lower sovereign risk premiums, contributing to greater stability in financial markets. Conversely, inefficiencies or mismanagement in the public sector can undermine investor confidence and lead to increased borrowing costs for governments. Panizza and Presbitero (2014) note that fiscal mismanagement and inefficiencies can exacerbate fiscal deficits, leading to heightened risks of sovereign debt defaults and financial market turmoil. Moreover, Acemoglu et al. (2016) argue that inefficient allocation of resources by the public sector can impede overall economic growth, adversely affecting financial market performance.

Second, public sector efficiency is closely intertwined with trust in government institutions. When governments operate efficiently and transparently, it fosters a sense of accountability, fairness, and responsiveness, thereby bolstering citizens' trust in their ability to govern effectively (Rothstein and Teorell, 2008). Warren (2004) highlights the importance of efficient public sector management in nurturing citizen trust, which is essential for social cohesion and political stability. Conversely, inefficiencies or perceived mismanagement in the public sector can erode trust in government institutions. Moynihan and Pandey (2005) emphasize that instances of corruption or wasteful spending can undermine citizens' confidence in the government's ability to serve the public interest. Such erosion of trust can have far-reaching consequences, including decreased compliance with government regulations and reduced civic engagement (Hetherington, 1998). Putnam (1993) further argues that a lack of trust in government can lead to heightened political polarization and social fragmentation.

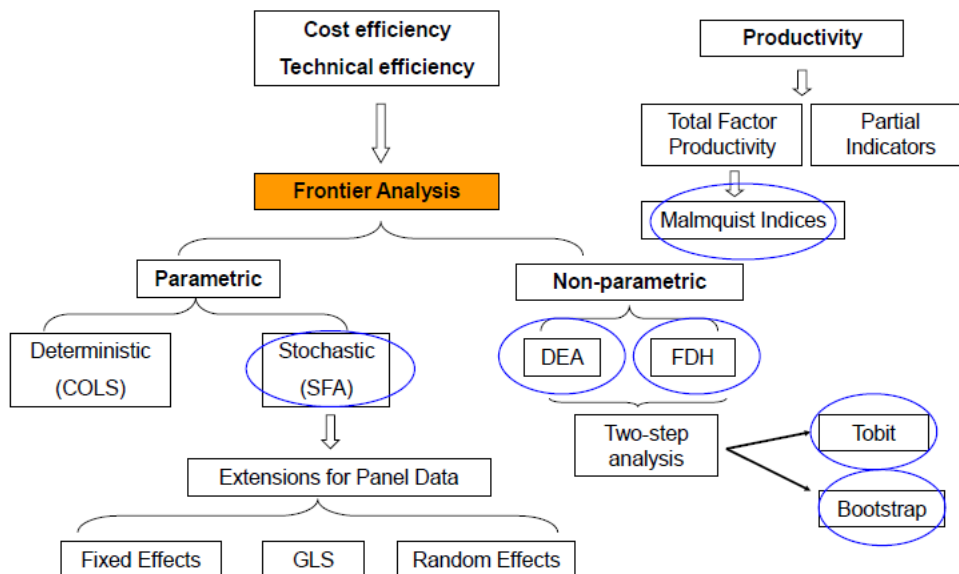
The remainder of the policy paper is organized as follows. Section 2 summarizes how efficiency can be computed and discusses key stylized facts for key OECD countries including Portugal. Section 3 looks at whether financial markets reward more efficiency

governments. Section 4 asks whether efficient governments enjoy higher levels of trust. Section 5 concludes.

2. How to compute efficiency?

Previous studies have employed various parametric and non-parametric methodologies to compute efficiency. Parametric approaches, such as corrected ordinary least squares (OLS) and stochastic frontier analysis (SFA), have been commonly used. Non-parametric techniques, including data envelopment analysis (DEA) and free disposal hull (FDH), have also found widespread application in the literature. Many studies estimate a non-parametric production function frontier and derive efficiency scores based on the relative distances of inefficient observations from this frontier. Non-parametric approaches offer the advantage of accommodating production functions with multiple outputs. However, they do not statistically assess differences across countries, which can be considered a limitation. Figure 2 provides an overview of some of the available methods for assessing efficiency.

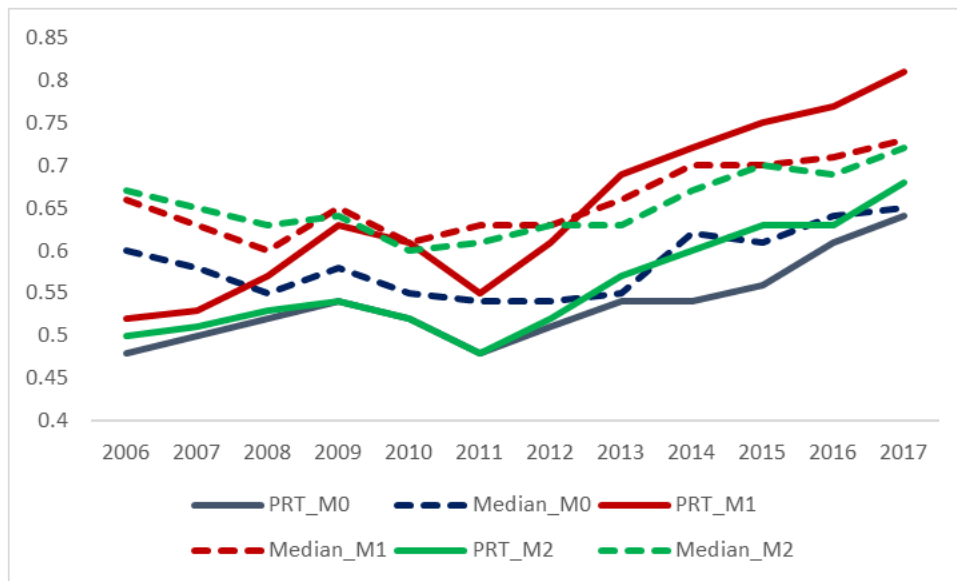
Figure 2 – Methods to Assess Efficiency



Source: Afonso et al. (2023).

Following the literature, in order to compute public sector efficiency scores, we rely on Afonso et al. (2023) and their DEA approach, which compares each observation with an optimal outcome.³ The purpose of an input-oriented assessment is to study by how much input quantities can be proportionally reduced without changing the output quantities produced. The average efficiency score throughout the period studied is around 0.6 for the 1 input and 1 output model (Model 0) and around 0.7 in the alternative models (Models 1 and 2).⁴ Interestingly, the median input efficiency scores have increased slightly between 2006 and 2017 (Figure 3). Nevertheless, results imply that some possible efficiency gains could be achieved with around less 30% government spending, on average, without changing the Public Sector Performance (PSP) outputs. Portugal, looking at either Models 0 or Model 2 consistently shown underperformance vis-à-vis OECD peers as far as efficiency is concerned (continuous lines below dotted lines).

Figure 3 – Input Efficiency Scores, Portugal vs OECD median, 2006-2017



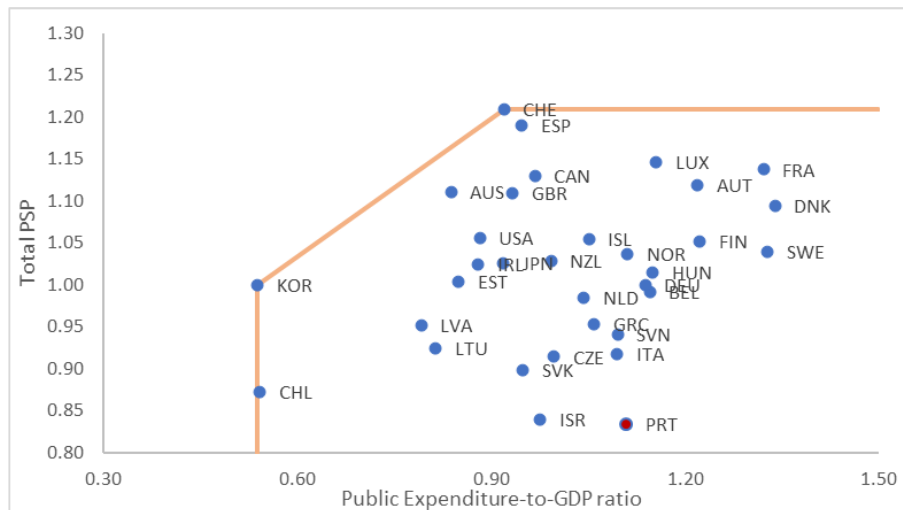
Source: own calculations using Afonso et al. (2023) data.

³ DEA is a non-parametric frontier methodology, which draws from Farrell's (1957) seminal work and that was further developed by Charnes et al. (1978). Coelli et al. (2002) and Thanassoulis (2001) offer introductions to DEA. DEA uses linear programming to compute the production frontier. This is a suitable approach for several reasons: first, it does not impose an underlying production function; second, it allows deviations from the efficient frontier and it examines the efficiency of a country relative to its peers. In computing the efficiency scores, we assume variable-returns to scale (VRS), to account for the fact that countries might not operate at their optimal scale. We use two orientations: input and output orientation. Both input and output approaches, deliver the same frontier in terms of the same set of efficient countries, but the magnitude of inefficiency per country may differ between the two approaches.

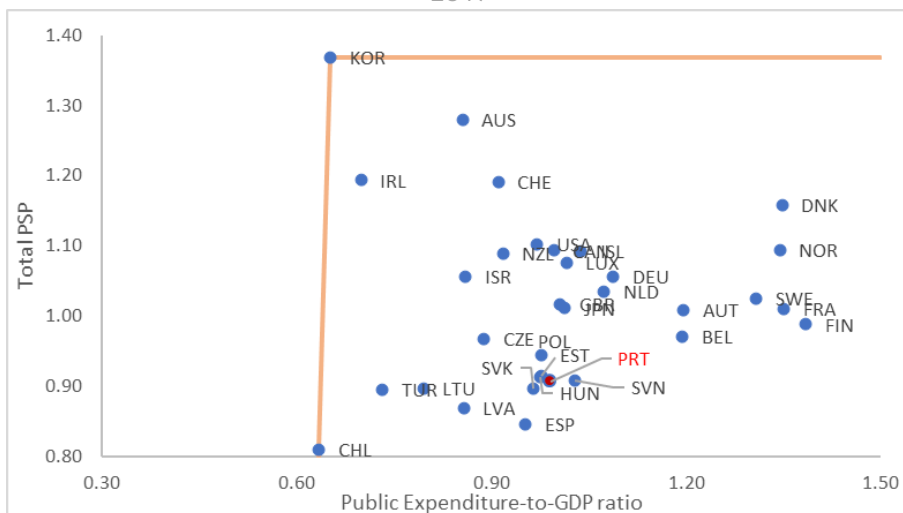
⁴ The detailed input efficient scores are illustrated on Tables 6, 7, 8 and 9 of Afonso et al. (2023). The DEA performed considered three models: baseline model (Model 0), which includes only one input and one output (Public Sector Performance or PSP); Model 1 uses one input, governments' normalized total spending and two outputs, the opportunity PSP and the "Musgravian" PSP scores; and Model 2 assumes two inputs, governments' normalized spending on opportunity and on "Musgravian" indicators and one output, total PSP scores.

An alternative visual representation that is easier to discuss is to plot the production possibility frontier⁵ for the baseline model (Model 0), for 2006 (first year of our sample) and for 2017 (last year of our sample). Figure 4 illustrates this precisely by pinpointing notably the countries that define the frontier: Switzerland and Korea in 2006, and Chile and Korea in 2017. For all the other countries inside the frontier, theoretically there would be room for improvement regarding efficiency gains. This includes Portugal which is highlighted in red.

Figure 4. Production Possibility Frontier (PPF)
(Input Efficiency Scores, model 0)
2006



2017



Source: authors' calculations.

Note: Figure 3 plots the production possibility frontiers for Model 0 for the years 2006 and 2017. In the vertical axis we have the total Public Sector Performance (PSP) composite indicator AUS – Australia; AUT- Austria; BEL – Belgium; CAN – Canada; CHE – Switzerland; CHL – Chile; CZE – Czech Republic; DEU – Germany; DNK – Denmark; ESP – Spain; EST – Estonia; FIN – Finland; FRA – France; GBR – United kingdom; GRC – Greece; HUN – Hungary; IRL – Ireland; ISL – Iceland;

⁵ In the context of DEA, the production possibility frontier (PPF) represents a boundary that delineates the maximum possible outputs that can be produced with a given set of inputs, considering the best available technology and practices.

ISR – Israel; ITA – Italy; JPN – Japan; KOR – South Korea; LTU – Lithuania; LUX – Luxembourg; LVA – Latvia; MEX – Mexico; NLD – Netherlands; NOR – Norway; NZL – New Zealand; POL – Poland; PRT – Portugal; SVK – Slovak Republic; SVN – Slovenia; SWE – Sweden; TUR – Turkey; USA – United States of America.

3. Do financial markets reward efficient governments?

In a nutshell, the answer to the above question is “Yes”. Indeed, better public spending efficiency developments are rewarded by financial markets notably with an upgrade of sovereign debt ratings. In capital markets, fiscal developments, including government policy announcements and fiscal stances, play a significant role in determining sovereign yields for purchasing a nation's debt. This assessment is reflected in sovereign credit ratings issued by major rating agencies, where downgrades and negative economic outlooks often correlate with weaker fiscal policies (Afonso et al., 2011). Conversely, in the current context of constrained budgetary resources – a factor exacerbated by the post-Covid19 period marked by extensive engagement in counter-cyclical policies, leading to unprecedented levels of deficits and debt – there is heightened emphasis on the efficient allocation of public resources. Policymakers and taxpayers alike prioritize outcomes that demonstrate better performance and efficiency in the utilization of public resources (Afonso et al., 2021).

Many governments grapple with constrained resources and strive to achieve fiscal balance. Consequently, the ability to continually roll over government debt relies on the widespread demand for such bonds in capital markets, particularly those with favorable sovereign ratings. An important consideration influencing these ratings is the efficient utilization of public resources. Therefore, there exists a direct correlation between public spending efficiency and the capacity to secure favorable rating notations.

Using efficiency scores for the same set of 36 OECD countries and data from the three main rating agencies, Standard & Poors (S&P), Moody’s and Fitch Ratings from Datastream and Bloomberg, Afonso et al. (2022) estimate the impact of public sector efficiency ($PSE_{i,t}$) on credit ratings ($R_{i,t}^*$), by run the following panel regression:

$$R_{i,t}^* = \alpha_i + \delta_t + \beta \widehat{PSE}_{i,t-1} + \gamma \mathbf{X}'_{i,t-1} + \varepsilon_{i,t} \quad (1)$$

where the unobserved latent variable $R_{i,t}^*$ follows a linear quantitative transformation of the qualitative rating scales; α_i are country-fixed effects capturing unobserved heterogeneity across countries, and time-unvarying factors; δ_t are time effects to account for common time trends and control for global shocks (such as the global business cycle); $\widehat{PSE}_{i,t-1}$ is the time-lag output efficiency estimate (see sub-section 3.2.2 for details on the

variables construction); \mathbf{X}_{it} is a vector of credit ratings determinants, also lagged one year to reduce reverse causality.⁶ $\varepsilon_{i,t}$ is an error term satisfying the usual assumptions. Note that the output efficiency scores are higher or equal to 1. To easily interpret the results, we made the following transformation $\widehat{PSE}_{i,t-1} = \frac{1}{\varphi_{i,t-1}}$.

The results reported in Table 1 show that better spending efficiency is positively related to higher sovereign ratings. This result holds for all the three rating agencies (Moody's, Standard & Poors and Fitch), for the average rating, and also for the Principal-Component-Analysis-based rating proxy.

Table 1. Conditional regression on alternative rating variables

Specification	(1)	(2)	(3)	(4)	(5)
Dependent Variable	Moody's	SP	Fitch	Average Rating	Rating PCA
PSE_0 (t-1)	3.284*** (0.866)	3.977*** (0.658)	3.315*** (0.631)	3.525*** (0.669)	0.700*** (0.132)
Inflation (t-1)	-0.050 (0.058)	-0.089+ (0.057)	-0.051 (0.048)	-0.063 (0.049)	-0.013 (0.010)
Terms of trade index (t-1)	-0.004 (0.014)	-0.016* (0.010)	-0.008 (0.010)	-0.009 (0.010)	-0.002 (0.002)
Debt ratio (t-1)	-0.079*** (0.008)	-0.055*** (0.005)	-0.058*** (0.006)	-0.064*** (0.006)	-0.013*** (0.001)
Ln(Reserves) (t-1)	-0.331** (0.150)	-0.531*** (0.114)	-0.316*** (0.114)	-0.393*** (0.119)	-0.078*** (0.024)
Constant	34.602*** (4.294)	37.399*** (3.080)	32.731*** (3.292)	34.911*** (3.368)	3.956*** (0.667)
Country effects	Yes	Yes	Yes	Yes	Yes
Time effects	Yes	Yes	Yes	Yes	Yes
Observations	489	489	489	489	489
R-squared	0.910	0.933	0.930	0.934	0.934

Note: standard errors in parenthesis. *, **, *** denote statistical significance at the 10, 5 and 1 percent levels, respectively. Country and time fixed effects included but omitted for reasons of parsimony.

Source: Afonso et al. (2022).

Considering that an ordered response model (probit or logit) is also a good alternative fit model for the latent variable R_{it}^* . The effect of the output spending efficiency score continues to be positive and statistically significant.⁷ Furthermore, we employ an instrumental variable (IV) approach. To instrument for the efficiency score variable, we select instruments capturing institutional and political characteristics of the countries likely to be correlated to our measure of public sector efficiency but presumably

⁶ Following the literature (Cantor and Packer, 1996; Monfort and Mulder, 2000; Bissoondoyal-Bheenick, 2005), the vector \mathbf{X}_{it} includes the following key determinants of sovereign credit ratings (with expected sign in parenthesis): inflation rate (+/-), debt-to-GDP ratio (-), foreign reserves (+), term of trade index(+/-).

⁷ Cf. Table C.4 and Table C.5 in Appendix C of Afonso et al. (2022).

not directly related to credit ratings. The main instruments used are those proposed by Acemoglu et al. (2019) and Fatas and Mihov (2001, 2013).

In the context of fewer public resources, and a strong demand for public services, financial markets will reward better more efficient governments. If capital markets perceive that public resources are not used efficiently, that can imply that a higher level of taxation or government indebtedness, also unnecessarily prevails. Therefore, markets can doubt of a government's ability to meet its repayment obligations. This is paramount since higher sovereign credit ratings will naturally imply lower funding costs in capital markets.

4. Are more efficient governments more trustful?

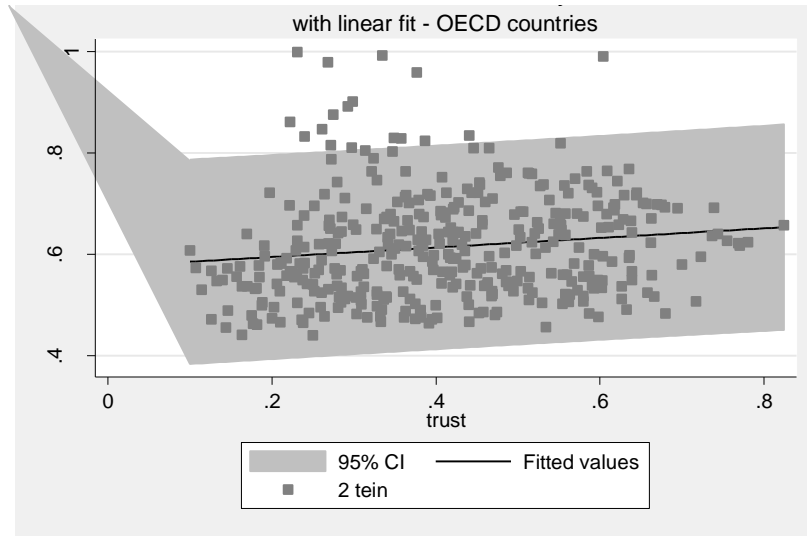
As before, in a nutshell, the answer to the above question is “Yes”. We conjecture that such general efficiency-enhancing policy and approach to government’s assets (physical and human) can generate a higher degree of confidence and trust in the state. Trust in the government has been identified as one of the most important foundations upon which the legitimacy and sustainability of political systems are built (Fukuyama, 1995). The trust citizens place in their government reflects their confidence in the government's actions. It is a function of the congruence between citizens’ preferences – their interpretation of what is right and fair and what is unfair – and the perceived actual functioning of government (Bouckaert and van de Walle, 2003). Public trust helps governments manage and administer a country on a daily basis in a way that reinforces the democratic institutions.⁸ However, trust in the government has decreased not only in the US but also in several European countries (Intawan and Nicholson, 2018; Pérez-Morote, et al., 2020). Hence, the key question in this paper is whether we can empirically provide strong evidence on the relationship between government’s trust and public sector efficiency. The level of trust that citizens place in their governments will depend on the credibility of the government's commitment to the quality of public policies in relation to the amount of spending.⁹

Using the same set of efficiency scores, Afonso et al. (2024) empirically assess the relevance of these efficiency scores on proxies of trust in the government in a panel setting of 36 OECD countries. It naturally follows that the idea of efficiency is also linked to some measure of fiscal prudence embedded in spending rationalization and optimization efforts. Figure 5 shows the unconditional relationship between trust and efficiency scores. It is clear, over the time span and sample of countries covered, a positive correlation between these variables (with a correlation coefficient of 12%). That said, any confirmation should be formally tested by means of an econometric analysis.

⁸ The rule of law and independent judiciary are especially relevant since they appropriate functioning is a fundamental driver of trust in government (Knack and Zak, 2003; Johnston et al., 2006; Blind, 2007). Furthermore, as well-functioning government institutions matter for business investment decisions, trust in them is a necessary component to propel economic growth (Dasgupta, 2009; Algan and Cahuc, 2010).

⁹ For instance, Alesina and Wacziarg (2000) argue that a more pronounced polarisation of voter preferences in advanced economies and the low quality of government policy, which favour particular groups and less the median voter, both reduce trust. Moreover, unproductive government spending reduces public trust in the State, which might become more damaging for large and ineffective governments (Garen and Clark, 2015).

Figure 5. Trust and Efficiency



Source: own calculation using Afonso et al. (2024) data.

In this sense, to estimate the impact of public sector efficiency ($PSE_{i,t}$) on trust ($T_{i,t}$), we run the following reduced-form panel regression for the period between 2007 and 2020:

$$T_{i,t} = \alpha_i + \delta_t + \beta PSE_{i,t-1} + \gamma X'_{i,t-1} + \varepsilon_{i,t} \quad (3)$$

where α_i are country-fixed effects included to capture unobserved heterogeneity across countries, and time-unvarying factors such as geographical variables which may affect the degree of trust; δ_t are time effects to control for global shocks (such as commodity prices or the world's business cycle); $\varepsilon_{i,t}$ is an i.i.d. error term satisfying usual assumptions of zero mean and constant variance.

Our dependent variable is trust in government ($T_{i,t}$) measured by the share of people who report having confidence in the national government. This indicator was retrieved from the OECD Stats (OECD, 2022) and it reflects the percentage of all survey respondents answering “yes” to the survey question: “In this country, do you have confidence in ... national government?”.¹⁰ The main independent variable is the one year-lag input efficiency scores ($PSE_{i,t-1}$). We also include a vector of other determinants

¹⁰ Data on trust is not available for all the years for the following countries: Australia, Austria, Belgium, Czech Republic, Estonia, Finland, Greece, Hungary, Iceland, Ireland, Latvia, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Slovakia, Slovenia, Switzerland and Turkey.

of trust in government, (X_{it-1}), lagged one year to reduce potential reverse causality concerns.¹¹

Table 2 reports this new set of results again for alternative input efficient scores (for Models 0,1 and 2). We find that better public spending efficiency contributes to strengthening the trust in governments, notably for the input and output efficiency scores variables, except for output efficiency scores in Model 2.

Table 2. Conditional regression on input efficiency scores

Specification	(1)	(2)	(3)
Dependent Variable	Trust	Trust	Trust
PSE_0 (t-1)	0.165* (0.083)		
PSE_1 (t-1)		0.147* (0.081)	
PSE_2 (t-1)			0.204*** (0.062)
Log(Population) (t-1)	-0.618** (0.229)	-0.623*** (0.227)	-0.602** (0.224)
Age dependency ratio (t-1)	0.008* (0.004)	0.009* (0.004)	0.009* (0.004)
Debt-to-GDP ratio (t-1)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)
Right (t-1)	0.015 (0.014)	0.013 (0.014)	0.016 (0.014)
Majority (t-1)	-0.000 (0.020)	-0.001 (0.021)	0.002 (0.020)
Constant	10.148** (3.874)	10.230** (3.835)	9.849** (3.783)
Country effects	Yes	Yes	Yes
Time effects	Yes	Yes	Yes
Observations	464	464	464
R-squared	0.290	0.288	0.298

Note: Clustered standard errors in parenthesis. *, **, *** denote statistical significance at the 10, 5 and 1 percent levels, respectively. Country and time fixed effects included but omitted for reasons of parsimony.

Source: Afonso et al. (2024).

Afonso et al. (2024) research revealed a positive correlation between government efficiency in expenditure management and the level of trust garnered from voters and citizens. This finding holds significant policy implications, especially considering the increasingly constrained fiscal space for conducting counter-cyclical fiscal policies.

¹¹ This vector includes the following variables: the logarithm of population and the age dependency ratio (as percentage of working-age population) included to control for the size of the social benefits, both variables retrieved from World Bank's World Development Indicators; the debt-to-GDP ratio to control for the size of government retrieved from the IMF's World Economic Outlook; a dummy variable equaling one for single-party majority government to control for political cohesion, and dummy variable for the right government to control for the political ideology, both retrieved from the Database of Political Institutions (Cruz et al., 2021) and Comparative Political Dataset, respectively.

Convincing the median voter that appropriate policies are being formulated and executed becomes crucial, particularly in a scenario where tax burdens in OECD countries are at historic highs.¹² Building trust among citizens not only enhances government credibility but also generates positive externalities across various sectors of the economy.

¹² See the IPP Policy Note on “Tax Effort, Tax Capacity and Tax Potential in Portugal”.

5. Concluding remarks

Public sector efficiency is a multifaceted concept influenced by institutional arrangements, political dynamics, and technological advancements. By incorporating insights from diverse perspectives and employing a mix of policy interventions, governments can work towards enhancing organizational performance, optimizing resource allocation, and delivering better outcomes for citizens. Efforts to improve public sector efficiency are essential for fostering trust in government institutions and ensuring the effective provision of public services in an increasingly complex and interconnected world.

This policy paper delved into the relationship between public sector efficiency and financial markets on the one hand, and trust, on the other. We have shown that indeed public sector efficiency is a critical determinant of financial market stability and trust in government institutions. Efficient governance practices signal commitment to fiscal responsibility, enhance investor confidence, and contribute to economic stability. Moreover, efficient public sector operations foster trust by promoting transparency, accountability, and responsiveness, which are essential for maintaining social cohesion and effective governance. Conversely, inefficiencies or mismanagement in the public sector can undermine investor confidence, increase borrowing costs, and erode trust in government institutions, leading to negative repercussions for financial markets and societal well-being.

The average input efficiency score in the period 2006-2017 was found to be around 0.6-0.7 implying that some efficiency gains could be achieved with around less 30-40% government spending, on average without changing the overall level of performance. The average output efficiency score was found to be between 1.16 and 1.50 suggesting that outputs could be increased by approximately 16-50%.

When comparing Portugal to other OECD or European countries, there are several considerations to explore:

- *Economic Performance and Fiscal Management:* Portugal, like some other European countries, has faced economic challenges in recent years, including high public debt and fiscal deficits. Efforts to enhance public sector efficiency in Portugal have often been intertwined with broader economic reforms aimed at improving fiscal sustainability and economic competitiveness.

- *Governance Structures and Institutional Quality:* The effectiveness of public sector institutions and governance structures varies across European countries. Countries with

stronger institutional frameworks and governance practices tend to exhibit higher levels of public sector efficiency. Portugal has made efforts to strengthen its governance structures and improve transparency and accountability within the public sector through initiatives such as administrative reforms and anti-corruption measures (Madureira, 2018).

- *Reform Initiatives and Policy Interventions:* European countries, including Portugal, have implemented various reform initiatives to enhance public sector efficiency. These reforms often include measures such as streamlining bureaucracy, improving public service delivery, and promoting digitalization and innovation in government operations (Rocha and Araujo, 2007). Portugal has pursued similar reforms, albeit with varying degrees of success, reflecting the complexities of implementing changes within the public sector (Gruner, 2013).

- *European Union Integration and Policy Coordination:* As a member of the European Union (EU), Portugal is part of a broader framework of policy coordination and integration. EU directives and guidelines influence public sector efficiency through initiatives such as the European Semester process, which monitors and evaluates member states' economic and fiscal policies. Portugal's compliance with EU standards and its ability to implement EU-mandated reforms can affect its public sector efficiency relative to other European countries.

- *Social and Cultural Context:* Social and cultural factors also play a role in shaping public sector efficiency. Differences in societal attitudes towards governance, accountability, and public service delivery can influence the effectiveness of public sector institutions. Understanding these cultural nuances is essential when comparing public sector efficiency across European countries, including Portugal.

In summary, while Portugal has made strides in improving public sector efficiency, challenges remain, highlighting the importance of ongoing reforms and policy interventions to enhance governance effectiveness and economic performance.

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Public Sector Efficiency: exploring (some) reasons for why it's needed

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