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The Determinants of Impact Budgetary Elasticities for 27 European Economies

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To ISEG for the opportunity to have made this journey.
In reverent homage to the memory of John Maynard Keynes.

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Abstract

We calculated impact elasticities for output, private investment and private consumption with respect to 10 budgetary items. We regressed them on two sets of variables (common and specific-aggregate) using a quantile regression approach. We obtained the determinants of these elasticities for a panel of 27 European economies for 2001Q4-2022Q3. For the common determinants we obtained the following elasticities results: output-to-total revenues was negatively affected by the exchange rate and government investment, but positively by government expenditure; private investment-to-total revenues was positively explained by the exchange rate, but negatively by the openness degree, interest-growth differential and external balance surplus; private consumption-to-total revenues rises during an expansion, but falls with public investment and fiscal episode; output-to-total expenditures was positively affected during a fiscal episode, but negatively by public investment; private investment-to-total expenditures was positively influenced by a fiscal episode, and negatively by an external balance surplus and public consumption; private consumption-to-total expenditures explained positively by the presence of the fiscal episode and during an expansion, but negatively by public investment.

Keywords: impact elasticity, budgetary items, quantile regression, determinants of elasticities, 27 European economies, Non-Keynesian effects

JEL Codes: C33, E62, E65, H20, H30, H50.

Os Determinantes das Elasticidades Orçamentais de Impacto para 27 Economias Europeias

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Resumo

Calculámos elasticidades de impacto para o produto, o investimento privado e o consumo privado relativamente a 10 rúbricas orçamentais. Usámos dois conjuntos de variáveis nas regressões (comuns e específicas ao agregado) utilizando o método de regressão de quantil. Obtivémos os determinantes destas elasticidades para um painel de 27 economias europeias para 2001Q4-2022Q3. Para os determinantes comuns obtivémos os seguintes resultados de elasticidades: produto-receitas totais foi negativamente afetado pela taxa de câmbio e pelo investimento do governo, mas positivamente pela despesa pública; investimento privado-receitas totais foi positivamente explicada pela taxa de câmbio, mas negativamente pelo grau de abertura comercial, de diferença juro-crescimento e de balança externa superavitária; consumo privado-receitas totais cresceu durante uma expansão, mas caiu com o investimento público e episódio fiscal; produto-despesas totais foi positivamente explicado durante um episódio fiscal, mas negativamente pelo investimento público; investimento privado-despesas totais foi positivamente influenciado pelo episódio fiscal, e negativamente pela balança externa superavitária e pelo consumo público; consumo privado-despesas totais foi positivamente explicado pelo episódio fiscal e durante uma expansão, mas negativamente pelo investimento público.

Palavras-chave: elasticidade de impacto, rúbricas orçamentais, regressão de quantil, determinantes de elasticidades, 27 economias europeias, efeitos Não-Keynesianos

Códigos JEL: C33, E62, E65, H20, H30, H50.

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Nevertheless, I solemnly assume the traditional academic *mea culpa* for any potential errors that may persist in this work, for which I bear sole and exclusive responsibility.

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1 Introduction

The political-economic paradigm shift of the 80s put the Keynesian consensus in check through a Monetarist transition that remained in use until the turmoil of 2007-2008 Global Financial Crisis. However, in the wake of the Great Recession, the responses of European policymakers were initially based on a countercyclical conjunctural economic policy based on the original concepts of Keynesian interventionism, which relied on an increase in public spending as a way of counteracting the recession. The underlying logic was that exogenous government intervention in an economy below full employment would stabilise the economic system in the face of a drastic slump in aggregate demand. Subsequently, the increase in public spending – combined with an unusual easing of European Central Bank monetary stance – would act as a trigger to stimulate economic activity, which would return to its full employment, stimulated by both private consumption and investment, which would respond to the public stimuli.

At the end of 2008 the European Commission announced the European Economic Recovery Plan, which set out an agenda for coordinated public intervention between Member States to respond to the recession. The Plan established an injection of €200 billion – *circa* 1.5% of the European Union's GDP – to stimulate aggregate demand, stabilise and restore purchasing power, improve the competitiveness of industries and boost confidence in European markets[1].

The sharp fall in output meant that it was necessary to go beyond the automatic adjustment of stabilisers through a fiscal response based on discretionary increases in transfers, unemployment benefits and public investment[2]. Each Member State developed nationally a set of measures, resulting in a wide range of measures across Europe. It should be noted that different fiscal measures are associated with different macro-financial conditions, as well as with different degrees of vulnerability across economies (see the table on the main determinants of fiscal multipliers and elasticities in the appendix). The success of these actions also depends on the perceptions and reactions of households and firms as key points in the evolution of an easier fiscal stance. Given this, it is not surprising that the size, effectiveness and time lag of the fiscal stimulus might vary across the 27 countries.

[1] Communication from the European Commission to the European Council on the announcement of the European Economic Recovery Plan done by European Commission President Barroso on the 26th November 2008 entitled *The time to act is now*.

[2] U.S. responded in the same way with its American Recovery and Reinvestment Act in 2009, with an injection equivalent to 2.5% of GDP. There is some literature consensus that public intervention has been crucial in reversing crisis' depressing effects. For instance, Faria e Castro (2022) concludes that the fall in private consumption would have been about 30% higher than in the absence of government intervention.

Although public intervention contained the recession initially, there were signs of an additional problem from 2010 onwards due to the rise of deficit- and debt-to-GDP ratios[3]. Even before the prelude of the Sovereign Debt Crisis, there was already the awareness that fiscal easing would be temporary and would be reversed as soon as private demand replaced public one. Therefore, European governments should immediately start thinking about consolidation at the turn of the recovery, as automatic stabilisers would not be sufficient and additional discretionary measures should be used to ensure fiscal positions aligned with the long-term macro-financial sustainability objectives of the Stability and Growth Pact[4].

These research issues can be condensed in Constâncio (2020)'s nutshell, where it was highlighted the main hotspots on fiscal policy efficiency: (i) prolonged lag between the decision and the implementation of public intervention; (ii) possibility of crowding-out in private consumption and investment aggregates; (iii) temporary fiscal easing would not change households' and firms' decisions given their intertemporal smoothing optimisation behaviour (Friedman and Modigliani hypotheses) and the intertemporal link between current spending and future taxes (Ricardian equivalence).

On this point, Feldstein (1982) was one of the first to link and show evidence that public spending has considerable ability to impact aggregate demand. The author's research showed promising results as he concluded no evidence for Ricardian equivalence. Quite the opposite, since the two non-Ricardian results caught were the notably decline in today's private saving by the compensation of future social security benefits and the absence of private aggregates crowding out to public deficit and debt – the first result was also a non-Keynesian effect.

Since then, research on fiscal multipliers and fiscal elasticities have been moving *en crescendo* as a prism through which one can infer the efficiency of government interventions and assess on potential (dis)incentives that can arise on the private side of the economy. While the concept of multipliers and elasticities can become close in fiscal matters, they are still different. Thus, we can differentiate the fiscal multiplier as a measure that assesses the overall effect on output as the ratio of the first difference in output over the initial first difference in government expenditure, from fiscal elasticity as a metric that seizures the proportional sensitivity of output answer to variations in a fiscal budgetary item, through the ratio of output's per-

[3]According to Eurostat (2012) in 2010 (2008) the EU27 area had a government deficit of 6.5% (2.4%) and a government debt of 80.0% (62.2%) over GDP ratios, above the Maastricht Treaty criteria.

[4]Gertrude Tumpel-Gugerell's speech, *The European response to the financial crisis*, as a Member of the Executive Board of the ECB at Bank of New York Mellon Headquarter. New York, the 16th October 2009.

centage change over the percentage change of public expenditure.[5]. Multipliers are indispensable for identifying the effects of government interventions on output, as they focus on the overall impact of fiscal policy in the original Keynesian definition, enabling a comprehensive assessment of changes in the fiscal stance. However, it is important to take into account that these multipliers are provided in absolute terms, which can result in a coarser metric as they cover the direct total effect of government actions. Elasticities, because they represent the sensitivity of one variable to another, are able to capture a proportional relationship between the two, as they are expressed in relative terms, and can therefore provide a more detailed analysis of a change in a fiscal tool.

In general, from a methodological point of view, Vector Autoregression (VAR) models are by far the most widely used approaches in the literature for estimating fiscal multipliers and elasticities. Despite some variants, these approaches are generally exhausted in the sense of having diminishing marginal contributions, partly because the vast majority of new studies include previous approaches that are replicated as a methodological *pro forma*. By far the most glaring example of this is the use of VAR methodology *à la* Blanchard and Perotti (2002).

Therefore, in this work we propose to apply a new concept - the one of elasticity's microeconomic definition, rather than the multiplier one, highlighting some of its advantages. First, as elasticities are expressed in relative percentage terms, this ensures comparability of this metric across countries, providing a standardised comparative analysis of the economy's response to fiscal movements. This comparability remains unaffected by country-specific characteristics, allowing for a consistent comparison of economies of different sizes. Second, elasticities are more flexible for studying the individual effects of different fiscal measures than an aggregate approach. Simultaneously, they are better suited to focus specific aggregates other than output. Hence, this not only allows to infer the aggregates that are more sensitive to fiscal shifts, but also to look in a more disaggregated way, allowing the analysis of a more targeted fiscal toolkit, depending on the impact, within the binomial of specific aggregate – fiscal instrument. Third, for the time series of macroeconomic aggregates and fiscal items analysed, we might expect the multipliers to have a more discrete behaviour, *i.e.*, with more abrupt changes from period to period, as the teeth of a

[5]Suppose that between two periods t and $t+1$, output increases from 100 to 110 and government expenditure increases from 50 to 52 monetary units. Then, according to the definitions presented above, the fiscal multiplier is 5 $\left\{\frac{\Delta Y}{\Delta G} = \frac{110-100}{52-50}\right\}$ and the elasticity is 2.5 $\left\{\frac{\Delta\%Y}{\Delta\%G} = \frac{\frac{110-100}{100}}{\frac{52-50}{50}}\right\}$. The first is read as output growing by 5 monetary units for every one increased in public expenditure. The second is read as output growing by 2.5 per cent for every one per cent increase in public expenditure.

saw. In contrast, elasticities will tend to capture a smoother evolution over time for the same data, as they use percentage changes, the changes in elasticities will be more continuous.

The motivation for this work is linked to the identification of some gaps that can be explored within this research topic by introducing some less common approaches in the literature at different levels. Conceptually, the definition of elasticity is preferred over the multiplier one, as it is a metric that captures the responsiveness of the variables we want to study with greater sensitivity - particularly, we will focus in a short-term angle, working only with the definition of impact elasticity.

Therefore, since an elasticity is a reaction, we have applied this concept to see how three macroeconomic aggregates - output, private investment and private consumption (dependent variables) - react to ten budget items (independent variables). Thus, this work is built around three sets of elasticities - each one for the respective macroeconomic aggregate - and within each set there will be a series of ten elasticities, each associated with the respective aggregate and the ten different budget items (revenue and expenditure items). Thus, after having obtained these elasticities, the research question of this paper is to find out which determinants explain each one of these elasticities. Within each of the three groups of elasticities, two sets of explanatory variables were selected: (i) one refers to variables specifically selected according to the macroeconomic aggregate in question; (ii) the other with a set of common variables to all the three groups elasticities. In total, sixty different impact elasticities were calculated and their respective regressions.

In terms of data, we assembled data covering 27 European economies, consisting of two decades of quarterly series that span several critical moments of fiscal policy action, from 2001Q4-2022Q3. Methodologically, we privileged for the panel of these 27 countries a quantile regression approach to take better advantage of the large number of observations. More specifically, we used a decile splitting, which allows us to order the 2268 quarterly observations of the impact elasticities and to divide them into nine deciles, from the smallest to the largest values. In this way, and for each one of the sixty regressions, we can deduce the evolution of the explanatory power of the variables explaining these elasticities as a function of their size, *i.e.*, from inelastic to more elastic ones.

This allows us to focus our work on seeing how output, private investment and private consumption react to fiscal changes - decomposed into more granular budgetary items – and then to assess on what determines these elasticities – taking to account elasticities' size, specific explanatory variables tuned to each aggregate and common explanatory variables to both the three aggregates in order to create a

comparative term for the explanatory power of these variables for the different elasticities. Finally, and whenever possible, we will infer on the existence of Keynesian or non-Keynesian effects on the way elasticities respond to the variables we use.

This work is structured as follows: Section 2 provides a review of the primary literature on fiscal multipliers, elasticities and non-Keynesian effects; Section 3 describes the data and econometrics strategies and methodologies; Section 4 presents and discusses the results obtained. Lastly, in Section 5, a comprehensive conclusion is drawn, which assesses the alignment of the results with the existing literature and endeavors to address some policymaking outcomes from these results.

2 Literature Review

2.1 Fiscal Multipliers

One must see here that the concept of fiscal multiplier itself should not be seen as a fixed definition, since there will be as many different fiscal outcomes, as there are different degrees of openness, soundness of public finance and specific reaction of private sector – each of all country-tuned. On the other hand, there will be as many more specific multipliers as there are different items on the revenue and expenditure sides – or the different time-lag approaches to study the evolution over time of fiscal impulses. These topics have been addressed in Favero et al. (2011) that confirmed the variability of fiscal multipliers, taking into account country-specific characteristics. The authors computed the cumulative contraction (with and without feedback) in GDP resulting from 1% fiscal changes in GDP. They concluded that fiscal contractions produce larger cumulative reductions in output than the equivalent expansionary impulse stemming from fiscal stance easing - notably in advanced economies.

In line with the previous work, Favero and Giavazzi (2012) applied the narrative approach to identify structural fiscal shocks on the revenue side. Analysing two specifications for expected and unexpected shocks, they find the tax multiplier was close to the unity. In the case of unexpected shocks, the authors showed contractionary results for real output resulting from a one percentage unit increase in tax revenues as in Romer and Romer (2010). They also tested the impact of tax increases on the debt ratio, but there was no significant difference between including and not including debt dynamics with respect to the tax multiplier effect.

As stated above, Romer and Romer (2010) went on to discuss the impact of tax changes on output. They proceeded through a narrative approach to isolate government revenues exogenous shocks and saw that output tended highly to follow

these variations – suggesting that the statistically significant contractionary effects on output came mainly from increased taxes. Another side effect has also been a negative undermining of private investment. Additionally, it was noted that current tax adjustments had a higher impact on output than announcements of future potential ones. Despite this focus on the tax side, the authors did not differentiate between the use of tax or spending changes in terms of equivalent adjustments and see which of them would be the most efficient, in the sense of seeing which of the tools could simultaneously ensure the success of a consolidation with a less eroding effect on macroeconomic aggregates.

Blanchard and Perotti (2002) is regarded as one of the most influential seminal works in identifying fiscal shocks and describing their time-dynamic impacts on government revenues and expenditures[6]. Their results showed that a positive government spending shock had an expansionary effect on output, but a positive tax shock had a contractionary outcome - concurrently, both shocks led to a significant negative impact in private investment and the expansionary spending one increased private consumption. One should stress here the odd results since for the same expansionary fiscal shock: (i) the increase in private consumption is consistent with Keynesian thinking but not for the neoclassical one; (ii) the decrease in private investment was predictable in neoclassical stance, yet difficult to frame in Keynesian theory[7].

Reversely, and to allow governments reforms to depend and vary with the business cycle phase, Auerbach and Gorodnichenko (2013) found a wide spectrum for OECD multipliers' size (particularly spending ones) during expansions and recessions, concluding that public intervention success was significantly higher in recessions *vis-à-vis* expansions. The authors, now in Auerbach and Gorodnichenko (2013), were among the first to disassemble the multiplier computation into more specific items on expenditure side where the different items induced different shocks – where the military purchases expenditure multiplier was the largest one. In this approach was also introduced the possibility to control contemporaneously forecasts for the variables considered which led (generally in recessions) to overestimate multiplier's size[8]. In a second moment, the authors used a smooth transition VAR model

[6] Blanchard and Perotti (2002) included some assumptions which have become outdated. The biggest one is the proxy that multipliers do not vary along the business cycle. The inclusion of this topic is a major purpose on multipliers' estimation - paramountly since Great Recession. See Auerbach and Gorodnichenko (2012), which summarises Blanchard and Perotti (2002)'s assumptions, which are open to some critique.

[7] See Blanchard and Perotti (2002), who, according to Keynesian theory, highlighted the expectation of different results for both tax and spending rises in order to increase private investment – which contradicts the results obtained.

[8] See Blanchard and Leigh (2013) on the link between forecast errors and estimation issues for

[9] that confirmed previous results for which recessions presented higher spending multipliers than expansions and there was evidence that the sign of the multipliers changes as a function of business cycle position. In addition, there was evidence that both inflation and private crowing-out spillovers might not be as strong as new-Keynesian stance expected. In the same methodology context, Auerbach and Gorodnichenko (2012) found that expectancies on potential government movements had explanatory weight over future fiscal reforms, and the control of these forecasts have a significant impact on results since it tends to rise multipliers' size in downturns and even more if the fiscal change results from an increase in public purchases spending. For Japan, Auerbach and Gorodnichenko (2017) focused on the calculation of multipliers for government purchases shock and obtained consistent results regarding the two previous papers, showing positive Keynesian multipliers in output response to the shock. It was also found that multipliers during economic upwards were positive but small. Lastly, multipliers' stabilising and stimulating capacity was not constant over time. Before the 90s, the results were consistently Keynesian. For 90s onwards, results were more volatile and always smaller (even when positive).

Regarding the use of fiscal episodes as a proxy to isolate discretionary changes to better assess fiscal performances, Alesina and Ardagna (2010) were among the first to applied them to expansions and consolidations. Their major result (unlike Romer and Romer (2010)) revealed differences on the budgetary items used in fiscal adjustments. During expansionary reforms they showed that a tax relief was more successful compared to a boost in government spending to promote output growth. Conversely, for consolidations the spending side was more efficient than taxes to cut back debt and deficit ratios. When spending cuts have been used, it has been observed that these periods have coincided with periods of growth.

Confirming some previous findings, Alesina and Giavazzi (2013) showed that expenditure cuts are less recessionary than tax increases in economies with a large government size and emphasised the design of a fiscal tool kit capable of minimising the consolidation recessionary effects in the short-term.

For their part, Ilzetzki et al. (2013) focused their analysis at the level of economy's characteristics. Their major conclusions revealed that the public consumption stimuli increased output and this rise was higher in advanced economies face to emerging ones. The exchange rate regime had a huge explanation share over the multiplier size, since when exchange rate was fixed[10] the multiplier was bigger than in flexible

fiscal multipliers.

[9] According to Auerbach and Gorodnichenko (2013) this allowed more direct estimations with few degrees of freedom and reducing the structural VAR impulse response functions' norms.

[10] Mainly in emerging economies where their monetary policy loses some of its discretionary

regimes. As for closed trade countries fiscal multipliers were bigger than open ones. And in very indebted countries multipliers tended to be lower regarding sound ones. Despite the results' heterogeneity (in short- and long-run) the authors highlighted that the policy mix – tax or spending – appeared as a non-influencing factor for the size of multipliers (the opposite of Alesina and Giavazzi (2013)).

On this trail, Perotti (2004a) assessed the outcomes of government stimuli in relation to output, inflation and interest rates. They concluded small multipliers - claiming that multipliers close to unity or higher could only be obtained for periods before the 80s. The author argued like Ilzetzki et al. (2013) that the composition tools has no influence on the multipliers estimation. It was also observed a fading trend in both spending and tax shocks in the long-run - associated to negative impact in private investment after the 80s. Alongside this, the rise in public expenditure had a positive influence on long-term interest rates, an insignificant impact in inflation and a decrease in the variance of output from the 80s onwards. And in Perotti (2004b) it was found no evidence that government investment is more efficient than consumption one in stimulating output (in short- and in the long-run), due to crowding-out of private investment resulting from the second. Yet, both did not have a strong stimulating effect. Inversely to Ramey and Zubairy (2018), military spending had limited and sometimes even negative effects on both output and private investment and the transfer multiplier was not high either, even in the short-term[11].

Emphasis on the assessment of government expenditure, Ramey and Zubairy (2018) wanted to link the possibility of bigger multipliers arising from economic downturns. Their estimated multipliers were not very expansionary, as they remained below one regardless of the size of the recession. One of the most interesting findings was that the success of Roosevelt's New Deal spending in stimulating recovery was not due to the efficiency of the public stimulus – as the estimated multipliers were not high (despite positive) – but due to a liquidity effect resulting from the huge amount of public spending. This paper is probably one of the few that parallels these two ideas of a net effect between the (un)success of public money injections in terms of their efficiency and liquidity effects. The authors also pointed that the military purchases multiplier had a large expansionary effect (defying Perotti (2004b)).

On the same issue of the impact of government spending on defence purchases, Barro and Redlick (2011) found that the temporary multiplier for military purchases

power, as its currency is pegged to the U.S. dollar. Thus, the weight of fiscal policy is greater in these countries.

[11]The author illustrates the ineffectiveness of public interventions by, *e.g.*, high public capital above the optimal, political pressure, *"pork-barrel projects"* and distortionary outcomes of taxes.

was much higher than the permanent one, between three and four times higher - although the first peaked in the second year and declined thereafter, and the second never took off from values near zero. The paper concluded that given multipliers below the unity, an increase in military purchases would crowd-out some GDP elements – mainly, the authors pointed crowding-out on private investment and net exports. In the permanent increase scenario, military purchases had fewer negative impact on private investment but a significantly negative impact on private consumption.

To measure anticipating announcements of potential changes in public spending, Ramey (2011) applied VAR and narrative approaches and found that public spending increases both consumption and real wages levels. The author noted some variability in the value of the overall multipliers over time. Within historical data series, the multiplier was around the unity until the 50s and from the 50s onwards the multiplier shrinkage was between 20%-40%. From this paper it is possible to derive a good explanation for the frequent combination of the VAR and the narrative approach in literature. If the first tries to identify the lagged fiscal shocks and doesn't take into account the first reductions in private consumption and real wages in the aggregates studied in this paper, the second manages to bridge this gap by taking into account more continuous time information, in this case in the trigger variable of potential increase in public spending.

Looking at the performance of fiscal multipliers in the Eurozone (EZ), Combes et al. (2014) showed that being a EZ economy or being an EZ crisis past impacted country didn't affect significantly the level of tax multipliers and that spending multipliers displayed big differences depending on the country category of belonging to EZ or potential future EZ economy – where output had a Keynesian effect having a more expansionary answer to spending shocks for both affected and non-affected countries during sovereign debt crisis. The paper also tested the effect of a country being an economy that has recently joined the euro and being an economy that it does not expect to become a future EZ member to try to unveil differences in multipliers. The authors suggested that that a EZ connection has some explanation at the time of measuring the output reaction to spending shocks. They saw that output reacted positively to expenditure growth for the general EZ countries and the same relation was negative for the non-EZ economies. In the same path, they identify spending multipliers were positive and significant for the category of economies that can become part of EZ. Output answered to both tax and expenditures shocks significantly, increasing constantly in four years – showing again evidence of a Keynesian effect, which was higher for affected countries than for core EZ ones.

Exploring estimations for government spending multipliers during expansion and

recession, Riera-Crichton et al. (2015) have taken in consideration some biases regarding asymmetry in government spending rises and cuts – for both countercyclical and procyclical performances. The authors seated a large long-run multiplier during recessions and with expenditure rises, and even higher during extreme recessions. But ignoring the distinction between government cuts and rises would split the multiplier by half. Contrary to the general literature that distinguishes between recessions, expansions and normal times, the authors showed that countries were in recession and expansion fifty-fifty of their time and no evidence for normal times. Like most of the authors featured so far, the fiscal multiplier during recessions was higher compared to the expansion one. Thus, decreasing the spending level in recessions would lower output by less the unity and for extreme recessions by more the unity. This paper lifted the question on how spending fluctuations could produce asymmetric effects in recessions[12], whereas has been shown to support Keynesian logic in the case of procyclical multipliers, but not for the case of spending cuts during expansions.

Guided by the heterogeneity on public stimuli to fight 2007-2008 crisis, Minea and Mustea (2015) approached the Mediterranean space, observing great differences when it comes to multipliers' size and sign. They found that both government consumption and investment statistically significant positive multipliers in the overall Mediterranean space leading to a Keynesian increase in output. This evidence was clear for both impact and cumulative multipliers in African consumption multipliers and East investment ones. Inversely, the East and small EMU public consumption didn't have a statistically significant increase in output. As for non-Keynesian effects, the authors brought evidence that the impact investment multiplier was negative in African and large EMU economies. Conversely, the size of the country displayed its relevance since fiscal multipliers were shorter in small economies in relation to the biggest economies[13]. The (financial) development degree also exhibited its explanation share, where the maximum peak consumption multipliers were twice bigger in Africa faced to certain EMU economies, but for investment multipliers those in the EMU were higher than African ones - although the latter were more persistent than the former. See appendix for a synthesis on these multipliers works

[12]See Riera-Crichton et al. (2015) for the explanation put forward to explain the asymmetry in recessions.

[13]This result is predicted by the Mundell– Fleming model. Small economies tend to have a higher openness degree which is associated with big capital flows mobility. As these economies loosen their fiscal stance, this leads to a rise in interest rates, which initially may rise capital inflows. Nevertheless, these economies tend to have weak capital retention capacity (explicit in Africa) and will most likely end up by facing the risk of capital outflows. This reduces the efficiency of fiscal expansion and the value of multipliers.

and consult the appendix 1 for some notes on this point.

2.2 Elasticities

Bruce et al. (2006) were one of the first to distinguish between fiscal elasticities in short- and long-run. They estimated these two elasticities of income for direct and indirect taxes. The authors find on average that the long-run elasticity of income for direct tax is twice bigger than indirect ones - revealing an asymmetry trend for short-run elasticities since these were bigger (lower) than long-run during high (lower) current tax base. One interesting point beyond expected common sense was that none of the direct and indirect taxes appeared to be more volatile comparing each other, despite income elasticities in literature to be higher for direct taxes for both short- and long-run[14]. In the long-term, direct taxes tended to be more elastic to income changes than sales ones in states where the fiscal burden is higher and more progressive.

Following a more fine-grained analysis, Creedy and Gemmell (2004) conducted the estimation of individual and aggregate revenue elasticities for both direct and indirect taxes. They showed that the revenue elasticity for direct tax was decreasing over time, especially in the transition from the 80s to the 90s, which they explain by saying that this elasticity was affected by revenue-related deductions to which they refer to be a fluctuating component - yet this elasticity always remained above the unity. Their study highlighted that discretionary tax shifts can decrease the level of government tax revenues and inducing a rise in tax elasticity. As for elasticities on indirect taxes, these usually are treated as to be close to one given the fact consumption taxation isn't totally progressive[15]. However, the authors saw that when considering saving and transfers influence the indirect tax revenue elasticity revenue reacted to consumption levels. The indirect taxes elasticity was the double of the direct taxes one.

Still on the distinction between short-run and long-run elasticities, Boschi and D'Addona (2019) estimated these elasticities catching: (i) the links between output and the tax revenues changes; (ii) elasticity decomposition for each tax category; (iii) the effect of cyclical fluctuations and the business cycle position. The study concluded that short-run tax elasticities vary with business cycle phase, where tax types showed in short-run to be more higher during recessions than in booms. This was observed for corporate income, indirect taxes and social contributions but

[14]See Bruce et al. (2006) on the volatility consideration about the interactions between short- and long-run elasticities

[15]When savings and transfers aren't considered, consumption taxation (*e.g.* VAT) is a regressive tax since the higher the income, the lower will be the fixed VAT burden over the respective income.

smaller for individual income taxes. As for long-run elasticities this study endorses the previously literature with values always below one for the different tax types. The most appealing point goes to the highlights done towards the calculation of cyclically-adjusted budget balance (CAB), where this metrics incorporate tax revenue elasticities regarding output gap. This paper question outdated methodologies that assumed and used fixed elasticities (and only use long-run estimations), in opposition to the authors' major evidence of time-varying tax elasticities in tandem business cycle phase[16].

Literature highlighted the importance of the taxable income elasticity as a key point in assessing the efficiency cost of a tax position and identifying the revenue impact of tax changes. In Giertz (2009) it was confirmed previous evidence that this elasticity is smaller than one. Using this concept the author build Laffer curves between the effective marginal tax rate and the collected tax revenues and settled different scenarios for different elasticity of taxable income between one and zero. They concluded that this elasticity increases with gross income level during economic upturns.

Similar to the short- and long-term elasticity distinguish of Boschi and D'Addona (2019), Wolswijk (2007) estimated these elasticities into tax categories. The results showed that short-run elasticities tended to be lower than long-run elasticities in recessions. Methodologically, they also inaugurated a new way to compute short-run elasticities, ceasing to determine the percentual change in the tax over a 1% percentual change of GDP or output gap, but using for each tax type its own 1% percentual change tax base. As for the long-run elasticities, they used cointegration in tax bases to deal with inconsistency issues. For the tax categories used, this study proved contrasts between short- and long-run tax elasticities - mostly direct ones. These differences were most evident during recessions periods when there is a decrease below the potential tax level. In expansions, with an increase of tax collects, both short- and long-run elasticities increased, particularly for indirect taxes. Consumption taxes long-run elasticity was almost the unity for private consumption and very low (near seven times less) for residential investment. In the short-run, the elasticity for private consumption was near one third lower than the long-term one and the elasticity for residential investment has not taken off from the low previous values recorded in the long-term. Lastly, they could conclude that policymaking moved from direct taxes to indirect ones over time – a reaction to stabilize the tax revenues level in short-run.

[16]This is not the case with the Larch and Turrini (2010)'s methodology, which I use, quarterly, in this paper. Indeed, Boschi and D'Addona (2019), p. 177, highlighted the Larch and Turrini (2010)'s work as one of that incorporates the time-varying parameters used in the CAB computation.

Arguing in the context of a spending rules as a better guiding for fiscal assessment than CAB, Mills and Quinet (2001) used income elasticities in relation to tax items, to assess the cyclical changes as reactions to these to tax item changess but considering an average reaction for a time range and not a homologous year variation – obtaining different results for these two ways[17]. They identified an average elasticity circling the unity for general government tax revenues elasticity. They saw that tax elasticities are volatile to the economic cycle phase – concluding that tax collects decrease (increase) more quickly in comparison to the decrease (increase) in GDP during recessions (expansions). Their focus was more inclined for direct taxes, for which they found a non-linear reaction of this tax type to changes in the GDP[18].

Hayo et al. (2023) assessed on how the contrasts between output short- and long-run elasticities can be associated to changes in output growth and volatility in tax revenues for GDP and tax bases elasticities. To identify asymmetries and see how these dependent on business cycle, they included a more states to proxy the cycle position. They scanned that the elasticity of tax to its respective tax base in long-run was higher than the short one for Germany and UK but no caught differences between these two in the U.S. case – the same result was observed for the elasticity of tax revenues-to-output. As for the elasticity of base-to-output in the short-run this was less than one and one for the long-run in both economies. Considering the elasticity for tax revenues-to-output. In terms of heterogeneity results, with was observed for the tax-to-base elasticity some asymmetries crosswise economies, although this has not been the case within each country over time. As for base-to-output elasticities the inverse happened.

Lastly, Machado and Zuloeta (2012) concentrated their analysis into tax items and output elasticities as in Boschi and D'Addona (2019); Wolswijk (2007). Their primary findings provide novel insights into demonstrating that – unlike long-run elasticities which were statistically significant and had an expansionary effect – short ones were not far from zero for almost Latin America countries. The biggest tax type elasticity was corporate income, with the other tax categories being slightly above the unity. See appendix for an overview of these elasticities papers and consult the appendix 2 for some notes on this subject.

2.3 Non-Keynesian Effects

Carvalho (2009) established the link that fiscal consolidations are the moments when non-Keynesian effects emerge and characterised three moments that verify

[17] See Mills and Quinet (2001) on the use of average elasticity and CAB fluctuations.
[18] Link between sensibility of profitable businesses to the progressivity of corporate income taxes.

this connection. First, when the fiscal consolidation process is accompanied by discretionary fiscal structural changes aimed to optimized public spending[19]. Second, when the soundness degree of public finances allows the long-term interest rate to be volatile and to capture quickly the reductions in public debt. Third, fiscal consolidation must go hand in hand with structural reforms on the private side of the economy to increase the competitiveness of markets.

One of the first insights of non-Keynesian evidence was Giavazzi and Pagano (1996)'s research that carried out a cross-country analysis on fiscal contractions effects over private consumption during continuous fiscal episodes. The authors found that taxes and transfers had positive elasticities to private consumption - when output was close to its potential level. While this expansionary effect was Keynesian for transfers, it was non-Keynesian result for taxes which continued to exist at the time of the introduction of a contractionary fiscal episode. They argued that the success of consolidations is due to the credibility and persistence of these programmes, combined with a higher prevalence in advanced economies highly indebted[20].

Confirming the previous findings, Giavazzi et al. (2000) concluded that non-Keynesian responses of private aggregates tend to occur when fiscal policy envisages intensive and continuous changes. Their main conclusions showed that non-linear effects tend to be bigger when budget reforms come from the tax side rather than the expenditure one. It also occurred that these non-linear reactions could be asymmetric – deeper during consolidation times in detriment expansions ones. At this stage, their paper found – in bursting with Perotti (1999), where it was shown that fiscal stress times induced non-Keynesian results in private reactions – that public debt soaring is not an indicator that influences private consumption, since it is not behind the non-linear reactions coming from the private sector.

Afonso (2001) showed that the effect of government spending always had a positive impact on private consumption. However, whether to include fiscal episodes or not had a very significant effect and varied the size of that outcome. The inclusion of a fiscal episode reduced by more than half the capacity of public expenditure to stimulate this aggregate. A rise in government revenue would lead to a Keynesian reduction in private consumption in the absence of fiscal episodes - when they were included the result has turned, leading to a non-Keynesian positive (albeit small) change in private consumption. The author suggested the presence of fiscal non-

[19]Reduce unproductive public spending and make it more efficient as stated in Perotti (2004b)

[20]Each marginal improvement in the government's budgetary position contributes to a well-received marginal revision of private expectations as they are seen as large contribution to the debt reduction. Precisely because fiscal episodes are one-off programmes, they are most successful in the short-term - inducing an upward revision of agents' permanent disposable income, as they expect a future lower tax burden.

linearity in these non-Keynesian effects depending on the fiscal episodes' definition. For a contractionary episode, an increase in government expenditure had a significant positive effect on private consumption without an episode, but an irrelevant effect (close to zero) in the presence of this one. Regarding a tax increase without an episode, there was a Keynesian significant reduction in private consumption, but the inclusion of the contractionary episode caused private consumption to reverse a significant change - flipping from a negative value to its positive equivalent.

Diametrically, Hjelm (2002) challenged the idea that private consumption responds positively to consolidation through public spending cuts and argue that early non-Keynesian evidences (Ireland, Sweden and Denmark in the 80s in Giavazzi and Pagano (1996)) should not be taken as a rule due to country-specific factors. Indeed, the author suggested that consolidations lead to a reduction in private consumption (mainly in the long-run), as they reduce income expectations, leading to a substitution of consumption in favour of savings. Furthermore, the choice of instruments has not proved to be explanatory in consolidations, as private consumption has reacted similarly to both expenditure cuts and tax increases (as in Ilzetzki et al. (2013)).

van Aarle and Garretsen (2003) focused fiscal adjustments within the transition period of EMU. Following Giavazzi and Pagano (1996), they concluded that taxes and transfers did not show non-linearity, but conversely government final consumption did (at least in the short run). There was also evidence that the EMU transition process affected private expenditure - although this result varied from country to country Globally, it was concluded that the effect of consolidations did not impact that much private spending and in some cases only affected when considering the EMU transition.

Emphasising consolidations episodes, Afonso (2010) computed both short- and long-run elasticities of private consumption in relation to income, both of which were statistically significant - long-term elasticities were around one and the short- ones approximately two thirds of the unity. It was found that final public consumption did not affect statistically significant private consumption in the short-run, regardless fiscal episodes presence. In the long run, the elasticity of private consumption reacting to public expenditure was negative, showing that an increase in government consumption led to a decrease in private one - with this result being more negative when considering consolidation episodes. Taxes did not suggest to be statistically significant for the short-run. But in the long-term, a tax increase as part of a consolidation would stimulate private consumption, against Keynesian theory.

Contributing to a more fine-tuned disaggregation of private consumption elasticities at the level of more specific short- and long-term budget items, and confirming

Giavazzi and Pagano (1996)'s private consumption elasticities, Afonso and Leal (2022) showed positive Ricardian and non-Keynesian tax elasticities. Oppositely, social benefits induced a negative non-Keynesian impact on private consumption in short-run, causing an enhanced reduction in consolidations than in expansions (confirming Afonso (2010)) - in the long-run this result was even grater. Social benefits were only Keynesian in the combined presence of normal times and EMU. The authors found that private investment was always Keynesian at the start of EMU, and the absence of non-Keynesian effects led to the conclusion that the expansionary effect of fiscal consolidation faded with the entry into EMU.

Despite having shown that government final consumption expansion impacted positively, according to Keynesian theory, private consumption, Afonso et al. (2022) pointed out that increases in tax revenues raised significantly, and against Keynesian theory, private consumption during consolidation episodes - negative Keynesian tax influence has only emerged during periods of financial crisis. Moreover, fiscal consolidations induced a crowning-in in private investment. It was further noted that both results were prominent in advanced countries with high debt ratios (in line with Giavazzi and Pagano (1996)). See appendix for a summary on these Non-Keynesian studies and consult the appendix 3 for some notes on this topic.

3 Data and Methodology

3.1 Data Collection

For this work we have compiled a database for 27 EU countries. The aim was to collect a complete database for all EU Member States and for quarterly data, which are less used than annual data in the topics of this work. Therefore, and for reasons of statistical, institutional and metadata standardisation, only Eurostat long time series for the 27 countries from 2001Q4 to 2022Q3 have been used[21][22]

A set of elasticities were calculated for three macroeconomic aggregates - output, private investment and private consumption- with respect to 10 budgetary items, in more granular categories of general government revenues and expenditures. To do this, we used the microeconomic concept of elasticity where the dependent vari-

[21]For a better description of the construction of the database: data, transformations, and metainformation, see the Excel files that follow-up this work.

[22]Following on from the last remark, we would like to highlight two variables in particular, the use of which required a more complex calculation. They are: (i) CAB, following the methodology used by Larch and Turrini (2010) (the details of which can be found in the appendix); (ii) fiscal episode to assess the effect of whether or not the country was experiencing a moment of fiscal consolidation in a given quarter, which concept was replicated from Afonso (2010)(the details of which can be found in the appendix.).

able was each of the three macroeconomic aggregates and the independent variable was each of the 10 budgetary items. Then, for the purposes of the econometric regression, we chose two sets of explanatory variables applicable to each one of the three groups of elasticities. Firstly, a set of variables chosen according to the type of aggregate, and therefore variables applicable only to the elasticities of a specific group. Secondly, a set of variables that are common to the three aggregates and that allow a comparison to be made between the different groups of elasticities, since they allow us to see how the same variables explain the 30 elasticities in question in different ways[23]. Thus, as we have 3 sets of elasticities (for 3 macroeconomic aggregates) and each set has 10 different elasticities (for 10 budgetary items), we have a total of 30 elasticities. However, as we have two approaches in terms of the sets of explanatory variables used (one set specific to the aggregate and another common to the generality), each of the 30 elasticities will have two different regressions. Thus, we have 60 different regressions[24].

Finally, the tables with the descriptive statistics of the elasticities, specific and common variables can be consulted in the appendix. The same applies to the correlation matrices - one between all the elasticities and the common variables, and three between each of the three groups of elasticities and their respective set of specific variables - which can also be consulted in the appendix.

3.2 Econometric Methodology

Methodologically, we chose to use a quatile regression approach for several reasons, which fit the nature of our data, both in quantity and variability. With a large amount of data (2268 observations per variable) and taking into account the panel of data for 27 countries of different sizes and characteristics, we would expect some variability in the values of the elasticities (from country to country), which was manifested by an excessively large amplitude. On this last point, the use of quarterly data may have contributed to this variability. And this may be behind the existence of some outliers in some countries' elasticity series. As we wanted to study non-linear effects, the quantile regression methodology is the one that best allows us to study this type of analysis, where the elasticity values were ordered from the lowest to the highest, and then divided into respective groups (deciles in this case). Then, the regression is applied individually to each one of these deciles and the corresponding coefficients are obtained for each one of them. Thus, we will

[23]The table with these variables can be found in the appendix.

[24]The choice of the sets of variables, both specific and common, was made according to a literature summary table on the determinants of multipliers and elasticities which can be found in the appendix.

be able to see how the explanatory capacity of these coefficients evolves as a function of the size of the elasticities - in the sense of them being more elastic or more inelastic. It should be noted straight away that, with regard to the issue raised earlier concerning the presence of outliers, this is an issue that is easily circumvented, since the outliers - very small (and negative) elasticity values and very large values - were concentrated in the extreme deciles (first and ninth). We therefore warn the reader to interpret the coefficients of the first and last deciles with some caution - concentrating above all on the deciles between the second and eighth ones.

A quantile regression, as defined by Koenker and Bassett (1978), is an approach that allows to analyse non-linearly the relation between a dependent and independent variables, but instead of using a regression to the mean - anchored in the average trend of all data - it captures the central tendency only for a subset of the total observations. Thus, we can say that this approach is a linear regression at the level of subgroups (quantile or decile), but it is non-linear for the totality of observations - going beyond the linear regression approach in the sense that it allows a more adapted and specific portrait of the conditional distribution of the elasticity in our case, in the detriment of the use of the conditional mean (Kleiber and Zeileis (2008)). This makes it possible to obtain results that are better adapted to the level of the explanatory variables, more *robust to outliers* (which is important in our case as it isolates them in the extreme deciles), *flexible to error distribution* and is a *method based on minimising asymmetrically weighted absolute residuals* (El Ghouch and Van Keilegom (2009)).

Linear Quantile Regression

Conditional Quantile function	$Q_{\varepsilon}(d\|\mathbf{x}) = \mathbf{x}_k^{\top} \cdot \boldsymbol{\beta}$	(1)
Minimizing argument	$\sum_k \varrho_d(\varepsilon_k - \mathbf{x}_k^{\top} \cdot \boldsymbol{\beta})$	(2)
Piecewise linear function	$\varrho_d(u) = u\{d - I(u < 0)\}$	(3)

Source: Kleiber and Zeileis (2008). Adapted to our terminology. Where $d \in \{0.1, 0.2, ..., 0.9\}$ refers the deciles, $\mathbf{x}$ the vector of explanatory variables and $\boldsymbol{\beta}$ the vector of respective coefficients. According to the authors: (i) 1 stands to d-decile of ε (elasticity) conditional to the set of variables, $\mathbf{x}$; (ii) in 2 estimation is through the minimization of the above argument regarding the coefficients vector; (iii) in 3, I stands for the indicator function seen here as a linear programming minimization.

Given our set of elasticities and our methodological strategy, the number of regression equations is fixed at six - for each one of the three macroeconomic aggregates there will be two type of regressions (common and specific variables). The equations can be found in the appendix.

4 Results and Discussions

In this section we will present our results, displaying in section 4.1 (4.2) the regressions for the set of common (specific) variables for both the total revenues and total expenditures. elasticities. We will build our interpretation around the regressions for total revenues and total expenditures, as these are the global budget items of revenues and expenditures - analysing them with the results of the regressions of the respective macroeconomic aggregate for the items of sub-revenues and sub-expenditures, allowing us to build a picture that links how the same elasticity is affected by different categories of revenues and expenditures. The regression tables can be found in the appendix.

From now on, it should be noted that since an elasticity is a percentage action-reaction between two variables, the values of the regression coefficients will always be the changes in percentage points of the macroeconomic aggregate reaction in relation to the one percentage point increase in the budget item in question induced by the explanatory variable. As mentioned above, the corner deciles, since they contain the outliers of the extreme values of the elasticities in our sample, are not taken into account in the interpretation and discussion of our results, so as not to affect the analysis of the evolution of the coefficients over the second to eighth deciles[25].

4.1 Common Explanatory Variables for General Budgetary Aggregates

4.1.1. Total Revenues Elasticities: Common Variables

[Insert Table VI]

For the elasticity of output-to-total revenues, it was found that the presence of a fiscal episode identifying the validity of a fiscal consolidation programme (hereafter fiscal episode) proved to be highly statistically significant, inducing a reduction in the value of the elasticity. This effect manifested itself in most deciles and there was evidence that this reduction was inversely proportional to the values of the elasticities, *i.e.*, the more elastic output was with respect to total revenue, the greater the reduction imposed during a fiscal episode - ranging from around -0.10% to -0.32%. When there is fiscal consolidation, the reduction in the strength of the output response is a Keynesian result.

[25] To structure the presentation of our results, from now on we will always start by highlighting the base regression table (total revenues or total expenditures). We will then go on to analyse and discuss it. Finally, we conclude with a reference to the regression tables for the granular items (sub-revenues or sub-expenditures) and their respective differences or similarities with the base regression.

The interest-growth differential of public debt did not show a strong explanation, although for inelastic values it induced a statistically significant reduction in the response of output, the values of this reduction are very small. For the same deciles in question, the amount of total government expenditure showed statistically significant positive values, indicating that when output reacts more moderately to total revenue, a unit increase in government expenditure as a percentage of GDP helps to increase this elasticity by around 0.60%. From the fifth decile onwards, a surplus position in the balance of payments shows a statistically significant increase. For the most elastic values, when exports are higher than imports, this contributes to an increase in the elasticity of output, showing a slight convexity. Also for the same set of deciles, the exchange rate appears as statistically significant, with a negative impact that increases with the degree of elasticity, with convex behaviour - it triples from -0.42% to -1.22%.

Government investment is the most important variable in terms of this elasticity, since a 1% increase in public investment as a percentage of GDP causes a very statistically significant drop in the elasticity values, which cuts across all deciles and is even more pronounced for the most elastic values, which suffer a drop of -5.4%. This result is the first evidence of a non-Keynesian effect, since when the government increases its investment, the elasticity of output with respect to total revenue falls sharply. This negative output response is also a sign of crowding out by the private sector, which significantly reduces its consumption and investment levels.

Looking at more granular revenues items, the same elasticity for direct taxes (Table XVIII) was similarly affected by the same variables and the same respective ranges of coefficient values and trends across deciles. It should be noted, however, that the inelastic elasticities of direct taxes were positively affected by the degree of openness of the economy, that total government expenditure had higher coefficients and that, in contrast to the elasticity of total revenues, there was highly statistically significant evidence that a period of economic growth slightly increased the response of output to direct taxes.

With regard to indirect taxes (Table XXI), it's worth noting that government expenditure, the position of the economic cycle and the external balance both had very statistically significant results for all deciles, and that throughout these the coefficients showed a certain constancy, in a range of values much higher than the other elasticities of other revenue items. The coefficients for public investment showed a strongly negative response, indicating that indirect taxes are the revenue category most sensitive to this variable.

On the other hand, the output response to social security (Table XXIV) contri-

butions shows similar results to the previous elasticities, except that this elasticity is significantly negatively affected for the most inelastic values, as well as the statistically significant non-Keynesian evidence that the presence of fiscal consolidation contributes positively (albeit modestly) to the increase in the output response to an increase in a unit change in social security contributions.

[Insert Table VII]

For the elasticity of private investment-to-total revenues, the fiscal episode was highly statistically significant for more elastic values. In the presence of fiscal consolidation, private investment tends to contract between -0.2% and -0.58%.

The interest-growth differential of public debt is statistically significant for inelastic responses and decreases as the public debt sustainability threshold is lowered; the response of investment decreases between -0.14% and -0.23%.

The degree of openness of the economy shows an interesting U-shaped behaviour. For inelastic values, the response of investment tends to shrink between -0.3% and -0.45% as trade openness increases. However, for the more elastic symmetric deciles, the relationship is reversed and the more open an economy is, the greater the response of investment to total income - reaching a very unique increase of 0.82% for very elastic values. A 1% increase in public spending relative to GDP leads to a sharp decline in the response of private investment to very elastic values. This contraction when public spending increases reveals crowding out.

A positive external balance for the first five deciles shows a significant reduction in elasticity between -0.22% and -0.35% when the economy exports more than it imports. Government investment shows a sharp reduction in inelastic values; when there is a 1% increase in public investment as a function of GDP, the elasticity falls very significantly, indicating crowding out of private investment. Nevertheless, government consumption expenditure appears to be a strong stimulus to increase this elasticity, which is directly proportional to the most elastic values. It's interesting to see how investment reacts differently to government consumption and investment. Since government consumption is characterised by a short-term stimulus, its effect is faster and more immediate, while investment spending is less tangible in the short term and more uncertain, so private investment reacts differently between the two. The exchange rate has shown some positive impact in inelastic values.

The elasticity of private investment with respect to direct taxes confirms the previous results for most of the variables concerned, in terms of the significance, sign and range of values of the coefficients with respect to the elasticity of total revenue, with government investment having the most negative effect on the values

of the elasticity of direct taxes in the range of the least elastic values. It should be noted, however, that in contrast to the elasticity of total revenue, a unit change in government expenditure relative to GDP now has a significant positive impact on the elasticity of direct taxes. While for the most elastic values between -4.5% and -6.3% this variable induced a reduction in the response of private investment to total revenue, for direct taxes it now induces greater growth the lower the level of elasticities - reaching an increase of 4%. As far as the elasticity of indirect taxes is concerned, this confirms the results for total revenues, but it should be noted that, on the one hand, the positive effect of the exchange rate is now more significant in indirect taxes for the first five deciles and, on the other hand, the effect induced by the presence of fiscal consolidation is no longer evident.

Finally, the elasticity of social security contributions confirms the negative effect induced by public investment and also shows that this significant negative effect extends to government final consumption for the lowest elasticities (which is contrary to what happened with the elasticity of total revenue); there is evidence that for very elastic values the result can be reversed and become strongly positive, thus evolving in a U-shape. We should note a significant increase in this elasticity for the first six deciles resulting from fiscal consolidation, *i.e.*, when there is a fiscal episode, the response of private investment to a 1% increase in social contributions increases, which seems to be a non-Keynesian effect. There is also statistically significant evidence that this elasticity increases and is directly proportional to economic growth for all deciles. Finally, there is some evidence, albeit small, that this elasticity increases with an increase in the interest-growth differential for the most elastic range of values.

The elasticity for direct taxes (Table XIX) showed broadly the same results in terms of significance, magnitude and sign for all the determinants analysed for total revenue. It should only be noted that government final consumption expenditure was less significant in the elasticity of private investment to direct taxes. The elasticity of indirect taxes (Table XXII), unlike total revenue, showed some differences for the positive external balance, now positively affecting the elasticity of private investment. Government consumption and the exchange rate, on the other hand, showed the opposite sign, but in the same order of magnitude. In the case of social contributions (table XXV), government final consumption showed negative and signalling values for the less elastic private investment responses.

[Insert Table VIII]

The elasticity of private consumption-to-total revenues is statistically significantly reduced by the presence of a fiscal episode in all deciles, and with a propor-

tional upward trend for the most elastic values - this effect of private consumption is seen as a Keynesian result. When output grows above potential, there is evidence that this phase can make a positive contribution to this elasticity, but only modestly and for values that are not very elastic.

The trend towards a more open economy also seems to have a negative effect, which is highly statistically significant, but also very modest. As with output elasticity, public investment has a very significant and negative impact on the response of private consumption - which can be seen not only as a crowding out effect but also as a non-Keynesian result. However, this is not the case for government consumption expenditure, to which the elasticity reacts positively, albeit in a less expressive and Keynesian way. The exchange rate shows a very statistically significant reduction in elasticity for the middle deciles, ranging from -0.37% to -0.82%. Regarding the elasticity of direct taxes, total government expenditure becomes positive and highly statistically significant at the lowest inelastic values - between 0.8% and 1.3%. There was also evidence that a period of economic expansion positively influenced the response of private consumption to direct taxes in a constant manner across all deciles. The exchange rate once again had a significant and negative impact on the response of private consumption, but now with larger values, whose trend extends to all deciles.

As for the elasticity of indirect taxes, there is a statistically significant and strongly negative effect of public investment on this elasticity, in all deciles and in some of which the coefficient of indirect taxes is almost twice that of total revenue. For total government expenditure and the phase of the cycle, the results for indirect taxes are similar to those for direct taxes, and the same is true for the elasticity of social contributions, which have larger coefficients. In contrast to direct and indirect taxes, social contributions show very significant negative coefficients on government final consumption expenditure in the less elastic deciles.

The elasticity of private consumption to direct taxes (Table XX) does not differ significantly from total revenue. As for indirect taxes (Table XXIII), total government expenditure stands out with a very clear and positive effect across all deciles and the (modest) negative effect of the degree of openness of trade for the less elastic deciles. Social security contributions (Table XXVI) differed only in the tax episode, which had a (modest) positive impact for the inelastic deciles. Total government expenditure showed a positive response in all deciles (the greater the less elastic). Government final consumption had a significant negative impact in the less elastic deciles.

4.1.2. Total Expenditures Elasticities: Common Variables

[Insert Table IX]

For the elasticity of output-to-total expenditures, it was found that the presence of a fiscal episode proved to be positive and statistically significant in all deciles, and with a trend directly proportional to the size of the elasticity - starting with an impact of 0.25% at the least elastic values and ending with an impact of 1.2% at the highest values. Again, we can see a non-Keynesian result in this determinant of the increase in the response of output to total expenditure.

Total government expenditure had a significant positive effect in the range of less elastic values, and this effect was greater the less elastic the values of the output responses were. Economic expansion showed statistically significant positive coefficients, the value of which was roughly constant across all deciles.

On the other hand, public consumption and public investment had different effects, as was already the case for some income elasticities. The former was found to increase the response of output, an increase that was directly proportional to the more elastic values, showing a convex trend.

As for public investment, the results were statistically significant, negative and roughly constant across all deciles. It should be noted, however, that the impact of public investment was much greater than that of government final consumption. Finally, and for the most elastic values, the exchange rate showed a significant decline in the last two deciles.

In compensation of employees (Table XXVII), government final consumption is no longer statistically significant. For government investment (Table XXXII), in contrast to the elasticity of output with respect to total expenditure, the sign of the fiscal episode is reversed and total government expenditure is no longer significant. Intermediate consumption (Table XXXVII), social benefits (table XLII) and social transfers (Table XLVII) showed no significant changes in relation to the underlying elasticity of output.

[Insert Table X]

For the elasticity of private investment-to-total expenditures yields an interesting non-Keynesian result. In the presence of a fiscal episode, the response of private investment to total revenue was very significant and positive in all deciles. In particular, it can be seen that the more elastic the level of the response, the stronger the trend. It should also be noted that the elasticities calculated in this study are impact elasticities, *i.e.*, they capture the reactions of private investment, in this

case, to the one-unit change in total expenditure for the same period, so we can see from this result that private investment reacts quickly to the fiscal episode with some impetus. There was also a decrease in the less elastic responses to the increase in the interest rate growth differential, which was very statistically significant but modest in magnitude.

The level of government expenditure showed, as before, a U-shaped behaviour over the deciles - for the less elastic values the effect was positive and very significant; for the higher values the coefficient values showed a symmetrical effect in size and sign.

The phase of the cycle above potential output was found to have a positive, albeit modest, effect on the response of private investment to total expenditure. A surplus in the external balance has been shown to reduce the response of private investment, although the sign is different but the magnitude and significance are similar. Government consumption is by far the most important variable (as it has been so far) in all deciles in a constant and significant way, having a strong negative impact on the elasticities.

Conversely, and as has also become usual, government final consumption was a determinant that significantly increased the elasticities of private investment - especially the more elastic ones, although the magnitude of the coefficients was more modest compared to those observed for public investment. The exchange rate[26], on the other hand, has been shown to give some positive impetus to the less elastic range of values, although the trend over the deciles is unclear.

Compensation of employees (Table XXVIII) and government investment are not significantly different from the baseline regression (Table XXXIII). For intermediate consumption (table XXXVIII), the impact of the exchange rate is no longer significant. Social transfers (Table XLIII) are no longer explained by the cyclical position, the external position and government final consumption expenditure. Social transfers (Table XLVIII) are no longer explained by the exchange rate but also by government final consumption expenditure.

[Insert Table XI]

The elasticity of private consumption-to-total expenditures shows that the fiscal episode has a positive and statistically significant impact on the response of private consumption to total expenditure. This trend is seen across all deciles and, as is now common practice, the greater the elasticity, the greater the response - starting

[26]The exchange rate is perhaps the variable with the least symmetry in its development over the deciles.

at 0.2% in the first decile and ending at 0.92% in the last. This is another non-Keynesian result observed in a private household.

Total government expenditure proved to be a positive and very significant determinant in explaining this elasticity, especially at the less elastic values, with increases between 1% and 3%. There was some evidence, albeit not very clear, that this variable could follow a U-shaped trend (a rather common trend to date) in the last few deciles, where the impact of government expenditure could be negative when private consumption is very sensitive to total expenditure.

The phase of the business cycle and the open trade degression both show significant and mostly constant values over the deciles. The first showed an average coefficient of 0.3%. The second was due to the decrease of -0.13% in the response of private consumption to total expenditure.

Finally, and once again, public investment showed very statistically significant values, strongly negative and constant throughout the deciles. Final public consumption expenditure, on the other hand, was statistically significant and positive for the last 5 deciles.

Compensation of employees (Table XXIX) and government investment (Table XXXIV) lose their explanation of the degree of open trade. Intermediate consumption (Table XXXIX) loses the importance of government final consumption expenditure. The same applies to social transfers (Table XLIV), which are also no longer explained by the exchange rate. Social transfers (Table XLIX) are no longer influenced by the external position.

4.2 Specific-Aggregate Explanatory Variables General Budgetary Aggregates

4.2.1. Total Revenues Elasticities: Specific Variables

[Insert Table XII]

For the elasticity of output-to-total revenues, final consumption expenditure appeared to be highly statistically significant and negative for the last 5 deciles of the most elastic values. The size of the coefficients showed a directly proportional trend, the more elastic the response of output to total income. This is another interesting non-Keynesian result, because as the unit change in private final consumption expenditure as a percentage of GDP increases, output reacts less to total income - it's as if the increase in private consumption has no effect on the increase in aggregate demand.

Private investment emerged as a significant determinant, but only for the least elastic values - with a more positive impact the lower the decile, in line with Keyne-

sian logic and in contrast to the previous one. Next, private disposable income shows a significant positive response across all deciles - and an increasing one, the more elastic the decile. This is another consistent Keynesian result, since an increase in disposable income (here as an increase in the unit change as a percentage of GDP) will lead to an increase in private consumption and thus to an increase in aggregate demand and output.

In addition to this elasticity, another interesting result comes from the interest payments on public debt, which turned out to be the most important determinant across all deciles, with high, positive and statistically significant coefficients - and with a tendency to increase the more elastic the responses of output to total income were. This result can be explained from a short-term point of view, since an increase in interest payments is the consequence of debt from previous periods to the present, which translates into an increase in public investment or consumption, and therefore increases aggregate demand and output itself.

Direct taxes (Table XLII) lose their explanatory power on private disposable income. Indirect taxes (Table XLV) stand out for their positive influence on private saving in the less elastic deciles. Social contributions (Table XLVIII) are no longer explained by interest payments and total government revenue, but are negatively influenced by GDP per capita for some deciles.

[Insert Table XIII]

For the elasticity of private investment-to-total revenues, 3 determinants are already fundamentally linked. First, labour costs were found to have a negative impact on the elasticity of private investment to total revenue. These results were statistically significant for the middle deciles and the size of the coefficient in question was consistent at around -1.1%. This result was to be expected, as an increase in unit labour costs per employee (wage costs) leads to an increase in total production costs and an upward revision of prices - which can be interpreted as a factor of uncertainty leading to a revision of private investment decisions.

The present value of debt, *i.e.*, updating the change in government debt to a sustainable path based on the interest-rate growth differential, shows that a one-unit change in the present value of debt as a percentage of GDP (*i.e.*, an increase in debt) has a very small and negative impact on the less elastic response deciles. This result is again consistent with the crowding out of private investment, which shrinks when the government takes on debt.

Finally, inflation is statistically significant and positive for most deciles, with significant coefficients, and we can see an upward trend in the size of the coefficient

as private investment becomes more elastic to total income. However, the sign of these results is surprising. With an increase in inflation, we would expect private investment to be faced with a scenario of uncertainty, which would lead it to redefine its decisions in the short term and, theoretically, reduce its level of investment due to risk aversion. Thus, the expected results for this determinant would have been coefficients with negative signs, indicating a less expressive reaction from this private aggregate.

Direct taxes (Table XLIII) and indirect taxes (Table XLVI) show no significant changes compared to the baseline regression. Social contributions (Table XLIX) are now considered to have a very statistically significant (albeit modest) impact on the unemployment rate and the energy component of inflation, with a curious positive effect on the response of private investment to total income in the less elastic deciles.

[Insert Table XIV]

For the elasticity of private consumption-to-total revenues, we first see an obvious and expected result. When there is an increase in private saving, and for all deciles in a significantly negative way and with size coefficients between -1% and -3%, the response of private consumption decreases - especially for the most elastic deciles - since, in Keynesian terms, saving and consumption are two sides of the same decision coin.

As for private disposable income, the results were U-shaped only for the extreme deciles. In the first decile of less elastic values, an increase in disposable income was found to have a negative effect on private consumption, while in the decile of more elastic values the results were (as expected) positive and more significant.

Another consistent result was found for compensation of employees, which showed significant, positive and increasing values the more elastic the values of the deciles were. *Ceteris paribus*, an increase in government expenditure on the salaries of the category of employees in question would be expected to increase the (disposable) income of this category of agents, which in turn would increase the corresponding private consumption.

It was also found that an increase in private investment had a positive and statistically significant effect on the response of private consumption to total income across all deciles (and more so for the less elastic values). To a certain extent, this figure is also somewhat unexpected, because since we are focusing on the short term, the decision between investment and private consumption is inversely proportional to each other. However, when there is an increase in investment, this is accompanied by a positive response from private consumption - we can see here an effect of future

anticipation; the decision on this consumption is made on the basis of the expectation that there will be positive future results from the investment decision of the present moment.

Direct taxes (Table XLIV) are no longer explained by private saving and the general level of inflation. This confirms the other results of the baseline regression, in particular the slight increase in the impact of private investment on the response of private consumption to direct taxes. Indirect taxes (Table XLVII) lose the influence of compensation of employees, private saving and private disposable income. Social contributions (Table L) reinforce the coefficients for all deciles of the determinants of private saving and private disposable income in the same direction, but to a greater extent. Government final consumption expenditure also becomes statistically significant and positive for all deciles.

4.2.2. Total Expenditures Elasticities: Specific Variables

[Insert Table XV]

With regard to the elasticity of output-to-total expenditures, we first found that GDP per capita and debt per capita only affected the 5 most elastic deciles. Both have statistically significant coefficients and for the same order of magnitude. However, they have opposite signs. The first is associated with a decrease in the elasticity response. The second shows an increase for the same range of values. The second was an expected result, since an increase in debt per agent leads to an increase in public or private consumption or investment capacity, which stimulates both aggregate demand and output. The first was an unexpected result, since one would expect an increase in income per agent to have the same effect as an increase in debt per agent, since both would increase the responsiveness of output to aggregate expenditure. Final private consumption expenditure showed a statistically significant U-shaped behaviour. For inelastic values, private consumption acted as a stimulus to output elasticity. For more elastic values, it inhibited the output response. Private investment turned out to be a consistently unique determinant across all deciles, with positive coefficients - the larger the coefficient, the less elastic the response of output to total expenditure, which was an expected result.

Conversely, private disposable income, which is also statistically significant for the first deciles, showed negative values. This is also a non-Keynesian result, since an increase in this determinant should increase private investment and consumption capacity, which would lead to a stimulation of aggregate demand.

It should also be noted that private saving also showed statistically significant negative values. In these circumstances, however, these results can be viewed with

some surprise, since both the ability to save and the ability not to save - *i.e.*, the ability to consume or invest that comes from disposable income - tend to reduce the responsiveness of output to total expenditure.

Compensation of employees (Table LI), government investment (Table LIV) and intermediate consumption (Table LVII) confirm the results of the basic regression without any changes of significant economic importance. Social benefits (Table LX) now capture the impact of long-term interest rates on government debt, an effect that is statistically very significant but modest in magnitude. There is also an increase in the positive impact of total government revenue for all deciles. Social transfers (Table LXIII) are no longer explained by private disposable income.

[Insert Table XVI]

For the elasticity of private investment-to-total expenditures, total government revenue was found to be statistically very significant and positive at all deciles, showing that private investment is significantly responsive to government revenue, which may seem contradictory to some extent, since more revenue means more taxes, and more taxes lead to a reduction in private disposable income and hence private investment itself. Government expenditure on transfers shows a significant reduction in the response of private investment at all deciles.

With regard to inflation, there were two interesting results. If we focus only on the general level of inflation, we would expect to find a very significant and large negative impact on private investment, since inflation, by creating a climate of uncertainty about the future, postpones investment decisions and reduces private investment in the present. However, when we look at the energy component of inflation, we see that the impact was very statistically significant and positive, with the values of the coefficients being much larger than their counterparts on the general inflation side.

The present value of public debt is once again a statistically very significant determinant, negative and with very large coefficients, showing how large the impact of public debt on private investment decisions is at the present time (here updated by the public debt growth sustainability discount factor) - this result confirms a crowding out reaction and the new classical argument on public debt.

The unemployment rate had a positive, statistically significant and moderate effect on the most elastic deciles. This is to be expected, as an increase in the unemployment rate is associated with a shortage in the demand for labour, which reduces the bargaining power of workers *vis-à-vis* their employers. This allows them to negotiate lower nominal wages (especially when inflation is high) in favour of

companies. As a result, production costs fall due to lower wage costs, allowing companies to increase their profit margins. These margins may explain the increased responsiveness of private investment to total expenditure.

Labour costs per employee also show significant negative coefficients, which is partly explained by the recovery of the previous argument that wage costs are a significant part of total production costs and that they will determine the setting of the price level based on the profit margins that can be obtained. Thus, an increase in these costs implies a reduction in these margins, which in turn leads to a reduction in private investment. Direct taxes show statistically significant negative values, but only for the less elastic deciles. More direct taxes (which include personal and corporate income taxes) reduce the margin of private disposable income, which in turn leads to a reduction in private investment. Surprisingly, this change is not significant across all deciles.

Compensation of employees (Table LII), government investment (Table LV) and social benefits (table LXI) show no relevant changes in the baseline regression. Intermediate consumption (Table LVIII) loses its explanatory power for total government revenue. Social transfers (Table LXIV) are no longer explained by the unemployment rate, by direct taxes and by the energy component of inflation - this last result is interesting because it can be seen as a central and very influential point in private investment decisions.

[Insert Table XVII]

For the elasticity of private consumption-to-total expenditures, private saving showed similar results to the previous one. Once again, private saving was statistically significant and negative for the last five deciles. This sign could be explained in a Keynesian context, thus reducing the response of private consumption. However, private disposable income did not show the same trend, as there was very significant and negative evidence that the one-unit change increase in disposable income derived from GDP had a negative impact on private consumption - which is a non-Keynesian result. Although for only a few middle deciles, government social benefits had a very significant impact on increasing the reaction of private consumption to total expenditure.

Another interesting result for all deciles, which was very statistically significant and negative, was the compensation of employees. Not only did private consumption not show an increase in its reaction to total expenditure, but it also showed a large reduction from this determinant. We can see here that an increase in the compensation of employees by the government is interpreted with some caution at

present by these agents. Thus, the fact that the increase in this expenditure does not lead to a proportional increase in private consumption shows that these agents are fixed in their permanent income and do not perceive the increase in compensation of employees as an increase in wealth; we can interpret this here as a Ricardian reaction of private consumption that does not spend because it anticipates the future consequences of the increase in this additional compensation expenditure by the government. Direct taxes, private investment and private consumption were three determinants that showed almost synchronised behaviour. All were statistically significant and positive at all deciles and, interestingly, the magnitudes of the coefficients were very close between the three, with little variation across deciles for any of them.

Finally, inflation (general level) showed a U-shaped behaviour. At the less elastic deciles, there were significant negative coefficients for private consumption, which is to be expected as higher inflation reduces the real purchasing power of consumption. At the more elastic deciles, however, there was some evidence of a positive stimulus to private consumption - but this result should be read with caution, as this positive response of private consumption is not because there is more actual consumption, but because this level of consumption already incorporates the level of inflation.

Employee compensation (Table LIII) is no longer explained by private saving and social benefits, and the latter is no longer significant for government investment (Table LVI) and social transfers (Table LXV). Government investment (Table LVI) and social transfers (Table LXV). Intermediate consumption (Table LIX) is no longer explained by private saving. Social transfers (Table LXII) do not differ much from the baseline regression.

5 Conclusion

The main motivation behind this work was the alternative use of the elasticity concept in detriment to that one of the fiscal multiplier. Both concepts are measures that have flooded applied fiscal policy research in recent decades because they are approaches that allow us to capture the impact on output and other macroeconomic indicators and macro-financial characteristics resulting from the implementation of different fiscal stances, stimuli and instruments.

To do this, we used the definition of impact elasticity - a term we used to define the nomological concept in fiscal multipliers, and given the microeconomic definition of elasticity - to apply it to the relationship between a macroeconomic aggregate and a given fiscal instrument, and try to see how the former reacts to a unit percentage change in the latter. Firstly, since most of the literature on fiscal multipliers and

elasticities focuses on their calculation in relation to output, the aim of this work was to try to extend it to other aggregates in order to get a more detailed view of the impact on the private sector - hence the extension to the private investment and private consumption aggregates. Secondly, the aim was also to try to extend the analysis of fiscal stimulus to a number of more granular fiscal categories, to try to get more fine-tuned results for the aggregates in question and to try to see more specific influences. In our case, the categories used were budgetary revenues and expenditures items.

At the same time, our work adds another methodological element that is less common in the field. Having used a panel of 27 European economies for quarterly observations from 2001Q4 to 2022Q3, the fact that we were working on a macro-panel with many observations (2268 observations per variable) allowed us, econometrically speaking, to move to a finer sieve in order to be able to deduce which were the determinants explaining the budgetary elasticities of impact and how this explanation was in turn explained and confounded by the more or less reactive degree of the group (decile) to which this elasticity belonged. Using the method of linear quantile regression for nine deciles, we were able to develop different coefficients for the same regressions by differentiating them over the nine deciles and to obtain a better characterisation, which proved very useful for seeing how the same explanation between a determinant and an elasticity evolves over the size of that elasticity. Our analysis also allowed for a dual reading by running each of the thirty regressions twice, for common and specific variables - the former allowing the reader to make a global macroeconomic comparison and description between different elasticities but explained by the same variables; the latter allowing us to discuss the results at a more granular level for each of the aggregates.

The main results for the common variables are the following. The elasticity of output-to-total revenues was cushioned by fiscal consolidation episodes, according to Keynesian theory. However, there is the glaring non-Keynesian result that government investment causes this elasticity to fall. On the other hand, total government expenditure had a very positive impact which is in line with Auerbach and Gorodnichenko (2012, 2013); Barro and Redlick (2011); Blanchard and Perotti (2002). The exchange rate had a negative impact as shown in Ilzetzki et al. (2013)

For the elasticity of private investment-to-total revenues, the fiscal episode caused the response of private investment to contract. The interest-growth differential of public debt also caused this aggregate to contract. The degree of openness of the economy shrank the response of investment (in opposition to Ilzetzki et al. (2013)) to less elastic values. A positive external balance, also for the less elastic values,

reduced the investment response. Government expenditure proved to be a strong stimulus to this elasticity as in Riera-Crichton et al. (2015); Perotti (2004b,a). The exchange rate had some positive effects - in contrast to the output elasticity.

The elasticity of private consumption-to-total revenues has been affected by the fiscal episode in a Keynesian way. When the economy is in an expansionary phase, this elasticity is positively explained. Public investment has a negative effect on the response of private consumption (crowding out).

For the elasticity of output-to-total expenditures, the fiscal episode had a positive impact on the output response - a non-Keynesian result. Total government expenditure had a positive impact on the less elastic output responses to total expenditure. Public consumption and public investment had opposite results: the former had a positive impact, the latter a negative one.

The elasticity of private investment-to-total expenditures was positively affected by the presence of the fiscal episode - a non-Keynesian result. The elasticity of government expenditure had a U-shaped behaviour, negatively affecting the less elastic values and positively affecting the more elastic ones. The position in the cycle had a positive effect on this elasticity. However, a surplus in the external balance reduced it. Government consumption had a negative effect on the elasticity of private investment. On the other hand, government final consumption had a positive effect.

The elasticity of private consumption-to-total expenditures showed a non-Keynesian effect due to the positive reaction explained by the presence of the fiscal episode. Government expenditure had a positive effect on the elasticity. The phase of the cycle and the open trade degree both had a positive effect on the response of private consumption to total expenditure. Finally, as noted above, public investment had a very negative effect on the values of this elasticity.

The main results for the specific variables are the following. A elasticity of output-to-total revenues the final consumption expenditure was very negative - a non-Keynesian result. Private investment had a very positive impact on output reaction - as also private disposable income. Interest payments on public debt were had a very positive impact.

The elasticity of private investment-to-total revenues was negatively affected by labour costs and the present value of debt, but positively affected by inflation.

For the elasticity of private consumption-to-total revenues the private savings and the disposable income had negative effects on the reaction of private consumption. Compensation of employees had a positive stimulus this elasticity as well the increase of private investment which a very positive effect on consumption response.

The elasticity of output-to-total expenditures, GDP per capita, induced a negative response of output. And debt per capita induced a positive response. Private consumption expenditure showed an interesting U-shaped behaviour for the lowest and most elastic values. Private savings contributed to a decrease in this elasticity, in line with private disposable income, which turned out to be negative - this last result is non-Keynesian. As regards the elasticity of private investment to total expenditure, total public revenue had a positive effect. Public expenditure on transfers significantly reduced the response of private investment. The general level of inflation had a surprisingly positive effect, as did the energy component of inflation. The current value of government debt and the unemployment rate had a positive effect. And the labour cost per employee had a significant negative effect.

For the elasticity of private consumption-to-total expenditures, private saving had a negative effect - a similar effect occurred for private disposable income, which is a surprising and non-Keynesian result. The same was true for compensation of employees, which had a negative impact on the response of private consumption. Direct taxes, private investment and private consumption all had a positive effect. Finally inflation (general level) showed a U-shaped behaviour - the explanatory relationship it induced in this and the other elasticities we saw for the group of specific variables was not exactly linear.

In conclusion, there are just three final points we would like to emphasise.

Primo, it can be seen that there are regressions that are more divergent when it comes to the results between the total budget items (total revenues and total expenditures) and its subsequent sub-categories. In general, sub-expenditures are more in line with total expenditures, with quite a few similarities between the two; sub-revenues shows more distance from total revenues and differences between them.

Secundo, we note that an alternative to our analysis, given the characteristics mentioned above, would have been to examine lag elasticity and cumulative elasticity, which would have made it possible to capture the medium- and long-term responses of lagged macroeconomic aggregates.

Tertio, this work continues to feed into the different empirical evidence of results that oscillate between Keynesian and non-Keynesian arguments, as can be seen from the variety of results obtained.

References

Afonso, A. (2001). Non-Keynesian Effects of Fiscal Policy in the EU-15. *ISEG Economics Department Working Paper*, 7.

Afonso, A. (2010). Expansionary Fiscal Consolidations in Europe: new evidence. *Applied Economics Letters*, **17**(2):105–109.

Afonso, A., Alves, J., and Jalles, J. T. (2022). The (Non-)Keynesian effects of Fiscal Austerity: New evidence from a large sample. *Economic Systems*, **46**(2):100981.

Afonso, A. and Leal, F. S. (2022). Fiscal Episodes in the Economic and Monetary Union: Elasticities and Non-Keynesian effects. *International Journal of Finance & Economics*, **27**(1):571–593.

Alesina, A. and Giavazzi, F. (2013). Introduction to Fiscal Policy after the Financial Crisis. In Alesina, A. and Giavazzi, F., editors, *Fiscal Policy after the Financial Crisis*, chapter 0, pages 1–18. University of Chicago Press, Chicago.

Alesina, A. F. and Ardagna, S. (2010). Large changes in Fiscal Policy: Taxes versus Spending. *Tax Policy and the Economy*, **24**(1):35–68.

Auerbach, A. J. and Gorodnichenko, Y. (2012). Measuring the Output Responses to Fiscal Policy. *American Economic Journal: Economic Policy*, **4**(2):1–27.

Auerbach, A. J. and Gorodnichenko, Y. (2013). Fiscal Multipliers in Recession and Expansion. In Alesina, A. and Giavazzi, F., editors, *Fiscal Policy after the Financial Crisis*, chapter 2, pages 63–102. University of Chicago Press, Chicago.

Auerbach, A. J. and Gorodnichenko, Y. (2017). Fiscal multipliers in Japan. *Research in Economics*, **71**(3):411–421.

Barro, R. J. and Redlick, C. J. (2011). Macroeconomic Effects From Government Purchases and Taxes. *The Quarterly Journal of Economics*, **126**(1):51–102.

Batini, N., Eyraud, L., Eyraud, L., and Weber, A. (2014). Fiscal Multipliers: Size, Determinants, and Use in Macroeconomic Projections. *Fiscal Affairs Department*, International Monetary Fund.

Blanchard, O. J. and Leigh, D. (2013). Growth Forecast Errors and Fiscal Multipliers. *American Economic Review*, **103**(3):117–120.

Blanchard, O. J. and Perotti, R. (2002). An Empirical Characterization of the Dynamic Effects of Changes in Government Spending and Taxes on Output. *The Quarterly Journal of Economics*, **117**(4):1329–1368.

Boschi, M. and D'Addona, S. (2019). The Stability of Tax Elasticities over the Business Cycle in European Countries. *Fiscal Studies*, **40**(2):175–210.

Bruce, D., Fox, W. F., and Tuttle, M. H. (2006). Tax Base Elasticities: A Multi-State Analysis of Long-Run and Short-Run Dynamics. *Southern Economic Journal*, **73**(2):315–341.

Carvalho, V. M. C. (2009). *Non-Keynesian Effects of Fiscal Policy in a New-Keynesian General Equilibrium Model for the Euro Area*. PhD dissertation, Universidade do Porto.

Case, K. E., Fair, R. C., and Oster, S. M. (2011). Principles of Macroeconomics. *Pearson*, London: United Kingdom(Ed:10th).

Combes, J. L., Minea, A., Mustea, L., and Sow, M. N. (2014). The Euro and the Crisis: Evidence on Recent Fiscal Multipliers. *Revue d'économie politique*, **124**(6):1013–1038.

Constâncio, V. (2020). The return of fiscal policy and the euro area fiscal rule. *REM Working Paper Series*, Research in Economics and Mathematics, ISEG Lisbon School of Economics and Management(0127).

Creedy, J. and Gemmell, N. (2004). The income elasticity of tax revenue: estimates for income and consumption taxes in the United Kingdom. *Fiscal Studies*, **25**(1):55–77.

ECB (2012). Cyclical Adjustment of the Government Budget Balance. In Bulletin, M., editor, *ECB Monthly Bulletin March 2012*, chapter 13, pages 102–105. European Central Bank, Frankfurt am Main: Germany.

El Ghouch, A. and Van Keilegom, I. (2009). Local Linear Quantile Regression with Dependent Censored Data. *Statistica Sinica*, 19:1621–1640.

Eurostat (2012). Provision of deficit and debt data for 2011 - second notification, *Eurostat News Release Euro Indicators*, Eurostat Press Office, 149/2012. https://ec.europa.eu/eurostat/documents/2995521/5154238/2-22102012-AP-EN.PDF/9ed717fc-5cb6-4c45-9a8b-b71cdca8371d?version=1.0.

Faria e Castro, M. (2022). Fiscal Multipliers and Financial Crises. *Working Paper Series*, Federal Reserve Bank of St. Louis(2018-023F).

Favero, C. and Giavazzi, F. (2012). Measuring Tax Multipliers: The Narrative Method in Fiscal VARs. *American Economic Journal: Economic Policy*, **4**(2):69–94.

Favero, C., Giavazzi, F., and Perego, J. (2011). Country Heterogeneity and the International Evidence on the Effects of Fiscal Policy. *IMF Economic Review*, **59**(4):652–682.

Feldstein, M. (1982). Government deficits and aggregate demand. *Journal of Monetary Economics*, **9**(1):1–20.

Giavazzi, F., Jappelli, T., and Pagano, M. (2000). Searching for non-linear effects of fiscal policy: Evidence from industrial and developing countries. *European Economic Review*, **44**(7):1259–1289.

Giavazzi, F. and Pagano, M. (1996). Non-Keynesian Effects of Fiscal Policy Changes: International Evidence and the Swedish Experience. *Swedish Economic Policy Review*, **3**(1):67–103.

Giertz, S. H. (2009). The Elasticity of Taxable Income: Influences on Economic Efficiency and Tax Revenues, and Implications for Tax Policy. In Viard, A. D., editor, *Tax Policy Lessons from the 2000s*, chapter 5, pages 101–136. AEI Press, Washington, DC: United States.

Gnip, A. G. (2014). The power of fiscal multipliers in Croatia. *Financial Theory and Practice*, 38(2):173–219.

Hayo, B., Mierzwa, S., and Ünal, U. (2023). Estimating policy-corrected long-term and short-term tax elasticities for the USA, Germany, and the United Kingdom. *Empirical Economics*, **64**(1):465–504.

Hjelm, G. (2002). Is private consumption growth higher (lower) during periods of fiscal contractions (expansions)? *Journal of Macroeconomics*, **24**(1):17–39.

Ilzetzki, E., Mendoza, E. G., and Végh, C. A. (2013). How big (small?) are fiscal multipliers? *Journal of Monetary Economics*, **60**(2):239–254.

Kleiber, C. and Zeileis, A. (2008). Diagnostics and Alternative Methods of Regression. In *Applied Econometrics with R*, chapter 4, pages 115–118. Springer, New York: United States.

Koenker, R. and Bassett, G. J. (1978). Regression Quantiles. *Econometrica*, 46(1):33–50.

Larch, M. and Turrini, A. (2010). The Cyclically Adjusted Budget Balance in EU Fiscal Policymaking. *Intereconomics*, **45**(1):48–60.

Machado, R. and Zuloeta, J. (2012). The Impact of the Business Cycle on Elasticities of Tax Revenue in Latin America. *IDB Working Paper Series*, Inter-American Development Bank(340).

Mankiw, N. G. (2010). Macroeconomics. *Worth Publishers*, New York: United States(Ed: 7th).

Mills, P. and Quinet, A. (2001). The Case for Spending Rules. *Fiscal Rules Conference*, p. 320:319–330.

Minea, A. and Mustea, L. (2015). A fresh look at fiscal multipliers: one size fits it all? Evidence from the Mediterranean area. *Applied Economics*, **47**(26):2728–2744.

Perotti, R. (1999). Fiscal Policy in Good Times and Bad. *The Quarterly Journal of Economics*, 114(4):1399–1436.

Perotti, R. (2004a). Estimating the Effects of Fiscal Policy in OECD Countries. *IGIER Working Paper*, Innocenzo Gasparini Institute for Economic Research, Bocconi University(276).

Perotti, R. (2004b). Public Investment: Another (Different) Look. *IGIER Working Paper*, Innocenzo Gasparini Institute for Economic Research, Bocconi University(277).

Prammer, D. (2004). Expansionary Fiscal Consolidations? an Appraisal of the Literature on Non-Keynesian Effects of Fiscal Policy and a Case Study for Austria. *Monetary Policy & the Economy, Quarterly Review of Economic Policy*, Oesterreichische Nationalbank(3):34–52.

Ramey, V. A. (2011). Identifying Government Spending Shocks: It's all in the Timing. *The Quarterly Journal of Economics*, **126**(1):1–50.

Ramey, V. A. and Zubairy, S. (2018). Government Spending Multipliers in Good Times and in Bad: Evidence from US Historical Data. *Journal of Political Economy*, **126**(2):850–901.

Riera-Crichton, D., Vegh, C. A., and Vuletin, G. (2015). Procyclical and countercyclical fiscal multipliers: Evidence from OECD countries. *Journal of International Money and Finance*, **52**:15–31.

Romer, C. D. and Romer, D. H. (2010). The Macroeconomic Effects of Tax Changes: Estimates Based on a New Measure of Fiscal Shocks. *American Economic Review*, **100**(3):763–801.

Samuelson, P. A. and Nordhaus, W. D. (2010). Economics. *McGraw-Hill*, New York: United States(Ed: 19th).

Spilimbergo, A., Symansky, S., and Schindler, M. (2009). Fiscal Multipliers. *IMF Staff Position Note, Research Department*, International Monetary Fund.

van Aarle, B. and Garretsen, H. (2003). Keynesian, non-Keynesian or no effects of fiscal policy changes? the EMU case. *Journal of Macroeconomics*, **25**(2):213–240.

Wolswijk, G. (2007). Short- and Long-run Tax Elasticities: The Case of the Netherlands. *ECB Working Paper Series*, European Central Bank(763).

Appendices

1 Fiscal Multipliers

The fiscal multiplier is a measure that captures the degree (direction, magnitude and persistence) of the impact on output of an exogenous discretionary change in government fiscal or budgetary policy. This measure is given as the ratio between the change in output and the change in the fiscal item under consideration. It should be noted that the concept of multiplier can be seen in a more abstract way, encompassing a greater number of relationships between variables, depending on the budgetary items of interest. The three main types of fiscal multipliers emerging from the theoretical literature are:

Fiscal Multiplier		
Aggregate Demand	$Y = C + I + G + X - M$	(4)
Exports	$X = \bar{X} + f(e, \bullet) \equiv \bar{X}$	(5)
Imports	$M = \bar{M} + m \cdot Y$	(6)
Private Investment	$I = \bar{I} + f(i, \pi, \bullet) \equiv \bar{I}$	(7)
Tax	$T = \bar{T} + t \cdot Y$	(8)
Transfers	$TR = \bar{TR} + f(Y, T, \bullet) \equiv \bar{TR}$	(9)
Private Consumption	$C = \bar{C} + c \cdot Y_d = \bar{C} + c \cdot [Y - \bar{T} - t \cdot Y + \bar{TR}]$	(10)
Public Spending	$G = \bar{G} + f(Y, T, \bullet) \equiv \bar{G}$	(11)
Substitution of (2)-(8) in (1)	$Y = \dfrac{\bar{C} - c \cdot \bar{T} + c \cdot \bar{TR} + \bar{I} + \bar{G} + \bar{X} - \bar{M}}{1 - c \cdot (1 - t) + m}$	(12)
Expenditure multiplier	$\Delta Y = \dfrac{1}{1 - c \cdot (1 - t) + m} \cdot \Delta \bar{G}$	(13)
Tax multiplier	$\Delta Y = \dfrac{-c}{1 - c \cdot (1 - t) + m} \cdot \Delta \bar{T}$	(14)
Balanced Budget multiplier	$\Delta Y = 1 \cdot \pm \Delta \bar{G} (\mp \Delta \bar{T})$	(15)

Table I: Major fiscal multipliers

This table was done according to Case et al. (2011); Mankiw (2010); Samuelson and Nordhaus (2010). These authors presented these fiscal multipliers for a closed economy with government. Here the fiscal multipliers were defined for an open economy with government. 13 stands for government spending on public purchases. 14 stands for changes in government revenues given by tax or net taxes (from transfers). 15 for alongside changes in both government expenditure and revenues sides, where the changes are proportionally the same for $|\Delta G| = |\Delta T|$. The notations hereby used follow the ones employed in Case et al. (2011); Mankiw (2010); Samuelson and Nordhaus (2010).

However, given the definition of the multiplier given above as the ratio between

the change in the dependent variable and the change in the independent variable, we can infer that while the dependent variable is always agreed to be output, the same is not true for the independent variable - not least because of the example in the table above. Thus, there will be as many fiscal multipliers as there are independent variables of budget items of interest to assess their impact on GDP. Rather than using large aggregates - as done above for total revenue or total expenditure - each specific budget item on either side is likely to be a multiplier of interest in terms of how that item affects economic growth and what an increase of one additional monetary unit in one of these items means in terms of monetary units in output. If the multiplier is negative, fiscal policy is contractionary. Zero or close to it has a neutral effect (meaning that the economy is already experiencing symmetric losses in other components of output, such as investment or consumption). Or positive, the fiscal stance is expansionary. In the latter case, and depending on Batini et al. (2014), fiscal multipliers can be small, medium or large if they are between 0.1-0.3, 0.4-0.6 and 0.7-1.0 respectively. Thereafter, the main definitions of multipliers in the literature in terms of their temporal definition are presented below.

Multiplier Time Definition		
Impact Multiplier	$\frac{\Delta Y_t}{\Delta G_t}$	(16)
Lag-h Multiplier	$\frac{\Delta Y_{t+h}}{\Delta G_t}$	(17)
Cumulative Multiplier	$\frac{\sum_{\tau=0}^{h} \Delta Y_{t+\tau}}{\sum_{\tau=0}^{h} \Delta G_{t+\tau}}$	(18)
Maximum Peak Multiplier	$\max_h \frac{\Delta Y_{t+h}}{\Delta G_t}$	(19)
Minimum Peak Multiplier	$\min_h \frac{\Delta Y_{t+h}}{\Delta G_t}$	(20)

Table II: Multiplier Time Definition

This table was done according to Gnip (2014); Spilimbergo et al. (2009). In the above formulae, t and h represent the current and maximum horizon periods respectively. 16 give the impact multiplier as the simultaneous GDP variation for the period t given the current fiscal tool exogenous shock. 17 represents the forthcoming output reaction to the present fiscal change considering the $t+h$ lag for output to react to government action. 18 is the cumulative aggregate output variation along the $t+h$ cumulative path fiscal tools moves. 19 and 20 stands for the maximum and the minimum multiplier, respectively, during the h horizon, *i.e.*, they identify the bigger and the smaller changes in output in a particular τ period belonging $t+h$ horizon. Δ stands for the first difference associated to the respective temporal setting.

2 Elasticities

Elasticity is a core concept in economic theory, particularly in microeconomics, which captures the responsiveness of the variable of interest, the dependent variable, to movements on the side of the independent variable. 21 is the ratio of the percentage change[27] in the dependent variable (dv) to the percentage change in the independent variable (iv). Thus, the result of the elasticity must be read in percentage terms as the $x\%$ growth (the calculated elasticity value) of the dependent variable in response to a 1% increase in the independent one.

From a policy perspective, these two variables can be seen as an action-reaction pair, where the independent variable (*e.g.* a fiscal tool in terms of budgetary items) is the emitter of an induced change in the respective recipient economic aggregates, which in the present context react to exogenous reforms resulting from the discretionary component of fiscal policy.

$$\varepsilon_{dv-iv_t} = \frac{\frac{\Delta dv_t}{dv_{t-1}}}{\frac{\Delta iv_t}{iv_{t-1}}} = \frac{\frac{dv_t - dv_{t-1}}{dv_{t-1}}}{\frac{iv_t - iv_{t-1}}{iv_{t-1}}} \rightarrow \frac{\Delta\%MA}{\Delta\%BI} \tag{21}$$

Given this definition elasticity can easily be applied to fiscal policy, especially on the government revenue and expenditure sides in relation to general macroeconomic aggregates - *e.g.* how output responds to increases in tax revenues. But it can also be applied at a more granular level, decomposing the analysis of these relationships for both specific aggregates and fiscal items - *e.g.* how elastic is the economy's private investment to increases in social security contributions. Note that this focus on more specific relationships is not common in the literature, which tends to focus on coarser aggregates.

Like fiscal multipliers, elasticities can have and be interpreted in terms of their temporal definition. It can be interesting to look at an impact elasticity to see how a dependent variable reacts contemporaneously to a change in an independent variable. Just as it is interesting to look at a lag elasticity and try to observe the reaction of the dependent after some periods of the occurrence of the independent.

The literature distinguishes between short-run and long-run elasticities. The first is defined for periods between one and one and a half years and favours impact elasticities, namely for government revenues (comparatively to spending) given the more instant impact of tax changes that are capture by short-run elasticities. The

[27] In this case I have defined the 21 between t and $t-1$ for the purpose of a more abstract presentation of the metrics. However, it should be noted that, as I'm working with quarterly data, the period of the percentage change will be the quarterly homologous change between the current quarter, Q, and the corresponding quarter of the previous year, $Q-4$.

Elasticity's Time Definition		
Impact Elasticity	$\frac{\Delta\% \, MA_t}{\Delta\% \, BI_t}$	(22)
Lag-h Elasticity	$\frac{\Delta\% \, MA_{t+h}}{\Delta\% \, BI_t}$	(23)
Cumulative Elasticity	$\frac{\sum_{\tau=0}^{h} \Delta\% \, MA_{t+\tau}}{\sum_{\tau=0}^{h} \Delta\% \, BI_{t+\tau}}$	(24)
Maximum Peak Elasticity	$\max_h \frac{\Delta\% \, MA_{t+h}}{\Delta\% \, BI_t}$	(25)
Minimum Peak Elasticity	$\min_h \frac{\Delta\% \, MA_{t+h}}{\Delta\% \, BI_t}$	(26)

Table III: Elasticity's Time Definition

In this table we applied the time definitions of fiscal multiplier to the concept of fiscal elasticity. The table hereby was made according to table II, where, for both, we concatenated the definitions as in Gnip (2014); Spilimbergo et al. (2009). $\Delta\%$ stands for the percentage change associated to the respective temporal setting.

second lasts more than a year and a half and can capture the behavioural adjustments of agents at the level of reactions over long periods[28] - where these elasticities can emerge as indicators of the equilibrium values of the fiscal impact (Wolswijk (2007)).

The public revenue side consists mainly of direct and indirect taxes and social contributions, the amounts of which are proportional to aggregate income and whose changes follow the cyclical fluctuations in output. On the other hand, the public expenditure side (with the exception of unemployment benefits) is a much more rigid component of the budget, independent of the cyclical component of output.

Grosso modo, government revenues, as they carry the weight of stronger automatic stabilisers, show the non-discretionary component of fiscal policy, which is tuned to cyclical developments in the economy, and expenditures show the discretionary component of government, which is associated with structural changes (ECB (2012))[29].

[28] See here the Japanese case of Ricardian reaction in the '90s, where households did not react to government stimuli. In this situation, which lasted for years, long-term elasticities are more relevant than short ones.

[29] This is why it was said earlier, in the last paragraph according to Wolswijk (2007), that the short-run elasticities for tax revenue are more relevant than the elasticities for public expenditure because they capture the more direct and immediate impact on aggregates that are more sensitive to taxes (given the automatic change in the level of disposable income and hence consumption and investment) than public expenditure (which does not affect disposable income, has a time lag to act and review consumption and investment decisions that are indirectly incorporated and that

In this context, the CAB is the measure that best reflects the performance of the fiscal response as well as the sustainability of the fiscal position, excluding from the overall budget balance its cyclical component and isolating only its structural part, which is the best indicator that approximates the government's discretionary actions - the latter being the best way to infer the effectiveness and efficiency of tax reforms[30].

There are several methods for CAB computation in literature. The one used in this paper follows the one used and defined by Larch and Turrini (2010)[31], which requires the output gap to be discounted from the overall budget balance according to the elasticity of the budget balance, *i.e*, to see where the economy is in relation to its potential activity (output gap) and how revenues and expenditures react to fluctuations in the economic system (revenue and expenditure elasticities) (See IV).

Methodology		
Cyclically Adjusted Budget Balance	$CAB_t = BB_t - \varepsilon_{BB} \cdot OG_t$	(27)
Budget Balance Elasticity	$\varepsilon_{BB} = \varepsilon_R - \varepsilon_G$	(28)
Revenue Elasticity	$\varepsilon_R = \eta_R \cdot \frac{R}{Y}$	(29)
Revenue Sensibility	$\eta_R = \sum_{i=1}^{4} \eta_{R,i} \cdot \frac{R_i}{R_T}$	(30)
Expenditure Elasticity	$\varepsilon_G = \eta_G \cdot \frac{PG}{Y}$	(31)
Expenditure Sensibility	$\eta_G = \eta_{G,u} \cdot \frac{G_u}{PG}$	(32)

Table IV: CAB Methodology Steps

This table was done according to Larch and Turrini (2010).

3 Non-Keynesian Effects

Fiscal episodes are a way of measuring a period of time during which the fiscal stance is revised via significant discretionary changes in fiscal tools, with the aim of

vary according to the type of agent).

[30]See also that the need for finer measures, in the context of both fiscal elasticities and multipliers, is related to the quality of the indicators incorporated in the forecasts (minimising errors) that underpin policymaking. On this point, Blanchard and Leigh (2013) shows the link between higher fiscal forecast errors and underestimated multipliers for 26 countries where deeper consolidation programmes lead to larger contractionary effects on output than expected.

[31]Larch's methodology is based on the works of OECD and the European Commission Output Gap Working Group of the Economic Policy Committee, where the CAB is used as a surveillance indicator for the 27 Member States under the Stability and Growth Pact.

achieving concrete budgetary outcomes. Fiscal episodes can be expansionary when they aim to stimulate the economy through tax cuts and increases in public spending, or contractionary when they aim to improve the soundness of public finances.

In this paper we use the fiscal episode defined in Afonso (2010). According to this definition, in order for the dummy to take the value of 1 in period t, the first difference between t and $t-1$ must be greater than $\gamma \cdot \sigma$ or the average of the first difference between t and $t-2$ must be greater than σ (See V).

Fiscal Episode		
Definition	$FE_t = \begin{cases} 1, & if \quad \Delta b_t > \gamma \cdot \sigma \\ 1, & if \quad \sum_{i=0}^{1} \frac{\Delta b_{t-i}}{2} > \sigma \\ 0, & otherwise \end{cases}$	(33)
1^{st} Condition	$\Delta b_t = b_t - b_{t-1}$	(34)
2^{nd} Condition	$\sum_{i=0}^{1} \frac{\Delta b_{t-i}}{2} = \frac{\Delta b_t}{2} + \frac{\Delta b_{t-1}}{2} = \frac{b_t - b_{t-2}}{2}$	(35)

Table V: Fiscal Episode

The definitions presented here follow Afonso (2010). Above b denotes the cyclical adjusted budget balance. σ is the standard deviation of b calculated individually for each one of the 27 countries. γ is a multiple of standard deviation, which was freely set at 1.5 by the author. Thus, the values of the two conditions to be considered fiscal episode are different and country-tuned.

This previous fiscal episode is an episode defined for fiscal consolidation, since the change in CAB in each period t and for both conditions should be positive - CAB grows and becomes either more positive or less negative, *i.e.*, there are tax increases combined with public expenditure cuts that make net revenues positive. Note that, symmetrically, the fiscal episode could be defined in the expansionary perspective by simply changing the greater than by less than in the conditions of the definition. However, in most of the literature, the consolidation fiscal episodes are more interesting to study than the expansionary ones, because they open the door to studying the possibility of the existence of non-Keynesian fiscal effects during consolidations.

Non-Keynesian effects are the consequence of an *"expectational view"* in which agents interpret current changes in the fiscal stance as a sign of future changes - anticipating policy outcomes outside Keynesian framework. These effects are associated with two transmission channels: consumption and investment.

With regard to the first, consolidations contribute to a review of the choices made by agents, since they are seen as permanent consolidations of public accounts

and this will be reflected in the future in a reduction of the tax burden, which will encourage private consumption and allow an expansionary contribution to economic activity Afonso and Leal (2022); Feldstein (1982); Prammer (2004).

Afonso et al. (2022) draws attention to an interesting point about consolidations in terms of their credibility (*"serious/credible"* in their words) among economic agents. The commitment of the government at the beginning of a fiscal reform must be to move forward. Once started it cannot stop, in order to generate effective and lasting effects in fiscal stance, at least in the short-term.

This is confirmed for the 27 fiscal episode dummies series that I obtained. These series show successive patterns of only 0's and then only 1's - larger for the former than for the latter. *I.e.*, fewer 1's than 0's because a fiscal episode is a specifically identified reform, timed to achieve a particular fiscal outcome, and is therefore used sporadically, as a *corrective arm*. Thus, one will rarely see an isolated 1 or even a 2 or 3. Whenever one see a 1 after a succession of many 0's, one can expect that this 1 will be followed by, at least, six 1's, because it corresponds to a year and a half, which is a plausible minimum value that shows the government's discretionary will to steer the fiscal stance in that direction - partly because duration is a key point given the lag between the implementation of measures and the review of firms' and households' decisions[32].

In fact, short consolidations could not even be detected by the private sector and would not be taken seriously. This is where the second transmission channel comes in, where the cutback in CAB deficits during consolidations leads to a reduction in the risk premium, which lowers real interest rates and allows private investment to increase Afonso et al. (2022).

In sum, and for both channels, the non-Keynesian effects lead to output growth, which is why the literature refers to these episodes as expansionary fiscal consolidations.

[32]On this last point, it should be noted that I'm working with quarterly data, hence, several continuous periods of 1's have been highlighted. It should also be noted that when I spoke of a minimum of six 1's, this was a mere guess. This value was suggested because six quarters correspond to one and a half years, and the idea was that when a fiscal episode starts, it has to last for a certain period of time without interruption.

Summary of the main determinants of Fiscal Multipliers (μ) and Elasticities (ε)

Determinant	Description	Signal
Capital Stock **S**	From Solow(–Swan) model, μ and ε are expected to be higher in emerging economies. The smaller the initial stock of capital, the higher will be the additional marginal productivity increase coming new investment. Government intervention would thus be more effective and expansionist.	-
Exchange Rate **S**	Floating exchange rates leads to a more interventive monetary policy. This can counterbalance the discretionary fiscal intervention. Resulting in low μ and ε.	-
Trade Openess Degree **S**	Closed/Low imports share/openness degree below 100/Big economies. Have higher μ and ε given their domestic demand. Search channels are more inward looking and therefore more responsive to internal stimuli and less responsive to external stimuli.	-
Financial Crisis **C**	Financial crisis are associated to credit tightening. Thus, both private consumption and investment decrease. Public expenditure has the ability to stimulate private (credit) demand. μ and ε tend to be higher in financial crisis then in non-financial recessions.	+
Hand-to-Mouth Agents **S**	μ and ε are larger in economies with a high weight of hand-to-mouth coverage. This type of agents has bigger marginal propensity to consume. They become very receptive to expansionary fiscal incentives that stimulate private consumption and then output.	+
Labor Market Rigidity **S**	Higher labour regulation protection and workers unions lead to higher μ and ε. Salary firmness can hold up the demand side and ensure this one responds better to fiscal shocks.	+
Public Expenditure **S**	Inefficient fiscal management leads to sterile spending results. Higher non-productive expenditure removes μ's and ε' power.	+
Business Cycle Phase **C**	μ and ε are bigger in downturn periods and shorter in upturn ones. Both in consolidations and expansions. Inelastic macroeconomic aggregate's reaction since economy is close to full employment. Output more elastic after slumps to fiscal stimuli.	+
Automatic Stabilizers **S**	Larger stabilizers reduce fiscal μ and ε. High correction of cyclical fluctuations towards to potential levels. Low need of discretionary measures.	-
Debt Level **S**	More indebted economies rise the probability of fiscal consolidation. Leading to a decrease in public spending and an increase in taxes. Lowing the fiscal intervention effectiveness, thus low μ and ε.	-
Monetary Accommodation **C**	Monetary easing might alleviate the effect of consolidations in the demand side. Intense monetary easing like Zero Lower Bound can increase μ's and ε's size. Lower interest rates combined with fiscal expansion (more public demand), help private aggregates to react more, leading to higher μ and ε.	+

This table summarises the main factors influencing the signal, direction and size of both μ and ε. It has been prepared in accordance with Batini et al.(2014), Spilimbergo et al. (2009) and Ilzetzki et al. (2013). Where it says **S** and **C** one should read structural (permanent determinants that affect μ and ε in close to economy's full employment) and conjunctural (temporary factors arising from periods of cyclical fluctuations during recessions and expansions).

Summary of authors cited on the topic of Fiscal Multipliers

Author	Sample	Range	Method	Results
Alesina & Ardagna (2010)	21 OECD countries	1970-2007	Narrative approach	Expansionary episodes of fiscal adjustments lead to impact of: 0.34 total revenues, 0.66 business taxes, -0.77 public investment, -0.32 subsidies, -0.58 transfers. Consolidation episodes of fiscal adjustments lead to impact of: 1.21, 0.35, -0.70, -0.09 and 0.47 for the same items respectively
Auerbach & Gorodnichenko (2012)	United States	1947Q1-2008Q4	SVAR (regime-switching) VAR (smooth transition)	Government spending CM were: 0.3-0.4 in N, 0.5 in R and – 0.2 in E.
Auerbach & Gorodnichenko (2013)	28 OECD countries	1960-2011	*Idem supra*	Total general government spending: 0.14-0.35 (SR multiplier between 4-8Q) + 0.14-0.23 (LR multiplier above 12Q)
Auerbach & Gorodnichenko (2017)	Japan	1960Q1-2012Q4	*Idem supra*	SR: IM 1-1.5 (in 10Q) + average multiplier was 2.3 one of the biggest in literature even more than military on in Ramey (2011) In expansions, multipliers for output were 0.5-1 for 1% shock in public spending. The same shock in recessions got values in average twice bigger
Barro & Redlick (2011)	United States	1917-2006	VAR	For government spending the IM was 0.5 and the CMs were all bigger than impact multipliers.
Blanchard & Perotti (2002)	United States	1947Q1-1997Q4	SVAR (narrative approach)	Taxes revenues: IM (-1.3 – -0.7) + CM (-1.3 – -0.8) Public spending: IM (0.8) + CM (1.3) (0.5 on average for both SR and LR multipliers)
Combes *et al.* (2014)	Eurozone	1999Q1-2012Q4	PVAR	Government Spending: IM (0 in N and 0.09 in C) + CM (0.26 in N and 1.26 in C). Taxes revenues: IM (0.25 in N and 0.28 in C) + CM (1.85 in N and 1.6 in C).
Favero & Giavazzi (2012)	United States	1947-2007	VAR (narrative approach)	For government tax revenues the IM was 0.7 the MPM was around 1.
Favero *et al.* (2011)	15 OECD countries	1978-2009	VAR	Model without (with) feedback: current 1% of GDP fiscal cutback leads to a 11% (8%) of GDP cumulative fiscal cutback in 5 years. For expansions in both models the impact was 2-2.5% of GDP
Ilzetzki *et al.* (2013)	24 emerging + 20 advanced countries	1960-2009	SVAR	↑ Openness Trade Degree (IM: 0.02 + CM: 1.3); ↑ Debt (IM: 0 + CM: - 2.3); Flexible exchange rate (IM: - 0.3 + CM: 0); Advanced country (IM: 0.37 + CM: 0.8); Consumption (SR: -0.03 to 0.39 + LR: -0.63 to 0.66); Investment (SR: 0.39 – 0.57 + LR: 1.5 –1.6).
Minea & Mustea (2015)	13 Mediterranean countries	1980-2012	PVAR	In 8Q, 1 standard deviation shock for government consumption (investment) made output multiplier be: 0.10 (0.34) in EMU-core group, 0.87 (1.05) in EMU-large, 0.20 (0.20) in EMU-small, -0.41 (0.34) in Africa and -0.01 (0.11) in Asia
Perotti (2004a,b)	5 OECD countries	1960Q1-2001Q4	SVAR	Increase in government expenditure: positive impact (SR) + low negative impact (LR). Decrease in tax revenues: low negative impact (SR) + insignificant impact (LR)
Ramey (2011)	United States	1939-2008	SVAR Narrative approach	Spending: IM (0.6-1.2) + PKM was 0.15-0.23 in 6Q
Ramey & Zubairy (2018)	United States	1889–2015	Local projection method State-dependent model	Multipliers *à la* Blanchard & Perotti (2002) shock were 0.64–0.76 in R (proxy ZLB) and 0.1–0.26 in N (non-ZLB). Multiplier for military news was 1.4 (in 8Q) and 1 (16Q) (in ZLB)
Riera-Crichton *et al.* (2015)	29 OECD countries	1986-2008	SVAR (non-linear method)	For government spending: IM (0.31 in N, 0.73 in R, 1.25 in high R, 0.09 in E and 0 in high E) + CM (0.4 in N, 1.25 in R, 2.1 in high R, 0.09 in E and 0 in high E).
Romer & Romer (2010)	United States	1945-2007	VAR, Narrative approach Single-equation method	For taxes revenues the IM was 1.2 and the MPM was around 3.

Abbreviations: N (normal times), R (recession), E (expansion), SR (short-run), LR (long-run), IM (impact multiplier), CM (cumulative multiplier), MPM (maximum peak multiplier).

Summary of authors cited on the topic of elasticities

Author	Sample	Range	Method	Results
Elasticities				
Boschi & D'Addona (2019)	15 EU countries	1980Q1–2013Q1	DOLS (Markov-switching model)	SR elasticities rise more in R than in E. This result occurs for every tax type (specially in corporate income taxes). In R, SR elasticities for output: 1.05 corporate income, 0.31 indirect taxes, 0.18 social security contributions and 0.06 for individual income taxes.
Bruce *et al.* (2006)	United States (tuned for 50 states)	1967-2000	DOLS	In E: Long-run personal income tax elasticity 1.8 Short-run personal income tax elasticity above equilibrium 2.7
Creedy & Gemmell (2004)	United Kingdom	1989-2000	SVAR (regime-switching) VAR (smooth transition)	Saving and transfers influence the indirect tax revenue elasticity The elasticities in that cases were of 0.7 and 1.4 for direct and indirect taxes, respectively
Hayo *et al.* (2023)	United States, Germany and United Kingdom	1980Q1-2018Q2	VAR	Elasticities for tax-to-base SR: total revenues (1.62, 0.45 and 0.76 for US, GE, UK, respectively,), wages (2.41, 0.76, 1.02), private consumption (0.87, 0.51, 0.52) LR: total revenues (1.09, 1.12, 0.96), wages (1.28, 2.02, 1.12), private consumption (0.88, 0.64, 0.84)
Machado & Zuloeta (2012)	8 Latin American countries	1980-2007	DOLS	SR total taxes elasticity to GDP: 1.21 (AR), 0.04 (BR), 0.31 (CH), 1.03 (CO), 0.97 (EC), 0.73 (ME), 0.50 (PE), 1.05 (VE). LR total taxes elasticity to GDP: 1.97, 1.14, 0.59, 1.68, 2.23, 0.91, 1.40, 2.06, respectively as above.
Mills & Quinet (2001)	Eurozone	1999Q1-2012Q4	PVAR	General government tax revenues elasticity for output between 0.9-1.0 tax elasticities were volatile to the business cycle position tax revenues dropped more quickly than the contemporaneous reduction of GDP in recessions compared to expansions. Non-linearity in direct taxes reaction to changes in GDP High sensibility of business with higher incomes to the progressive income tax
Wolswijk (2007)	Netherlands	1970-2005	DOLS	LR (SR) VAT elasticity for private consumption and private investment were 0.82-0.90 (0.56-0.69) and 0.07-0.16 (0.09- 0.13), respectively. As for elasticities tax-to base: SR: income tax 2.01, corporate 0.12 in R and 0.90 in E, VAT 0.56 in R and 1.01 in E LR: income tax 1.57, corporate 1.07 and VAT 0.90

Abbreviations: SR (short-run), LR (long-run), E (expansions), R (recessions), VAT (value added tax), AR (Argentina), BR (Brazil), CH (Chile), CO (Colombia), EC (Ecuador), ME (Mexico), PE (Peru), VE (Venezuela).

Summary of authors cited on the topic of Non-Keynesian Effects

Author	Sample	Range	Method	Results
Non-Keynesian Effects				
Afonso (2001)	15 EU countries	1970-1999	Panel Data (Fixed Effects model)	Without (with) FE, private consumption increased by 0.1739% (0.0696) with a 1% GDP increase in government spending. FE reduced the expansionary capacity of public spending by 0.1043%. The same shock for government revenue, without (with) FE led to a reduction (small increase) of -0.145% (0.0243) in private consumption. Using fixed effects model: increase in government expenditure led to a change of 0.177% (-0.0012) in private consumption without (with) FE. Increase in government revenue led to a change of -0.15% (+0.13) in private consumption without (with) FE. Presence of KE and NKE.
Afonso (2010)	15 EU countries	1970-2005	Panel Data model	SR and LR elasticities for private consumption in relation to income were both statistically significant and between 0.66 and 0.69 and between 0.95 to 0.97, respectively.
Afonso *et al.* (2022)	174 countries	1970-2018	Panel Data model	Rise taxes led to an expansionary result on private consumption during consolidations Rise in government final consumption led to an expansionary impact in private consumption (KE) Evidence for crowding-in impact on private investment, in developed countries face to emerging ones, resulting for government fiscal contraction Evidence of expansionary fiscal consolidations resulting of rises in taxes and in countries with high debt.
Afonso & Leal (2022)	19 EA countries	1960-2017	Narrative approach	SR elasticities were statistically significant, positive (expansionary) in normal times: 0.02 private investment, 0.11 taxes revenues and 0.05 employees' compensation. During consolidations social benefits got a negative elasticity,-0.15, for private consumption. For LR elasticities in consolidations: 0.85 total taxes, -0.11 public investment, -0.26 social benefits, 0.12 private investment.
Giavazzi & Pagano (1995)	19 countries and Sweden	1947Q1-1997Q4	SVAR (narrative approach)	223 episodes identified. Evidence of NKE and expansionary fiscal consolidations. Evidence of NK investment channel. Significant persistent and size of consolidation program.
Giavazzi *et al.* (2000)	Eurozone	1999Q1-2012Q4	PVAR	103 episodes identified. Evidence of expected KE. No evidence of NKE and expansionary fiscal consolidations. Not pertinent initial conditions. tax rises are more useful in contraction than spending cuts.
Hjelm (2002)	19 OECD countries	1947-2007	VAR (narrative approach)	Private consumption falls in contractions and is stimulated in expansions consolidations lead to a reduction in private consumption, especially in the long run composition of policy instruments is not a predictor of private consumption difference between fiscal consolidation via expenditure cuts or via tax increases on private consumption.
Perotti (1999)	15 OECD countries	1978-2009	VAR	Evidence of NKE and expansionary fiscal consolidations. Evidence of NK consumption channel. Pertinent initial conditions for consolidation programs success . Evidence of tax discretionary effect.
van Aarle & Garretsen (2003)	14 EU countries	1960-2009	SVAR	Fiscal adjustments showed some non-linearity in their results through the passage phase into the EMU. But both public transfers and taxes didn't show non-linearity. Public expenditure (particularly government consumption items) showed expansionary impact in private consumption. Fiscal adjustments showed to have a larger influence in transfers compared to private spending.

Abbreviations: SR (short-run), LR (long-run), FE (fiscal episode), KE (Keynesian effect), NKE (Non-Keynesian effect).

Variable	Description	Variable	Description	Variable	Description	Variable	Description
	Elasticity		*Elasticity*		*Elasticity*		*Common Variables*
ε_{O-TR}	Output-to-Total Revenues	$\varepsilon_{I_{Priv}-TR}$	Private Investment-to-Total Revenues	$\varepsilon_{C_{Priv}-TR}$	Private Consumption-to-Total Revenues	FE	Fiscal Episode
ε_{O-DT}	Output-to-Direct Taxes	$\varepsilon_{I_{Priv}-DT}$	Private Investment-to-Direct Taxes	$\varepsilon_{C_{Priv}-DT}$	Private Consumption-to-Direct Taxes	$i-g$	Interest-to-growth differential
ε_{O-IT}	Output-to-Indirect Taxes	$\varepsilon_{I_{Priv}-IT}$	Private Investment-to-Indirect Taxes	$\varepsilon_{C_{Priv}-IT}$	Private Consumption-to-Indirect Taxes	OTD	Openness Trade Degree
ε_{O-SS}	Output-to-Social Security contributions	$\varepsilon_{I_{Priv}-SS}$	Private Investment-to-Social Security contributions	$\varepsilon_{C_{Priv}-SS}$	Private Consumption-to-Social Security contributions	$TGGE$	Total General Government Expenditures
ε_{O-TE}	Output-to-Total Expenditures	$\varepsilon_{I_{Priv}-TE}$	Private Investment-to-Total Expenditures	$\varepsilon_{C_{Priv}-TE}$	Private Consumption-to-Total Expenditures	OG_{dummy}	Outputgap dummy
ε_{O-SB}	Output-to-Social Benefits	$\varepsilon_{I_{Priv}-SB}$	Private Investment-to-Social Benefits	$\varepsilon_{C_{Priv}-SB}$	Private Consumption-to-Social Benefits	EB_{dummy}	External Balance dummy
ε_{O-ST}	Output-to-Social Transfers	$\varepsilon_{I_{Priv}-SB}$	Private Investment-to-Social Transfers	$\varepsilon_{C_{Priv}-ST}$	Private Consumption-to-Social Transfers	GCF_{GG}	$GovernmentGrossCapitalFormation$
ε_{O-IC}	Output-to-Intermediate Consumption	$\varepsilon_{I_{Priv}-SB}$	Private Investment-to-Intermediate Consumption	$\varepsilon_{C_{Priv}-IC}$	Private Consumption-to-Intermediate Consumption	FCE_{GG}	Government Final Consumption Expenditure
$\varepsilon_{O-I_{Gov}}$	Output-to-Government Investment	$\varepsilon_{I_{Priv}-I_{Go}}$	Private Investment-to-Government Investment	$\varepsilon_{C_{Priv}-I_{Gc}}$	Private Consumption-to-Government Investment	$Debt_{ratio}$	Debt-to-GDP ratio
ε_{O-CE}	Output-to-Compensation Employees	$\varepsilon_{I_{Priv}-CE}$	Private Investment-to-Compensation Employees	$\varepsilon_{C_{Priv}-CE}$	Private Consumption-to-Compensation Employees	$REER$	Real Effective Exchange Rate
	Output Specific Variables		*Private Investment Specific Variables*		*Private Consumption Specific Variables*	gr_{GDP}	GDP growth rate
FCE_{Priv}	Private Final Consumption Expenditure	$TGGR$	Total General Government Revenues	Sav_{Priv}	Private Net Savings		
GDP_{pc}	GDP per capita	TR_{Gov}	Government Transfers	DI_{Priv}	Private Disposable Income		
$Debt_{pc}$	Debt per capita	$NULC$	Nominal Unit Labour Costs	SB	Social Benefits		
GCF_{Priv}	Private Gross Capital Formation	DT	Direct Taxes	TR_{Gov}	Government Transfers		
Sav_{Priv}	Private Net Savings	u	Unemployment Rate	CE	Compensation of Employees		
i	Long-run Interest Rate	$PVDebt$	Present Value of Debt	DT	Direct Taxes		
DI_{Priv}	Private Disposable Income	gr_{Debt}	Debt growth rate	FCE_{Priv}	Private Final Consumption Expenditure		
u	Unemployment Rate	$HICP$	Harmonised Index of Consumer Prices	GCF_{Priv}	Private Gross Capital Formation		
$Interest$	Interest Payments	$HICP_E$	Energy Harmonised Index of Consumer Prices	$HICP$	Harmonised Index of Consumer Prices		
$TGGR$	Total General Government Revenues	CAB	Cyclical-Adjusted Budget Balance	CAB	Cyclical-Adjusted Budget Balance		

The first three columns - output, private investment and private consumption respectively - show, at the top, all the elasticities of the macroeconomic aggregate in question, and at the bottom of the same column the specific explanatory variables tuned to that same aggregate. The last column shows the common explanatory variables that have been applied to both of the three aggregates.

ε	Obs	Min	Country	Max	Country	μ	Med	Q1	Q3	IQR	σ^2	σ	CV	Ske	Kurt
$Output - Tot\ Rev$	2268	-63.60	HU 2011Q1	160.57	AT 2009Q3	1.28	0.92	0.67	1.23	0.57	38.29	6.19	484.02	12.55	274.67
$Output - DT$	2268	-468.53	CZ 2013Q4	838.22	LU 2005Q3	0.46	0.61	0.29	1.03	0.74	533.55	23.10	5008.88	16.56	851.98
$Output - IT$	2268	-121.45	CZ 2015Q2	346.81	FI 2015Q1	1.00	0.84	0.54	1.22	0.69	83.93	9.16	912.33	23.99	947.64
$Output - SS$	2268	-148.92	SI 2014Q1	209.21	LV 2004Q1	0.98	0.89	0.51	1.36	0.86	79.43	8.91	909.21	5.72	248.26
$Output - Tot\ Exp$	2268	-583.10	LT 2015Q2	1111.28	LT 2002Q1	0.87	0.89	0.33	1.45	1.11	954.26	30.89	3533.52	16.02	814.13
$Output - SB$	2268	-426.46	MT 2014Q3	1235.54	IT 2021Q4	1.24	0.88	0.32	1.56	1.24	998.99	31.61	2539.48	25.16	1062.13
$Output - ST$	2268	-231.29	EE 2010Q2	409.06	LV 2009Q3	0.71	0.60	0.16	1.08	0.92	162.97	12.76	1787.03	9.68	564.41
$Output - IC$	2268	-745.14	SK 2002Q4	662.52	RO 2013Q1	0.74	0.81	0.33	1.35	1.02	850.02	29.16	3925.72	-5.96	465.93
$Output - I_{Gov}$	2268	-2810.32	AT 2014Q4	1274.18	SK 2003Q2	-0.34	0.30	-0.18	0.77	0.95	4366.79	66.08	-19197.80	-30.88	1504.14
$Output - CE$	2268	-184.35	PT 2008Q2	345.64	PT 2010Q4	0.96	0.92	0.49	1.49	1.00	102.93	10.15	1053.89	13.26	665.21
$I_{Priv} - Tot\ Rev$	2268	-450.67	CY 2016Q2	1593.29	SI 2010Q3	2.61	1.34	0.24	2.67	2.43	1867.76	43.22	1657.22	23.70	855.41
$I_{Priv} - DT$	2268	-1411.54	CZ 2013Q4	533.36	LV 2010Q4	-0.55	0.94	-0.03	2.07	2.10	2072.35	45.52	-8273.34	-19.77	577.18
$I_{Priv} - IT$	2268	-360.26	CZ 2015Q2	131.62	EE 2021Q1	0.91	1.29	0.21	2.39	2.17	195.67	13.99	1534.86	-12.82	300.85
$I_{Priv} - SS$	2268	-536.01	SI 2014Q1	717.75	LV 2021Q3	1.67	1.21	-0.16	2.67	2.82	698.23	26.42	1585.48	7.24	347.45
$I_{Priv} - Tot\ Exp$	2268	-4464.53	NL 2015Q4	1473.67	LI 2002Q1	0.13	0.99	-0.52	2.80	3.32	13304.20	115.34	83531.26	-24.42	1024.73
$I_{Priv} - SB$	2268	-689.65	IE 2016Q1	4789.76	IT 2021Q4	4.60	0.94	-0.73	2.73	3.46	16103.14	126.90	2757.74	31.78	1107.03
$I_{Priv} - ST$	2268	-3592.83	LT 2010Q4	1022.44	LV 2009Q3	-0.45	0.73	-0.33	2.03	2.36	6791.24	82.41	-18278.00	-35.94	1606.65
$I_{Priv} - IC$	2268	-2374.47	IT 2013Q2	2294.93	PO 2021Q1	1.17	1.03	-0.29	2.61	2.91	5711.60	75.58	6466.96	-1.10	808.33
$I_{Priv} - I_{Gov}$	2268	-2307.40	AT 2014Q4	1044.25	SK 2003Q2	-0.37	0.26	-0.17	0.70	0.87	3038.16	55.12	-10695001.32	-29.39	1308.65
$I_{Priv} - CE$	2268	-2595.50	EL 2019Q1	792.53	EL 2017Q1	0.35	1.18	-0.29	2.93	3.22	3635.39	60.29	17258.19	-34.35	1532.11
$C_{Priv} - Tot\ Rev$	2268	-265.21	SI 2010Q3	300.26	HR 2014Q4	1.08	0.84	0.55	1.18	0.63	124.15	11.14	1028.38	11.14	599.10
$C_{Priv} - DT$	2268	-393.65	CZ 2013Q4	541.95	LU 2005Q3	0.20	0.54	0.21	0.95	0.74	292.67	17.11	8402.04	7.12	589.51
$C_{Priv} - IT$	2268	-128.85	RO 2018Q1	502.56	FI 2015Q1	0.99	0.77	0.47	1.14	0.66	143.79	11.99	1205.23	32.51	1371.22
$C_{Priv} - SS$	2268	-208.56	FI 2003Q3	232.62	LV 2004Q1	0.98	0.80	0.43	1.22	0.78	92.04	9.59	973.37	3.54	299.35
$C_{Priv} - Tot\ Exp$	2268	-772.69	PT 2003Q3	1059.37	LT 2002Q1	0.53	0.82	0.30	1.31	1.02	1154.40	33.98	6360.24	4.47	608.91
$C_{Priv} - SB$	2268	-394.93	EL 2021Q1	1100.01	IT 2021Q4	1.17	0.83	0.30	1.38	1.07	737.46	27.16	2330.65	29.47	1230.08
$C_{Priv} - ST$	2268	-273.99	EE 2010Q2	387.86	LV 2009Q3	0.81	0.55	0.13	1.01	0.88	159.15	12.62	1557.81	10.07	536.41
$C_{Priv} - IC$	2268	-758.51	SK 2002Q4	918.76	PO 2021Q1	0.41	0.70	0.29	1.22	0.92	891.23	29.85	7222.56	2.96	615.97
$C_{Priv} - I_{Gov}$	2268	-2307.40	AT 2014Q4	1044.25	SK 2003Q2	-0.37	0.26	-0.17	0.70	0.87	3038.16	55.12	-14812.17	-29.76	1415.05
$C_{Priv} - CE$	2268	-265.94	PT 2008Q2	612.84	PT 2010Q4	0.96	0.85	0.45	1.31	0.86	218.58	14.78	1536.58	28.43	1342.30

ε	Obs	Min	Country	Max	Country	μ	Med	Q1	Q3	IQR	σ^2	σ	CV	Ske	Kurt
FCE_{Priv}	2268	0.2322	IE 2022Q3	0.7130	RO 2005Q2	0.5492	0.5490	0.4967	0.6125	0.1158	0.0070	0.0839	15.2796	-0.6435	0.6487
GDP_{pc}	2268	8.1892	BG 2001Q4	11.5230	LU 2008Q1	9.9682	9.9501	9.4613	10.5400	1.0787	0.4585	0.6771	6.7928	-0.0340	-0.4986
$Debt_{pc}$	2268	5.4781	EE 2001Q4	10.8019	BE 2022Q3	9.1878	9.4469	8.5562	10.0900	1.5338	1.2915	1.1364	12.3689	-0.9586	0.2741
GCF_{Priv}	2268	0.0571	EL 2014Q2	0.6863	IE 2020Q1	0.1934	0.1887	0.1681	0.2125	0.0444	0.0019	0.0442	22.8468	1.9607	14.1601
Sav_{Priv}	2268	-0.2004	CY 2007Q4	0.2115	MT 2021Q4	0.0684	0.0740	0.0456	0.0967	0.0511	0.0018	0.0427	62.4599	-0.7823	1.9261
i	2268	-0.6100	DE 2020Q4	25.4000	EL 2012Q2	3.3950	3.6400	1.3500	4.6325	3.2825	6.2464	2.4993	73.6172	1.5422	8.4970
DI_{Priv}	2268	0.3726	LU 2020Q3	0.9728	RO 2009Q4	0.7572	0.7659	0.7202	0.7989	0.0787	0.0053	0.0727	9.5990	-1.2998	4.4238
u	2268	2.0000	CZ 2019Q1	28.1000	EL 2013Q3	8.5841	7.6300	5.8000	10.0725	4.2725	18.1202	4.2568	49.5894	1.5907	3.1066
$Interest$	2268	0.0002	EE 2019Q3	0.0769	EL 2012Q1	0.0207	0.0184	0.0110	0.0288	0.0178	0.0002	0.0129	62.4299	0.7501	0.4091
$TGGR$	2268	0.2209	IE 2021Q2	0.5636	DK 2014Q4	0.4245	0.4211	0.3803	0.4749	0.0946	0.0041	0.0637	14.9996	0.0030	-0.4405
$TGGR$	2268	0.2209	IE 2021Q2	0.5636	DK 2014Q4	0.4245	0.4211	0.3803	0.4749	0.0946	0.0041	0.0637	14.9996	0.0030	-0.4405
TR_{Gov}	2268	0.0918	IE 2022Q3	0.3683	FR 2021Q1	0.2072	0.2080	0.1677	0.2399	0.0722	0.0025	0.0499	24.0672	0.2470	-0.2899
$NULC$	2268	3.7149	RO 2002Q3	5.2321	RO 2022Q1	4.5624	4.5815	4.4676	4.6665	0.1989	0.0349	0.1869	4.0972	-0.8616	2.8023
DT	2268	0.0429	LT 2012Q1	0.3315	DK 2014Q4	0.1103	0.0991	0.0737	0.1317	0.0580	0.0026	0.0508	46.0301	1.8037	4.2366
u	2268	2.0000	CZ 2019Q1	28.1000	EL 2013Q3	8.5841	7.6300	5.8000	10.0725	4.2725	18.1202	4.2568	49.5894	1.5907	3.1066
$PVDebt$	2268	-0.2111	EL 2022Q1	0.6568	EL 2012Q1	0.0006	-0.0060	-0.0183	0.0078	0.0261	0.0025	0.0498	8717.9051	4.6956	43.6755
gr_{Debt}	2268	-17.9491	BG 2005Q1	153.7484	LV 2009Q3	7.4328	4.6798	1.1196	10.6475	9.5279	165.4548	12.8630	173.0568	3.8111	25.7170
$HICP$	2268	3.7194	RO 2001Q4	4.9704	EE 2022Q3	4.5362	4.5847	4.4508	4.6212	0.1704	0.0203	0.1425	3.1419	-1.0672	2.3229
$HICP_E$	2268	3.3727	RO 2001Q4	5.4797	EE 2022Q3	4.5023	4.5737	4.3656	4.6609	0.2953	0.0623	0.2495	5.5423	-0.7409	1.2828
CAB	2268	-627.1993	BE 2010Q1	2438.0350	RO 2010Q4	-1.7479	-2.2635	-4.3270	-0.2332	4.0938	2836.4101	53.2580	-3046.9187	41.6514	1951.6652
Sav_{Priv}	2268	-0.2004	CY 2007Q4	0.2115	MT 2021Q4	0.0684	0.0740	0.0456	0.0967	0.0511	0.0018	0.0427	62.4599	-0.7823	1.9261
DI_{Priv}	2268	0.3726	LU 2020Q3	0.9728	RO 2009Q4	0.7572	0.7659	0.7202	0.7989	0.0787	0.0053	0.0727	9.5990	-1.2998	4.4238
SB	2268	0.0565	IE 2022Q3	0.2414	IT 2021Q1	0.1418	0.1406	0.1176	0.1661	0.0485	0.0010	0.0318	22.4600	0.0904	-0.6229
TR_{Gov}	2268	0.0918	IT 2022Q3	0.3683	FR 2021Q1	0.2072	0.2080	0.1677	0.2399	0.0722	0.0025	0.0499	24.0672	0.2470	-0.2899
CE	2268	0.0573	IE 2022Q3	0.1769	DK 2010Q1	0.1101	0.1090	0.0968	0.1239	0.0271	0.0004	0.0193	17.5669	0.3531	0.1606
DT	2268	0.0430	LT 2012Q1	0.3315	DK 2014Q4	0.1103	0.0991	0.0737	0.1317	0.0580	0.0026	0.0508	46.0301	1.8037	4.2366
FCE_{Priv}	2268	0.2322	IE 2022Q3	0.7130	RO 2005Q2	0.5492	0.5490	0.4967	0.6125	0.1158	0.0070	0.0839	15.2796	-0.6435	0.6487
GCF_{Priv}	2268	0.0571	EL 2014Q2	0.6863	IE 2020Q1	0.1934	0.1887	0.1681	0.2125	0.0444	0.0020	0.0442	22.8468	1.9607	14.1601
$HICP$	2268	3.7194	RO 2001Q4	4.9704	EE 2022Q3	4.5362	4.5847	4.4508	4.6212	0.1704	0.0203	0.1425	3.1419	-1.0672	2.3229
CAB	2268	-627.1993	BE 2010Q1	2438.0350	RO 2010Q4	-1.7479	-2.2635	-4.3270	-0.2332	4.0938	2836.4101	53.2580	-3046.9187	41.6514	1951.6652

ε	Obs	Min	Country	Max	Country	μ	Med	Q1	Q3	IQR	σ^2	σ	CV	Ske	Kurt
FE	2268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
$i-g$	2268	-33.6805	IE 2015Q4	36.5427	LV 2009Q4	-1.4932	-1.6209	-4.5071	1.3287	5.8357	43.5902	6.6023	-442.1697	0.5111	4.2331
OTD	2268	3.8150	IT 2009Q4	5.9466	LU 2022Q1	4.6879	4.6522	4.3687	5.0012	0.6325	0.2121	0.4605	9.8233	0.4286	-0.1966
$TGGE$	2268	0.2209	IE 2022Q3	0.6490	IE 2010Q4	0.4508	0.4517	0.4036	0.4990	0.0954	0.0045	0.0670	14.8741	-0.1800	-0.2231
OG_{dummy}	2268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EB_{dummy}	2268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GCF_{GG}	2268	0.0138	LV 2002Q2	0.0757	CZ 2003Q4	0.0380	0.0378	0.0302	0.0447	0.0145	0.0001	0.0110	28.8911	0.3394	-0.1665
FCE_{GG}	2268	0.1129	IE 2022Q3	0.2807	DK 2010Q1	0.1989	0.1954	0.1816	0.2163	0.0346	0.0009	0.0294	14.7851	0.2422	-0.1253
$Debt_{ratio}$	2268	3.4361	EE 2007Q2	209.2735	EL 2021Q1	60.5697	53.7967	36.4771	78.5147	42.0376	1304.3911	36.1164	59.6278	1.0055	1.1919
$REER$	2268	4.0957	SK 2001Q4	4.8464	CZ 2022Q3	4.6251	4.6301	4.6057	4.6623	0.0567	0.0049	0.0702	1.5175	-1.9924	9.4011
gr_{GDP}	2268	-22.8727	LV 2009Q4	34.8005	IE 2015Q4	4.8881	4.2065	1.9467	7.7030	5.7562	36.1989	6.0165	123.0849	0.5293	2.9788

The descriptive statistics of the variables used are presented in the three previous tables. The first table displays the dependent variables used: output, private investment, and private consumption elasticities, respectively. The second table applies to the explanatory variables specific to the macroeconomic aggregate group and which were used specifically and respectively for each of the three groups of elasticities. The third table details the common explanatory variables for both the three groups of elasticities.

The descriptive statistics presented herein follows the subsequent abbreviations: Obs (Observations), Min (Minimum value), Country (Country/Time for minimum value), Max (Maximum value), Country (Country/Time for maximum value), μ (Mean), Med (Median), Q1 (25th Quartile), Q3 (75th Quartile), IQR (Interquartile Range), σ^2 (Variance), σ (Standard Deviation), CV (Coefficient of Variation), Ske (Skewness), and Kurt (Kurtosis).

Correlation Matrix 1	FE	$i-g$	OTD	$TGGE$	OG_{dummy}	EB_{dummy}	GCF_{GG}	FCE_{GG}	$Debt_{ratio}$	$REER$	gr_{GDP}
ε $Output-TR$	-0.0199	0.0474	-0.0187	0.0271	-0.0179	0.0096	-0.0441	0.0053	0.0529	0.0065	-0.0338
ε $Privi-TR$	0.0102	0.0283	0.0118	-0.0022	-0.0184	0.0115	0.0018	-0.0083	0.0016	-0.0084	-0.0221
ε $Privc-TR$	-0.0351	0.0282	-0.0091	0.0149	0.0037	-0.0224	-0.0347	0.0177	0.0413	0.0116	-0.0116
ε $Output-DT$	0.0061	-0.0080	0.0316	0.0059	0.0034	0.0058	0.0099	-0.0088	-0.0243	-0.0148	0.0108
ε $Privi-DT$	-0.0096	-0.0118	-0.0379	0.0208	0.0367	-0.0219	-0.0149	0.0278	0.0250	-0.0060	0.0203
ε $Privc-DT$	0.0041	-0.0133	0.0333	0.0074	0.0089	0.0062	0.0039	-0.0064	-0.0273	-0.0161	0.0172
ε $Output-IT$	-0.0341	-0.0154	-0.0184	0.0220	-0.0022	-0.0292	0.0044	0.0085	-0.0009	-0.0057	0.0170
ε $Privi-IT$	0.0170	-0.0040	0.0047	0.0031	0.0136	-0.0118	0.0182	-0.0069	0.0156	0.0154	0.0257
ε $Privc-IT$	-0.0334	-0.0118	-0.0218	0.0281	-0.0077	-0.0319	0.0090	0.0186	-0.0056	-0.0092	0.0081
ε $Output-SS$	-0.0019	-0.0350	0.0113	-0.0705	0.0003	-0.0398	-0.0008	-0.0446	-0.0210	-0.0410	0.0401
ε $Privi-SS$	-0.0105	-0.0327	-0.0079	-0.0625	0.0037	-0.0296	-0.0110	-0.0401	-0.0054	-0.0153	0.0315
ε $Privc-SS$	-0.0052	-0.0081	0.0006	-0.0371	-0.0143	-0.0316	0.0074	-0.0376	-0.0089	-0.0438	0.0151
ε $Output-TE$	-0.0019	-0.0140	-0.0028	-0.0064	0.0319	-0.0220	-0.0266	-0.0010	0.0059	-0.0237	0.0296
ε $Privi-TE$	-0.0102	0.0027	-0.0244	0.0059	0.0107	-0.0232	-0.0131	-0.0228	0.0126	0.0058	0.0104
ε $Privc-TE$	0.0043	-0.0134	0.0009	0.0042	0.0320	-0.0126	-0.0203	0.0087	0.0092	-0.0191	0.0257
ε $Output-SB$	-0.0059	-0.0355	-0.0189	0.0165	-0.0113	0.0226	-0.0009	-0.0047	0.0223	-0.0058	0.0326
ε $Privi-SB$	-0.0070	-0.0251	-0.0166	0.0312	-0.0314	0.0193	-0.0120	0.0036	0.0499	0.0122	0.0149
ε $Privc-SB$	0.0035	-0.0468	-0.0117	0.0021	-0.0106	0.0225	-0.0043	-0.0073	0.0151	-0.0035	0.0417
ε $Output-ST$	-0.0039	0.0211	-0.0099	-0.0042	0.0188	-0.0255	0.0120	0.0079	-0.0167	0.0046	-0.0102
ε $Privi-ST$	-0.0175	0.0019	-0.0090	0.0000	0.0171	0.0164	-0.0143	0.0020	-0.0036	0.0131	-0.0008
ε $Privc-ST$	0.0144	0.0222	-0.0125	0.0031	0.0049	-0.0332	0.0239	0.0263	-0.0237	-0.0036	-0.0115
ε $Output-IC$	-0.0012	-0.0168	0.0150	-0.0274	0.0133	0.0221	0.0126	-0.0358	-0.0507	0.0666	0.0231
ε $Privi-IC$	-0.0234	-0.0070	0.0217	0.0000	0.0007	-0.0011	0.0145	-0.0081	-0.0059	0.0103	0.0054
ε $Privc-IC$	0.0056	-0.0187	0.0199	0.0011	0.0169	0.0388	0.0047	-0.0057	-0.0296	0.0657	0.0153
ε $Output-I_{Gov}$	0.0244	-0.0171	0.0085	-0.0226	0.0125	-0.0241	0.0085	0.0005	-0.0160	-0.0469	0.0260
ε $Privi-I_{Gov}$	0.0170	-0.0208	0.0098	-0.0167	0.0191	-0.0177	-0.0050	0.0070	-0.0143	-0.0364	0.0261
ε $Privc-I_{Gov}$	0.0240	-0.0169	0.0087	-0.0214	0.0118	-0.0253	0.0090	-0.0015	-0.0147	-0.0460	0.0256
ε $Output-CE$	-0.0134	-0.0507	0.0263	-0.0081	0.0360	0.0103	0.0171	-0.0022	-0.0252	-0.0178	0.0590
ε $Privi-CE$	-0.0098	-0.0256	0.0210	-0.0177	-0.0130	0.0239	0.0077	-0.0058	-0.0541	-0.0087	0.0263
ε $Privc-CE$	-0.0200	-0.0150	0.0031	0.0107	0.0319	-0.0101	0.0301	0.0069	-0.0048	-0.0120	0.0263

Correlation Matrix 2	FCE_{Priv}	GDP_{pc}	$Debt_{pc}$	GCF_{Priv}	Sav_{Priv}	i	DI_{Priv}	u	$Interest$	$TGGR$
$\varepsilon\ O-TR$	0.0048	0.0097	0.0410	0.0235	-0.0081	0.0438	0.0133	0.0135	0.0655	0.0126
$\varepsilon\ O-DT$	-0.0337	0.0420	-0.0071	-0.0065	0.0533	0.0048	-0.0142	-0.0053	-0.0223	0.0086
$\varepsilon\ O-IT$	0.0099	0.0162	0.0109	-0.0149	-0.0123	0.0003	0.0054	0.0053	-0.0006	0.0294
$\varepsilon\ O-SS$	0.0283	-0.0421	-0.0500	0.0448	-0.0159	0.0042	0.0246	0.0085	-0.0135	-0.0731
$\varepsilon\ O-TE$	0.0156	-0.0203	-0.0201	-0.0044	-0.0334	0.0342	0.0000	0.0396	0.0011	-0.0098
$\varepsilon\ O-SB$	0.0025	0.0032	0.0187	0.0060	0.0069	-0.0154	0.0141	-0.0078	0.0144	0.0125
$\varepsilon\ O-ST$	-0.0102	0.0080	0.0035	0.0382	0.0292	0.0311	0.0224	-0.0140	-0.0222	0.0025
$\varepsilon\ O-IC$	-0.0154	-0.0009	-0.0153	0.0144	0.0481	0.0114	0.0049	-0.0548	-0.0294	-0.0179
$\varepsilon\ O-I_{Priv}$	-0.0005	-0.0228	-0.0277	0.0081	-0.0138	0.0173	-0.0029	0.0272	-0.0043	-0.0283
$\varepsilon\ O-CE$	-0.0305	0.0127	0.0002	0.0300	0.0267	0.0082	-0.0109	-0.0240	-0.0165	-0.0147

Correlation Matrix 3	$TGGR$	TR_{Gov}	$NULC$	DT	u	$PVDebt$	gr_{Debt}	$HICP$	$HICP_E$	CAB
$\varepsilon\ I_{Priv}-TR$	-0.0154	0.0004	-0.0034	-0.0088	0.0017	0.0312	-0.0110	0.0012	0.0013	-0.0032
$\varepsilon\ I_{Priv}-DT$	0.0128	0.0032	-0.0049	0.0168	0.0256	-0.0001	0.0164	0.0048	0.0032	-0.0027
$\varepsilon\ I_{Priv}-IT$	-0.0081	-0.0110	0.0035	0.0010	0.0330	0.0204	-0.0031	0.0105	0.0097	0.0052
$\varepsilon\ I_{Priv}-SS$	-0.0621	-0.0480	-0.0120	-0.0331	0.0178	-0.0272	-0.0314	-0.0191	-0.0326	0.0008
$\varepsilon\ I_{Priv}-TE$	0.0000	-0.0101	-0.0089	-0.0041	0.0236	-0.0013	0.0192	-0.0132	-0.0103	-0.0007
$\varepsilon\ I_{Priv}-SB$	0.0197	0.0346	0.0474	0.0073	0.0016	-0.0239	-0.0069	0.0432	0.0403	-0.0021
$\varepsilon\ I_{Priv}-ST$	0.0138	0.0028	0.0085	0.0349	-0.0425	-0.0017	0.0139	0.0047	-0.0095	0.0005
$\varepsilon\ I_{Priv}-IC$	-0.0053	0.0076	0.0029	-0.0175	-0.0168	0.0016	0.0150	0.0125	0.0126	-0.0006
$\varepsilon\ I_{Priv}-I_{Gov}$	-0.0186	-0.0134	-0.0114	0.0080	0.0240	-0.0068	-0.0112	-0.0122	-0.0094	-0.0008
$\varepsilon\ I_{Priv}-CE$	-0.0165	-0.0116	-0.0133	0.0056	-0.0361	-0.0225	-0.0102	-0.0046	-0.0000	0.0004

Correlation Matrix 4	Sav_{Priv}	DI_{Priv}	SB	TR_{Gov}	CE	DT	FCE_{Priv}	GCF_{Priv}	$HICP$	CAB
$\varepsilon\ C_{Priv}-TR$	-0.0161	0.0068	0.0040	0.0003	0.0035	-0.0121	0.0231	-0.0331	0.0011	-0.0006
$\varepsilon\ C_{Priv}-DT$	0.0468	-0.0276	0.0101	0.0160	0.0097	0.0283	-0.0361	-0.0058	-0.0215	-0.0012
$\varepsilon\ C_{Priv}-IT$	-0.0145	-0.0040	0.0261	0.0127	0.0303	0.0269	0.0022	-0.0011	-0.0045	-0.0003
$\varepsilon\ C_{Priv}-SS$	-0.0318	0.0401	-0.0308	-0.0431	-0.0166	-0.0550	0.0461	0.0247	-0.0391	-0.0064
$\varepsilon\ C_{Priv}-TE$	-0.0321	-0.0073	0.0090	0.0012	0.0053	0.0049	0.0087	-0.0080	-0.0089	0.0008
$\varepsilon\ C_{Priv}-SB$	0.0167	0.0153	0.0232	0.0125	-0.0266	0.0097	0.0020	0.0083	0.0272	-0.0003
$\varepsilon\ C_{Priv}-ST$	0.0421	0.0301	-0.0241	-0.0105	0.0307	0.0291	-0.0019	0.0236	0.0142	0.0025
$\varepsilon\ C_{Priv}-IC$	0.0440	-0.0261	0.0014	0.0134	0.0059	0.0106	-0.0289	-0.0105	0.0226	0.0001
$\varepsilon\ C_{Priv}-I_{Gov}$	-0.0168	-0.0012	-0.0273	-0.0216	0.0013	-0.0127	0.0027	0.0075	-0.0229	-0.0023
$\varepsilon\ C_{Priv}-CE$	0.0012	0.0063	-0.0012	-0.0031	0.0198	0.0007	0.0042	0.0042	0.0003	-0.0045

The previous four tables are respectively the correlation matrices between: (1) 30 elasticities (10 from each one of the three aggregates) with the set of common variables; (2) 10 output elasticities with the set of variables specific to this aggregate; (3) 10 private investment elasticities with the set of variables specific to this aggregate; (4) 10 private consumption elasticities with the set of variables specific to this aggregate.

Output-Specific Equation Regression [1]

$$\varepsilon_{(O-f)\ c,d,t} = \alpha_{0,c,t} + \alpha_{1,c,t} \cdot \left(\frac{FCE_{\text{Priv}}}{GDP}\right)_{c,t} + \alpha_{2,c,t} \cdot \ln(GDP_{pc})_{c,t} + \alpha_{3,c,t} \cdot \ln(Debt_{pc})_{c,t} + \alpha_{4,c,t} \cdot \left(\frac{GCF_{\text{Priv}}}{GDP}\right)_{c,t} + \alpha_{5,c,t} \cdot \left(\frac{Sav_{\text{Priv}}}{GDP}\right)_{c,t}$$
$$+ \alpha_{6,c,t} \cdot i_{c,t} + \alpha_{7,c,t} \cdot \left(\frac{DI_{\text{Priv}}}{GDP}\right) + \alpha_{8,c,t} \cdot (u)_{c,t} + \alpha_{9,c,t} \cdot \left(\frac{Interest}{GDP}\right)_{c,t} + \alpha_{10,c,t} \cdot \left(\frac{TGGR}{GDP}\right)_{c,t} + e_{c,t}$$

country: c = 1, ... ,27 *decile: d = 1, ... ,9* *fiscal item: f = 1, ... ,10* *time: t = 1, ... ,84*

Private Investment-Specific Equation Regression

$$\varepsilon_{(I_{Priv}-f)\ c,d,t} = \beta_{0,c,t} + \beta_{1,c,t} \cdot \left(\frac{TGGR}{GDP}\right)_{c,t} + \beta_{2,c,t} \cdot \left(\frac{TR_{Gov}}{GDP}\right)_{c,t} + \beta_{3,c,t} \cdot \ln(NULC)_{c,t} + \beta_{4,c,t} \cdot \left(\frac{DT}{GDP}\right)_{c,t} + \beta_{5,c,t} \cdot u_{c,t}$$
$$+ \beta_{6,c,t} \cdot \left(\frac{PVDebt}{GDP}\right)_{c,t} + \beta_{7,c,t} \cdot gr_{Debtc,t} + \beta_{8,c,t} \cdot \ln(HICP)_{c,t} + \beta_{9,c,t} \cdot \ln(HICP_E)_{c,t} + \beta_{10,c,t} \cdot CAB_{c,t} + \nu_{c,t}$$

country: c = 1, ... ,27 *decile: d = 1, ... ,9* *fiscal item: f = 1, ... ,10* *time: t = 1, ... ,84*

Private Consumption-Specific Equation Regression

$$\varepsilon_{(I_{Priv}-f)\ c,d,t} = \gamma_{0,c,t} + \gamma_{1,c,t} \cdot \left(\frac{Sav_{Priv}}{GDP}\right)_{c,t} + \gamma_{2,c,t} \cdot \left(\frac{DI_{Priv}}{GDP}\right)_{c,t} + \gamma_{3,c,t} \cdot \left(\frac{SB}{GDP}\right)_{c,t} + \gamma_{4,c,t} \cdot \left(\frac{TR_{Gov}}{GDP}\right)_{c,t} + \gamma_{5,c,t} \cdot \left(\frac{CE}{GDP}\right)_{c,t}$$
$$+ \gamma_{6,c,t} \cdot \left(\frac{DT}{GDP}\right)_{c,t} + \gamma_{7,c,t} \cdot \left(\frac{FCE_{Priv}}{GDP}\right)_{c,t} + \gamma_{8,c,t} \cdot \left(\frac{GCF_{Priv}}{GDP}\right)_{c,t} + \gamma_{9,c,t} \cdot \ln(HICP)_{c,t} + \gamma_{10,c,t} \cdot CAB_{c,t} + \mu_{c,t}$$

country: c = 1, ... ,27 *decile: d = 1, ... ,9* *fiscal item: f = 1, ... ,10* *time: t = 1, ... ,84*

All Aggregates-Common Equation Regression

$$\varepsilon_{(agg-f)\ c,d,t} = \lambda_{0,c,t} + \lambda_{1,c,t} \cdot FE_{c,t} + \lambda_{2,c,t} \cdot (i-g)_{c,t} + \lambda_{3,c,t} \cdot \ln(OTD)_{c,t} + \lambda_{4,c,t} \cdot \left(\frac{TGGE}{GDP}\right)_{c,t} + \lambda_{5,c,t} \cdot (OG_{dummy})_{c,t}$$
$$+ \lambda_{6,c,t} \cdot (EB_{dummy})_{c,t} + \lambda_{7,c,t} \cdot \left(\frac{GCF_{GG}}{GDP}\right)_{c,t} + \lambda_{8,c,t} \cdot \left(\frac{FCE_{Priv}}{GDP}\right)_{c,t} + \lambda_{9,c,t} \cdot (Debt_{ratio})_{c,t} + \lambda_{10,c,t} \cdot \ln(REER)_{c,t} + \lambda_{10,c,t} \cdot (gr_{GDP})_{c,t} + \upsilon_{c,t}$$

aggregate: agg = 1, 2, 3 *country: c = 1, ... ,27* *decile: d = 1, ... ,9* *fiscal item: f = 1, ... ,10* *time: t = 1, ... ,84*

[1] Hereby is the correspondence between the numbers of the above indices and the corresponding information, in the respective order, that they represent in the 27 countries panel sample.
agg = Output, Private Investment, Private Consumption | c = Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden | d = d1 (lowest values 9-tile), ... , d9 (highest values 9-tile) | f = Total Revenues, Direct Taxes, Indirect Taxes, Social Security contributions, Total Expenditures, Compensation of Employees, Intermediate Consumption, Social Benefits, Social Transfers | t = 2001Q4, ... , 2022Q3

TABLE VI: Elasticity of Output-to-Total Revenues for common variables

	DECILES								
VARIABLES	I	II	III	IV	V	VI	VII	VIII	IX
FE	0.062	−0.026	−0.079***	−0.097***	−0.130***	−0.169***	−0.233***	−0.318***	−0.634***
	(0.062)	(0.025)	(0.024)	(0.025)	(0.024)	(0.028)	(0.028)	(0.038)	(0.166)
i-g	−0.063***	−0.029***	−0.027***	−0.018***	−0.007	−0.006	0.008	0.013	0.031
	(0.015)	(0.006)	(0.007)	(0.007)	(0.009)	(0.010)	(0.011)	(0.014)	(0.042)
OTD	0.070	0.021	−0.019	0.003	0.017	0.034	0.066**	0.053	0.013
	(0.065)	(0.033)	(0.028)	(0.026)	(0.034)	(0.034)	(0.032)	(0.062)	(0.238)
$TGGE$	1.797***	0.544*	0.685**	0.613*	0.658	0.509	0.190	−0.122	−2.547
	(0.503)	(0.286)	(0.315)	(0.341)	(0.402)	(0.440)	(0.558)	(0.849)	(2.008)
OG_{dummy}	0.249***	0.104***	0.041	0.001	−0.021	−0.026	−0.024	−0.092	−0.068
	(0.036)	(0.026)	(0.028)	(0.025)	(0.024)	(0.033)	(0.034)	(0.060)	(0.177)
EB_{dummy}	−0.029	0.055*	0.034	0.031	0.047*	0.068**	0.080**	0.154***	0.134
	(0.062)	(0.033)	(0.034)	(0.039)	(0.028)	(0.032)	(0.032)	(0.056)	(0.126)
GCF_{GG}	−9.123***	−4.250***	−3.416***	−3.248***	−4.124***	−4.101***	−5.110**	−5.414*	−10.575
	(2.497)	(1.305)	(1.281)	(0.863)	(0.967)	(1.571)	(1.992)	(3.190)	(7.907)
FCE_{GG}	1.219	0.937	0.184	0.193	0.487	0.407	0.475	−0.449	−0.285
	(0.928)	(0.707)	(0.601)	(0.696)	(0.810)	(0.756)	(0.743)	(1.355)	(3.671)
$REER$	0.354	−0.008	−0.125	−0.228	−0.415**	−0.526*	−0.840**	−1.219***	−1.957*
	(0.379)	(0.125)	(0.131)	(0.153)	(0.176)	(0.284)	(0.341)	(0.438)	(1.107)
gr_{GDP}	−0.008	0.009	0.001	0.002	0.007	0.004	0.013	0.014	0.013
	(0.015)	(0.007)	(0.008)	(0.008)	(0.009)	(0.010)	(0.013)	(0.016)	(0.041)
$Debt_{ratio}$	−0.002***	−0.001	−0.001	−0.001	−0.000	0.000	0.001*	0.003**	0.009*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.005)
Constant	−2.484	0.081	1.125*	1.681**	2.536***	3.140**	4.701***	7.018***	12.315**
	(1.698)	(0.598)	(0.651)	(0.776)	(0.868)	(1.340)	(1.411)	(1.786)	(5.543)
Pseudo-R^2	0.064	0.042	0.025	0.015	0.011	0.009	0.009	0.013	0.023

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table VII: Elasticity of Private Investment-to-Total Revenues for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	0.649^{*}	0.200	0.064	0.037	-0.091	-0.213^{***}	-0.346^{***}	-0.584^{***}	-1.828^{***}
	(0.370)	(0.186)	(0.108)	(0.094)	(0.104)	(0.078)	(0.122)	(0.152)	(0.369)
$i-g$	-0.453^{***}	-0.229^{***}	-0.137^{***}	-0.050^{*}	-0.003	0.029	0.064	0.128	0.162
	(0.104)	(0.046)	(0.034)	(0.026)	(0.027)	(0.029)	(0.056)	(0.080)	(0.145)
OTD	-0.810^{***}	-0.451^{*}	-0.309^{**}	-0.107	0.023	0.306^{**}	0.414^{**}	0.822^{***}	2.261^{***}
	(0.283)	(0.266)	(0.133)	(0.116)	(0.065)	(0.136)	(0.209)	(0.230)	(0.873)
$TGGE$	15.432^{***}	5.089	1.977	-0.095	-0.486	-2.827	-4.577^{**}	-6.332^{***}	-19.528^{***}
	(3.073)	(3.369)	(1.988)	(1.296)	(1.363)	(1.810)	(2.054)	(2.358)	(6.251)
OG_{dummy}	0.642^{*}	0.212	0.015	-0.038	-0.013	-0.137^{*}	-0.273^{**}	-0.284	-1.511^{***}
	(0.341)	(0.165)	(0.085)	(0.079)	(0.080)	(0.081)	(0.132)	(0.184)	(0.583)
EB_{dummy}	-0.262	-0.348^{*}	-0.328^{***}	-0.229^{**}	-0.221^{**}	-0.256^{**}	-0.215	-0.211	-0.373
	(0.455)	(0.194)	(0.096)	(0.099)	(0.097)	(0.119)	(0.182)	(0.286)	(0.397)
GCF_{GG}	-29.214^{*}	-18.267^{**}	-21.968^{***}	-17.070^{***}	-7.067	-0.894	1.271	1.444	9.244
	(15.426)	(8.283)	(5.255)	(5.241)	(4.673)	(4.619)	(6.868)	(8.597)	(23.325)
FCE_{GG}	-16.844^{***}	-3.022	0.282	3.807^{**}	4.274^{**}	8.247^{***}	10.392^{***}	14.787^{***}	30.493^{**}
	(4.879)	(3.877)	(2.599)	(1.884)	(1.866)	(2.831)	(3.658)	(4.529)	(15.283)
$REER$	-1.470	0.524	1.455^{**}	1.029^{*}	0.312	0.669	0.173	-2.356	-4.074
	(3.048)	(1.057)	(0.698)	(0.576)	(0.560)	(0.540)	(0.940)	(1.551)	(2.819)
gr_{GDP}	-0.233^{**}	-0.096^{**}	-0.061^{*}	-0.009	0.007	0.018	0.036	0.070	0.006
	(0.096)	(0.048)	(0.032)	(0.025)	(0.026)	(0.030)	(0.056)	(0.080)	(0.137)
$Debt_{ratio}$	-0.014^{***}	-0.006	-0.002	0.002	0.006^{**}	0.010^{***}	0.014^{***}	0.025^{***}	0.052^{***}
	(0.005)	(0.005)	(0.004)	(0.002)	(0.002)	(0.004)	(0.004)	(0.004)	(0.012)
Constant	6.983	-1.244	-4.634	-3.447	-0.773	-3.358	-0.914	9.037	15.514
	(13.994)	(5.432)	(3.305)	(2.723)	(2.435)	(2.567)	(4.535)	(7.223)	(13.112)
Pseudo-R^2	0.038	0.018	0.009	0.004	0.003	0.005	0.009	0.014	0.027

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table VIII: Elasticity of Private Consumption-to-Total Revenues for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	0.137^{**}	0.005	-0.070^{**}	-0.117^{***}	-0.163^{***}	-0.193^{***}	-0.244^{***}	-0.338^{***}	-0.607^{***}
	(0.064)	(0.036)	(0.030)	(0.026)	(0.027)	(0.029)	(0.039)	(0.059)	(0.129)
i-g	-0.070^{***}	-0.041^{***}	-0.020^{**}	-0.013^{**}	-0.005	-0.003	-0.000	0.008	0.054^{*}
	(0.026)	(0.012)	(0.008)	(0.006)	(0.005)	(0.006)	(0.007)	(0.011)	(0.032)
OTD	0.004	-0.021	-0.048^{*}	-0.047^{*}	-0.046	-0.046	-0.019	-0.030	0.214
	(0.069)	(0.039)	(0.029)	(0.028)	(0.032)	(0.035)	(0.040)	(0.070)	(0.180)
TGGE	0.698	0.833^{*}	0.247	0.311	0.309	0.382	0.225	-0.308	-3.309^{*}
	(0.970)	(0.429)	(0.312)	(0.298)	(0.279)	(0.342)	(0.479)	(0.867)	(1.822)
OG_{dummy}	0.336^{***}	0.152^{***}	0.097^{***}	0.067^{***}	0.032	0.013	0.005	-0.036	-0.085
	(0.072)	(0.041)	(0.020)	(0.020)	(0.020)	(0.022)	(0.040)	(0.054)	(0.125)
EB_{dummy}	-0.238^{***}	-0.149^{***}	-0.099^{**}	-0.076^{***}	-0.075^{***}	-0.062^{***}	-0.022	0.028	0.102
	(0.073)	(0.049)	(0.041)	(0.024)	(0.024)	(0.017)	(0.038)	(0.052)	(0.115)
GCF_{GG}	-14.040^{***}	-8.814^{***}	-5.753^{***}	-4.189^{***}	-4.578^{***}	-4.978^{***}	-4.626^{***}	-6.360^{***}	-4.173
	(2.700)	(1.196)	(1.188)	(1.215)	(1.713)	(1.648)	(1.277)	(2.258)	(5.109)
FCE_{GG}	3.912^{*}	1.392	1.647^{***}	1.183^{**}	1.165^{**}	1.113^{*}	1.279	2.186	8.215^{*}
	(2.017)	(0.880)	(0.464)	(0.551)	(0.500)	(0.619)	(1.007)	(1.583)	(4.335)
REER	0.204	0.110	-0.149	-0.367^{**}	-0.423^{***}	-0.546^{***}	-0.815^{***}	-0.525	-1.215
	(0.729)	(0.237)	(0.157)	(0.175)	(0.126)	(0.161)	(0.239)	(0.386)	(0.744)
gr_{GDP}	-0.017	-0.005	0.000	-0.001	0.001	-0.001	-0.002	-0.002	0.026
	(0.027)	(0.013)	(0.008)	(0.006)	(0.006)	(0.006)	(0.007)	(0.010)	(0.029)
$Debt_{ratio}$	-0.004^{**}	-0.002^{**}	-0.002^{***}	-0.001^{**}	-0.001	-0.000	0.001	0.001	0.008^{**}
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.003)
Constant	-1.353	-0.212	1.399^{*}	2.545^{***}	2.944^{***}	3.639^{***}	4.865^{***}	3.953^{*}	6.246
	(3.413)	(1.203)	(0.795)	(0.830)	(0.620)	(0.841)	(1.228)	(2.022)	(4.001)
Pseudo-R^2	0.050	0.030	0.019	0.013	0.009	0.009	0.009	0.013	0.023

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table IX: Elasticity of Output-to-Total Expenditures for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	-0.720	0.247^{***}	0.326^{***}	0.442^{***}	0.539^{***}	0.642^{***}	0.766^{***}	1.202^{***}	2.281^{***}
	(0.477)	(0.054)	(0.043)	(0.044)	(0.035)	(0.037)	(0.052)	(0.116)	(0.350)
i-g	-0.083^{***}	-0.040^{***}	-0.020^{**}	-0.009^{**}	-0.008^{*}	0.001	0.020^{**}	0.018	0.029
	(0.023)	(0.008)	(0.008)	(0.004)	(0.004)	(0.007)	(0.010)	(0.018)	(0.045)
OTD	0.162	0.150^{***}	0.046	0.009	-0.018	-0.013	0.010	0.065	0.234
	(0.137)	(0.052)	(0.051)	(0.029)	(0.023)	(0.048)	(0.058)	(0.081)	(0.287)
$TGGE$	5.841^{**}	1.920^{***}	1.101^{***}	0.693^{**}	0.893^{*}	0.230	-0.430	-2.254^{*}	-10.298^{***}
	(2.282)	(0.448)	(0.345)	(0.344)	(0.456)	(0.458)	(0.735)	(1.209)	(2.955)
OG_{dummy}	0.480^{***}	0.331^{***}	0.237^{***}	0.271^{***}	0.262^{***}	0.263^{***}	0.265^{***}	0.239^{***}	0.169
	(0.165)	(0.056)	(0.045)	(0.035)	(0.028)	(0.041)	(0.045)	(0.087)	(0.181)
EB_{dummy}	-0.390^{**}	-0.113^{*}	0.021	0.035	0.026	0.060	0.080	0.056	-0.012
	(0.173)	(0.063)	(0.043)	(0.035)	(0.037)	(0.042)	(0.054)	(0.060)	(0.235)
GCF_{GG}	-15.694^{**}	-12.376^{***}	-10.273^{***}	-12.870^{***}	-13.528^{***}	-11.550^{***}	-11.071^{***}	-15.106^{***}	-28.453^{**}
	(6.526)	(3.205)	(2.275)	(1.723)	(1.759)	(2.960)	(2.777)	(3.738)	(11.122)
FCE_{GG}	-6.755	0.019	0.990^{*}	2.116^{***}	2.071^{**}	3.272^{***}	4.431^{**}	8.405^{***}	21.067^{**}
	(4.553)	(0.796)	(0.526)	(0.754)	(0.856)	(0.948)	(1.826)	(2.889)	(8.344)
$REER$	3.297^{***}	0.887^{**}	0.247	0.018	-0.145	-0.622	-1.920^{***}	-3.114^{***}	-6.495^{***}
	(1.148)	(0.372)	(0.293)	(0.230)	(0.305)	(0.406)	(0.461)	(0.810)	(2.067)
gr_{GDP}	-0.024	0.028^{***}	0.056^{***}	0.066^{***}	0.071^{***}	0.084^{***}	0.105^{***}	0.099^{***}	0.121^{***}
	(0.021)	(0.009)	(0.009)	(0.006)	(0.009)	(0.010)	(0.015)	(0.020)	(0.043)
$Debt_{ratio}$	-0.012^{**}	-0.004^{***}	-0.001	-0.001^{**}	-0.001	0.002	0.004^{***}	0.005^{***}	0.014^{**}
	(0.005)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.006)
Constant	-16.317^{***}	-5.076^{***}	-1.623	-0.281	0.608	2.710	8.646^{***}	14.290^{***}	30.944^{***}
	(5.573)	(1.830)	(1.456)	(1.182)	(1.516)	(2.026)	(2.191)	(3.707)	(8.720)
Pseudo-R^2	0.019	0.029	0.032	0.032	0.031	0.029	0.029	0.033	0.042

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table X: Elasticity of Private Investment-to-Total Expenditures for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	-1.858^{**}	-0.111	0.367^{***}	0.717^{***}	0.959^{***}	1.221^{***}	1.663^{***}	2.756^{***}	5.719^{***}
	(0.768)	(0.229)	(0.138)	(0.092)	(0.074)	(0.080)	(0.184)	(0.323)	(1.038)
i-g	-0.385^{***}	-0.245^{***}	-0.164^{***}	-0.133^{***}	-0.088^{**}	-0.019	0.019	0.108	0.272^{***}
	(0.116)	(0.056)	(0.034)	(0.034)	(0.035)	(0.044)	(0.051)	(0.066)	(0.087)
OTD	0.135	-0.170	-0.223	-0.136	-0.009	0.185	0.255	0.810^{***}	2.173^{***}
	(0.602)	(0.260)	(0.202)	(0.101)	(0.133)	(0.149)	(0.174)	(0.175)	(0.705)
TGGE	30.637^{***}	9.745^{***}	5.991^{***}	4.493^{***}	1.758	0.377	-4.218^{**}	-11.822^{***}	-33.759^{***}
	(8.443)	(2.939)	(2.195)	(1.311)	(1.424)	(1.622)	(1.680)	(2.686)	(7.245)
OG_{dummy}	0.569	0.311	0.150	0.235^{**}	0.335^{***}	0.392^{***}	0.342^{*}	0.544^{**}	0.033
	(0.470)	(0.213)	(0.187)	(0.107)	(0.101)	(0.134)	(0.195)	(0.270)	(0.505)
EB_{dummy}	-0.933	-0.173	-0.217	-0.428^{***}	-0.376^{***}	-0.445^{**}	-0.377	-0.314	-0.717
	(0.608)	(0.237)	(0.185)	(0.134)	(0.137)	(0.208)	(0.254)	(0.279)	(0.649)
GCF_{GG}	-18.210	-13.038	-22.525^{***}	-29.730^{***}	-31.499^{***}	-30.161^{***}	-20.354^{**}	-15.436	-61.277^{**}
	(24.646)	(10.235)	(7.085)	(4.206)	(4.238)	(6.171)	(8.755)	(12.677)	(25.827)
FCE_{GG}	-34.598^{*}	-10.857^{*}	-4.989	-1.404	6.022^{*}	7.594^{***}	16.294^{***}	32.044^{***}	64.922^{***}
	(18.058)	(6.285)	(4.036)	(2.916)	(3.131)	(2.862)	(4.180)	(7.121)	(20.910)
REER	8.613^{*}	1.887	1.725^{*}	1.990^{**}	1.807^{**}	0.928	0.159	-5.735^{**}	-16.450^{***}
	(4.759)	(1.298)	(0.980)	(0.862)	(0.845)	(1.133)	(1.449)	(2.680)	(4.327)
gr_{GDP}	-0.185^{*}	-0.062	0.004	0.025	0.054	0.114^{**}	0.136^{***}	0.238^{***}	0.428^{***}
	(0.109)	(0.057)	(0.035)	(0.030)	(0.036)	(0.046)	(0.050)	(0.086)	(0.111)
$Debt_{ratio}$	-0.052^{***}	-0.010^{**}	-0.006^{*}	-0.002	0.001	0.008^{**}	0.015^{***}	0.029^{***}	0.065^{***}
	(0.013)	(0.004)	(0.003)	(0.002)	(0.003)	(0.004)	(0.004)	(0.005)	(0.017)
Constant	-46.032^{**}	-10.213	-7.950	-9.119^{**}	-9.030^{**}	-5.702	-2.395	21.995^{*}	70.264^{***}
	(21.909)	(6.904)	(4.992)	(3.841)	(4.049)	(5.382)	(7.185)	(12.459)	(20.037)
Pseudo-R^2	0.016	0.014	0.014	0.013	0.013	0.012	0.013	0.016	0.031

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XI: Elasticity of Private Consumption-to-Total Expenditures for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	-0.600^{*}	0.194^{***}	0.259^{***}	0.362^{***}	0.460^{***}	0.505^{***}	0.657^{***}	0.920^{***}	1.724^{***}
	(0.347)	(0.058)	(0.041)	(0.035)	(0.049)	(0.054)	(0.081)	(0.105)	(0.343)
i-g	-0.046^{*}	-0.014	-0.007	0.006	0.015	0.012	0.009	0.005	0.028
	(0.027)	(0.014)	(0.009)	(0.010)	(0.013)	(0.011)	(0.009)	(0.012)	(0.051)
OTD	0.008	-0.017	-0.142^{***}	-0.133^{***}	-0.143^{***}	-0.114^{**}	-0.131^{***}	-0.081	0.145
	(0.127)	(0.061)	(0.033)	(0.038)	(0.029)	(0.046)	(0.048)	(0.058)	(0.222)
TGGE	5.658^{***}	2.904^{***}	1.640^{***}	1.129^{***}	0.984^{**}	0.118	-0.695	-2.079^{**}	-11.744^{***}
	(1.675)	(0.654)	(0.365)	(0.382)	(0.500)	(0.393)	(0.732)	(0.936)	(3.015)
OG_{dummy}	0.490^{***}	0.425^{***}	0.339^{***}	0.280^{***}	0.284^{***}	0.239^{***}	0.257^{***}	0.300^{***}	0.303
	(0.167)	(0.061)	(0.043)	(0.038)	(0.051)	(0.048)	(0.059)	(0.081)	(0.206)
EB_{dummy}	-0.152	-0.046	-0.001	0.006	0.002	-0.042	-0.068	-0.085	-0.061
	(0.224)	(0.073)	(0.041)	(0.039)	(0.050)	(0.056)	(0.061)	(0.094)	(0.276)
GCF_{GG}	-12.757^{**}	-13.488^{***}	-12.765^{***}	-13.063^{***}	-12.716^{***}	-15.021^{***}	-12.033^{***}	-12.158^{***}	-9.439
	(5.111)	(2.245)	(1.860)	(1.494)	(1.665)	(1.942)	(2.152)	(3.466)	(12.309)
FCE_{GG}	-4.587	-0.471	0.744	1.635^{**}	1.780^{**}	3.091^{***}	4.737^{***}	7.782^{***}	24.534^{***}
	(3.423)	(0.931)	(0.694)	(0.757)	(0.905)	(0.832)	(1.067)	(1.420)	(6.004)
REER	2.104^{*}	0.705	0.225	0.156	-0.126	-0.468	-1.023^{***}	-1.922^{***}	-6.060^{***}
	(1.259)	(0.604)	(0.403)	(0.375)	(0.357)	(0.371)	(0.336)	(0.654)	(1.321)
gr_{GDP}	0.006	0.040^{***}	0.052^{***}	0.065^{***}	0.069^{***}	0.061^{***}	0.054^{***}	0.055^{***}	0.066
	(0.024)	(0.012)	(0.007)	(0.007)	(0.010)	(0.012)	(0.011)	(0.014)	(0.058)
$Debt_{ratio}$	-0.012^{***}	-0.006^{***}	-0.004^{***}	-0.003^{***}	-0.003^{***}	-0.002^{*}	0.000	0.004^{**}	0.018^{***}
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.006)
Constant	-10.734^{*}	-3.771	-0.606	-0.253	1.218	3.055^{*}	5.710^{***}	9.687^{***}	28.654^{***}
	(6.325)	(2.962)	(1.735)	(1.796)	(1.702)	(1.848)	(1.758)	(3.382)	(6.475)
Pseudo-R^2	0.016	0.025	0.027	0.026	0.023	0.020	0.021	0.024	0.032

Notes: (1)Standard errors in parentheses; (2) Significance levels: $^{***}\, p < 0.01$; $^{**}\, p < 0.05$; $^{*}\, p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XII: Elasticity of Output-to-Total Revenues for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FCE_{Priv}	1.418	−0.311	−0.463	−1.131**	−1.343***	−1.633***	−2.436***	−3.772***	−8.893***
	(2.952)	(0.650)	(0.374)	(0.450)	(0.438)	(0.593)	(0.678)	(1.349)	(2.463)
GDP_{pc}	−0.010	−0.047	−0.010	−0.016	−0.010	0.019	0.027	0.012	−0.067
	(0.110)	(0.052)	(0.040)	(0.038)	(0.032)	(0.043)	(0.062)	(0.084)	(0.165)
$Debt_{pc}$	−0.095	−0.024	−0.068**	−0.093***	−0.075***	−0.069***	−0.086***	−0.071	0.036
	(0.108)	(0.029)	(0.027)	(0.028)	(0.023)	(0.026)	(0.031)	(0.060)	(0.149)
GCF_{Priv}	3.393**	2.186***	1.472***	0.867**	0.704	0.763	0.389	−0.224	−1.578
	(1.336)	(0.518)	(0.341)	(0.388)	(0.517)	(0.612)	(0.593)	(0.939)	(1.652)
Sav_{Priv}	1.812	0.080	0.274	−0.181	−0.385	−0.540	−0.827	−1.959	−7.377***
	(3.325)	(0.839)	(0.501)	(0.518)	(0.407)	(0.428)	(0.548)	(1.324)	(2.553)
i	−0.081**	−0.030**	−0.027***	−0.029***	−0.027***	−0.027***	−0.029***	−0.032*	−0.008
	(0.032)	(0.013)	(0.008)	(0.008)	(0.009)	(0.007)	(0.008)	(0.019)	(0.049)
DI_{Priv}	−1.452	0.464	0.309	0.540*	0.794***	1.085***	1.457***	2.297*	7.566***
	(2.432)	(0.479)	(0.278)	(0.282)	(0.272)	(0.345)	(0.490)	(1.256)	(2.195)
u	−0.065***	−0.037***	−0.023***	−0.013***	−0.005*	0.003	0.012***	0.030***	0.066**
	(0.021)	(0.005)	(0.004)	(0.004)	(0.003)	(0.005)	(0.004)	(0.011)	(0.030)
Interest	12.618**	4.712***	5.446***	7.172***	7.383***	8.539***	10.950***	14.347***	13.429
	(5.326)	(1.754)	(1.352)	(1.631)	(1.956)	(1.334)	(1.689)	(3.780)	(12.510)
TGGR	0.944	0.062	0.349*	0.520**	0.463	0.247	0.039	−0.750	−1.058
	(0.909)	(0.268)	(0.203)	(0.263)	(0.307)	(0.349)	(0.392)	(0.635)	(1.249)
Constant	0.924	0.928	1.157**	1.725***	1.515***	1.226*	1.659**	2.301**	1.923
	(1.625)	(0.608)	(0.541)	(0.565)	(0.498)	(0.638)	(0.707)	(0.959)	(2.321)
Pseudo-R^2	0.043	0.026	0.014	0.008	0.006	0.005	0.006	0.008	0.017

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XIII: Elasticity of Private Investment-to-Total Revenues for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
TGGR	7.386	4.470	1.207	−0.993	−1.018	−0.888	−2.173	-5.524^{*}	-25.746^{***}
	(4.702)	(2.986)	(1.757)	(1.588)	(1.399)	(1.707)	(2.509)	(3.282)	(6.336)
TR_{Gov}	2.318	−2.177	0.523	2.632	2.266^{*}	1.100	2.227	2.381	6.261
	(3.303)	(2.557)	(2.340)	(1.733)	(1.303)	(1.432)	(1.990)	(2.979)	(8.293)
NULC	0.430	0.146	−0.570	-1.067^{**}	-1.130^{***}	-1.210^{***}	-1.154^{**}	−0.497	−0.035
	(1.989)	(0.887)	(0.884)	(0.502)	(0.392)	(0.397)	(0.549)	(0.778)	(1.844)
DT	-8.829^{*}	−3.341	−1.277	0.279	0.442	1.667	1.303	4.056	18.427^{***}
	(4.911)	(2.039)	(1.762)	(1.070)	(1.174)	(1.492)	(1.826)	(2.903)	(5.203)
u	-0.165^{***}	-0.045^{**}	-0.027^{*}	0.014	0.045^{***}	0.071^{***}	0.093^{***}	0.194^{***}	0.383^{***}
	(0.043)	(0.018)	(0.015)	(0.013)	(0.008)	(0.011)	(0.021)	(0.034)	(0.076)
PVDebt	-36.473^{***}	-24.419^{***}	-11.991^{***}	-5.984^{***}	−1.604	0.875	4.361	10.068^{***}	21.133^{***}
	(4.553)	(2.957)	(2.685)	(2.207)	(1.669)	(1.701)	(2.757)	(2.067)	(8.074)
gr_{Debt}	-0.069^{**}	-0.034^{***}	−0.013	−0.009	−0.002	−0.001	−0.002	0.003	0.040
	(0.030)	(0.011)	(0.010)	(0.007)	(0.008)	(0.007)	(0.009)	(0.017)	(0.036)
HICP	−2.366	−2.056	0.074	1.958^{**}	2.623^{***}	3.717^{***}	4.643^{***}	4.976^{***}	8.945^{***}
	(3.071)	(1.415)	(1.456)	(0.883)	(0.822)	(0.909)	(0.846)	(1.183)	(3.000)
$HICP_E$	−0.857	0.175	−0.011	−0.459	−0.416	−0.683	-0.932^{*}	−0.746	−1.423
	(0.969)	(0.556)	(0.452)	(0.444)	(0.416)	(0.515)	(0.504)	(0.587)	(1.664)
CAB	0.002	0.001	0.000	−0.000	−0.000	−0.001	−0.001	−0.001	−0.003
	(0.040)	(0.008)	(0.012)	(0.010)	(0.011)	(0.010)	(0.009)	(0.019)	(0.072)
Constant	9.783^{*}	6.924^{***}	2.534	−1.225	-3.950^{***}	-7.074^{***}	-9.680^{***}	-13.873^{***}	-24.064^{***}
	(5.028)	(2.237)	(2.015)	(1.124)	(1.480)	(1.808)	(1.762)	(2.511)	(4.504)
Pseudo-R^2	0.041	0.021	0.007	0.002	0.003	0.005	0.008	0.013	0.026

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}\,p < 0.01$; $^{**}\,p < 0.05$; $^{*}\,p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XIV: Elasticity of Private Consumption-to-Total Revenues for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
Sav_{Priv}	2.381	−0.079	−0.628	−0.900**	−1.134**	−1.540***	−1.724***	−3.064***	−8.203***
	(1.983)	(0.615)	(0.527)	(0.451)	(0.451)	(0.398)	(0.477)	(0.874)	(2.387)
DI_{Priv}	−4.831***	−1.285**	−0.649	−0.071	0.104	0.551	0.869**	2.060***	6.456***
	(1.755)	(0.532)	(0.402)	(0.402)	(0.325)	(0.335)	(0.409)	(0.619)	(2.012)
SB	−6.628***	−0.587	−0.137	0.442	1.371	0.989	1.852	3.278**	1.746
	(1.483)	(1.242)	(1.081)	(0.904)	(1.146)	(0.944)	(1.563)	(1.669)	(4.018)
TR_{Gov}	4.722***	0.704	0.775	0.544	0.086	0.270	0.565	0.195	1.914
	(1.366)	(0.909)	(0.783)	(0.585)	(0.721)	(0.610)	(1.235)	(1.491)	(2.554)
CE	−1.728	−0.808	−0.022	1.833**	2.111**	2.538***	1.705	3.546**	7.056
	(2.806)	(1.095)	(0.915)	(0.765)	(0.880)	(0.908)	(1.246)	(1.708)	(5.591)
DT	3.004**	1.124**	0.372	−0.514	−0.578	−0.475	−0.247	−0.860	−0.841
	(1.341)	(0.494)	(0.416)	(0.445)	(0.407)	(0.409)	(0.436)	(0.863)	(2.399)
FCE_{Priv}	3.802*	0.818	0.501	0.034	−0.229	−0.577	−0.662	−1.761**	−5.887**
	(2.167)	(0.648)	(0.510)	(0.406)	(0.428)	(0.444)	(0.590)	(0.825)	(2.425)
GCF_{Priv}	4.318***	2.592***	2.117***	1.967***	1.395***	0.874***	0.937**	−0.876	−2.363*
	(1.153)	(0.393)	(0.266)	(0.234)	(0.321)	(0.293)	(0.379)	(0.602)	(1.429)
$HICP$	−1.371***	−0.543***	−0.291***	−0.147	−0.129	−0.093	−0.025	0.092	0.015
	(0.213)	(0.114)	(0.093)	(0.099)	(0.111)	(0.094)	(0.121)	(0.143)	(0.328)
CAB	0.000	0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.001
	(0.009)	(0.007)	(0.003)	(0.002)	(0.002)	(0.003)	(0.003)	(0.005)	(0.013)
Constant	6.601***	2.826***	1.590***	0.786	0.886	0.776*	0.307	−0.098	−0.195
	(1.126)	(0.530)	(0.397)	(0.529)	(0.643)	(0.463)	(0.530)	(0.738)	(2.162)
Pseudo-R^2	0.027	0.016	0.010	0.008	0.006	0.004	0.004	0.007	0.011

Notes: (1)Standard errors in parentheses; (2) Significance levels: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XV: Elasticity of Output-to-Total Expenditures for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FCE_{Priv}	10.440^{**}	4.842^{***}	2.283^{*}	0.683	0.335	-1.741^{**}	-3.182^{**}	-5.379^{***}	-17.457^{***}
	(4.857)	(1.875)	(1.338)	(1.258)	(0.912)	(0.864)	(1.275)	(1.698)	(3.052)
GDP_{pc}	−0.018	0.009	0.011	−0.107	-0.106^{**}	-0.187^{**}	-0.395^{***}	-0.456^{***}	-0.812^{***}
	(0.275)	(0.163)	(0.082)	(0.071)	(0.054)	(0.076)	(0.093)	(0.121)	(0.243)
$Debt_{pc}$	0.111	−0.164	-0.164^{***}	−0.052	0.011	0.107^{**}	0.232^{***}	0.417^{***}	0.980^{***}
	(0.185)	(0.117)	(0.056)	(0.052)	(0.036)	(0.042)	(0.080)	(0.115)	(0.224)
GCF_{Priv}	8.175^{***}	4.744^{***}	3.293^{***}	3.362^{***}	3.193^{***}	2.334^{***}	1.658^{***}	1.658	3.746
	(2.210)	(1.065)	(0.459)	(0.582)	(0.454)	(0.471)	(0.630)	(1.168)	(3.563)
Sav_{Priv}	9.688^{*}	4.178^{*}	1.034	0.041	−0.018	-1.431^{**}	-2.171^{**}	-4.620^{***}	-13.956^{***}
	(5.746)	(2.239)	(1.452)	(1.253)	(0.859)	(0.716)	(1.053)	(1.420)	(2.555)
i	0.113^{***}	0.017	−0.005	−0.003	0.009	0.020	0.007	−0.017	−0.070
	(0.042)	(0.026)	(0.015)	(0.009)	(0.013)	(0.015)	(0.021)	(0.027)	(0.057)
DI_{Priv}	-10.191^{*}	-6.443^{***}	-3.285^{***}	-1.744^{*}	-1.529^{**}	0.231	0.355	1.724	5.188^{**}
	(5.530)	(2.142)	(1.237)	(1.035)	(0.638)	(0.714)	(0.816)	(1.118)	(2.327)
u	−0.061	-0.027^{**}	-0.029^{***}	-0.023^{***}	−0.010	0.005	0.020^{**}	0.074^{***}	0.198^{***}
	(0.049)	(0.012)	(0.008)	(0.006)	(0.007)	(0.009)	(0.010)	(0.015)	(0.022)
$Interest$	−14.492	8.764	8.193^{**}	2.322	−0.256	−5.567	−6.539	-14.826^{*}	-28.512^{**}
	(14.126)	(6.002)	(3.594)	(2.463)	(2.469)	(3.744)	(6.162)	(8.297)	(11.831)
$TGGR$	3.616	2.744^{***}	2.177^{***}	1.608^{***}	1.006	0.562	−0.032	−1.191	-9.166^{***}
	(2.906)	(0.926)	(0.569)	(0.589)	(0.667)	(0.481)	(0.649)	(0.974)	(3.008)
$Constant$	−2.796	1.417	1.540^{**}	1.975^{***}	1.795^{**}	2.131^{**}	4.372^{***}	4.368^{***}	10.948^{***}
	(2.843)	(1.050)	(0.780)	(0.608)	(0.755)	(1.009)	(1.049)	(1.682)	(4.147)
Pseudo-R^2	0.010	0.013	0.011	0.007	0.004	0.003	0.003	0.007	0.019

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are for the countries panel data. This value divided by 9 deciles gives the observations per decile.

Table XVI: Elasticity of Private Investment-to-Total Expenditures for specific variable

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
TGGR	17.792^{*}	8.249^{**}	5.026^{*}	4.419^{*}	6.632^{**}	6.379^{**}	6.099^{*}	0.433	−13.780
	(9.189)	(3.839)	(3.022)	(2.615)	(2.898)	(3.156)	(3.384)	(5.293)	(13.030)
TR_{Gov}	−2.146	−4.360	−3.992	-4.724^{***}	-7.893^{***}	-9.437^{***}	-11.568^{***}	-15.107^{***}	-22.862^{***}
	(9.670)	(3.486)	(2.821)	(1.784)	(2.244)	(2.521)	(2.507)	(3.494)	(7.748)
NULC	3.896	0.286	0.150	-0.932^{*}	-1.517^{***}	-2.308^{***}	-3.741^{***}	-4.959^{***}	-8.492^{***}
	(3.189)	(1.025)	(0.546)	(0.507)	(0.425)	(0.502)	(0.575)	(1.117)	(2.568)
DT	−8.078	-7.312^{***}	-4.453^{*}	−2.453	−1.840	−0.299	−0.778	4.911	15.242
	(7.688)	(2.835)	(2.413)	(2.430)	(2.172)	(2.674)	(2.606)	(5.436)	(14.108)
u	-0.329^{**}	-0.045^{*}	−0.015	0.008	0.050^{**}	0.080^{***}	0.157^{***}	0.284^{***}	0.799^{***}
	(0.139)	(0.024)	(0.014)	(0.015)	(0.020)	(0.022)	(0.028)	(0.050)	(0.236)
PVDebt	-39.718^{***}	-33.943^{***}	-27.044^{***}	-21.463^{***}	-20.497^{***}	-17.314^{***}	-18.741^{***}	-16.660^{***}	-25.792^{***}
	(11.760)	(6.777)	(4.311)	(4.172)	(4.014)	(3.701)	(4.035)	(3.564)	(7.129)
gr_{Debt}	−0.005	-0.017^{**}	-0.025^{***}	-0.024^{***}	-0.024^{***}	-0.025^{***}	-0.031^{***}	-0.039^{***}	-0.061^{***}
	(0.015)	(0.008)	(0.006)	(0.005)	(0.004)	(0.003)	(0.006)	(0.010)	(0.017)
HICP	1.289	−2.248	-3.268^{***}	-2.059^{**}	-1.415^{**}	−0.300	1.760^{*}	2.716	6.029
	(6.088)	(2.004)	(1.049)	(1.006)	(0.590)	(0.878)	(0.969)	(1.950)	(4.179)
$HICP_E$	-5.037^{**}	0.303	1.809^{***}	2.062^{***}	2.313^{***}	2.891^{***}	3.457^{***}	5.678^{***}	8.653^{***}
	(2.511)	(0.803)	(0.460)	(0.532)	(0.365)	(0.516)	(0.747)	(1.273)	(1.803)
CAB	0.003	0.001	0.001	0.001	0.001	0.000	−0.000	−0.001	−0.002
	(0.012)	(0.004)	(0.005)	(0.003)	(0.003)	(0.003)	(0.013)	(0.013)	(0.016)
Constant	−7.665	5.318^{*}	5.343^{***}	4.199^{**}	2.641^{*}	−0.825	-5.380^{*}	-11.330^{***}	-17.915^{***}
	(10.535)	(2.738)	(1.589)	(1.838)	(1.585)	(2.650)	(2.892)	(3.459)	(6.553)
Pseudo-R^2	0.009	0.012	0.013	0.013	0.012	0.012	0.012	0.015	0.028

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}\,p < 0.01$; $^{**}\,p < 0.05$; $^{*}\,p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XVII: Elasticity of Private Consumption-to-Total Expenditures for specific variable

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
Sav_{Priv}	4.840	1.643	0.552	−0.940	−1.249	-1.867^{**}	-3.756^{***}	-5.009^{***}	-16.616^{***}
	(6.007)	(1.372)	(0.873)	(1.012)	(0.849)	(0.894)	(1.154)	(1.789)	(6.347)
DI_{Priv}	-10.146^{**}	-4.231^{***}	-3.399^{***}	-2.116^{*}	-1.690^{**}	−0.738	0.545	1.347	7.295
	(4.826)	(1.354)	(0.932)	(1.079)	(0.807)	(0.839)	(0.943)	(1.655)	(4.705)
SB	−10.506	−4.223	−0.051	0.729	2.036^{**}	3.300^{**}	2.199	1.222	−13.859
	(7.186)	(2.862)	(2.105)	(1.188)	(1.017)	(1.433)	(2.268)	(3.839)	(9.784)
TR_{Gov}	6.994	1.130	−0.284	−1.142	−1.125	-1.957^{**}	−1.527	−1.686	2.518
	(4.304)	(1.850)	(1.730)	(0.910)	(0.752)	(0.912)	(1.387)	(1.961)	(6.405)
CE	9.054	−1.493	-3.486^{*}	-4.685^{***}	-4.189^{***}	-3.621^{*}	−3.014	-9.052^{**}	-22.809^{***}
	(7.739)	(2.465)	(1.897)	(1.359)	(1.168)	(1.991)	(2.272)	(3.672)	(8.749)
DT	0.894	3.050^{***}	2.768^{***}	3.228^{***}	2.764^{***}	2.603^{***}	3.270^{***}	5.174^{***}	11.635^{***}
	(4.180)	(0.883)	(0.622)	(0.624)	(0.514)	(0.735)	(0.564)	(1.040)	(2.922)
FCE_{Priv}	8.575^{*}	3.963^{***}	3.262^{***}	2.050^{*}	1.788^{**}	0.944	0.321	0.708	−1.862
	(5.026)	(1.371)	(0.923)	(1.083)	(0.827)	(0.756)	(0.871)	(1.815)	(5.945)
GCF_{Priv}	4.908^{***}	2.849^{***}	3.248^{***}	3.045^{***}	3.314^{***}	2.352^{***}	2.061^{*}	1.612	−5.041
	(1.798)	(0.864)	(0.564)	(0.700)	(0.683)	(0.804)	(1.078)	(1.751)	(3.171)
$HICP$	-2.488^{***}	-1.412^{***}	-0.679^{***}	-0.331^{**}	−0.066	0.163	0.795^{***}	1.653^{***}	3.574^{***}
	(0.734)	(0.201)	(0.122)	(0.130)	(0.136)	(0.155)	(0.235)	(0.281)	(0.400)
CAB	0.002	0.001	0.001	0.001	0.001	0.001	0.000	0.000	−0.000
	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)
$Constant$	11.331^{***}	7.045^{***}	3.752^{***}	2.355^{***}	0.927	−0.017	-3.156^{**}	-6.707^{***}	-13.289^{***}
	(3.384)	(1.050)	(0.653)	(0.613)	(0.727)	(0.809)	(1.289)	(1.646)	(2.551)
Pseudo-R^2	0.008	0.012	0.011	0.008	0.006	0.004	0.004	0.007	0.012

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

4 Sub-Budgetary Items

4.3.1. Commons Explanatory Variables for Sub-Revenues

Table XVIII: Elasticity of Output-to-Direct Taxes for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	0.347	0.127^{***}	0.000	-0.068^{***}	-0.070^{***}	-0.135^{***}	-0.225^{***}	-0.336^{***}	-0.828^{***}
	(0.237)	(0.048)	(0.027)	(0.025)	(0.027)	(0.032)	(0.039)	(0.055)	(0.170)
i-g	0.017	-0.038^{***}	-0.032^{***}	-0.028^{***}	-0.026^{***}	-0.026^{**}	-0.021^{**}	-0.010	0.021
	(0.031)	(0.011)	(0.009)	(0.006)	(0.008)	(0.012)	(0.010)	(0.014)	(0.030)
OTD	0.454^{***}	0.169^{***}	0.081^{***}	0.023	0.016	0.001	-0.032	-0.005	-0.177
	(0.159)	(0.048)	(0.027)	(0.023)	(0.031)	(0.048)	(0.071)	(0.106)	(0.285)
TGGE	2.224	1.305^{**}	0.876^{**}	0.808^{*}	0.532	0.581	0.468	0.127	0.976
	(2.452)	(0.552)	(0.402)	(0.422)	(0.467)	(0.672)	(0.988)	(1.231)	(3.640)
OG_{dummy}	0.435^{*}	0.184^{***}	0.130^{***}	0.089^{***}	0.079^{***}	0.093^{**}	0.049	0.044	0.148
	(0.258)	(0.040)	(0.029)	(0.030)	(0.030)	(0.040)	(0.048)	(0.066)	(0.200)
EB_{dummy}	-0.183	-0.104^{**}	-0.010	0.046	0.078^{***}	0.079^{**}	0.091	0.027	0.204
	(0.185)	(0.053)	(0.037)	(0.029)	(0.028)	(0.039)	(0.059)	(0.088)	(0.243)
GCF_{Gov}	-14.013^{*}	-8.090^{***}	-3.630^{***}	-2.985^{**}	-1.803	-1.354	-3.475	-10.612^{***}	-23.496^{**}
	(7.328)	(2.810)	(1.314)	(1.367)	(1.366)	(2.127)	(2.311)	(3.211)	(11.381)
FCE_{Gov}	1.646	0.491	0.368	-0.421	-0.289	-0.807	-1.268	0.498	3.304
	(4.151)	(1.161)	(0.682)	(0.612)	(0.615)	(1.009)	(1.517)	(2.181)	(7.202)
REER	0.378	-0.716^{**}	-0.485^{**}	-0.461^{**}	-0.631^{***}	-0.781^{***}	-1.340^{***}	-1.991^{***}	-4.507^{***}
	(0.921)	(0.289)	(0.212)	(0.185)	(0.197)	(0.292)	(0.283)	(0.544)	(1.741)
gr_{GDP}	0.067^{**}	0.000	0.002	0.003	0.002	-0.004	-0.005	0.005	0.051
	(0.031)	(0.011)	(0.009)	(0.007)	(0.007)	(0.012)	(0.012)	(0.017)	(0.039)
$Debt_{ratio}$	-0.009^{**}	-0.003^{**}	-0.001^{**}	-0.001	-0.000	-0.000	-0.000	-0.000	-0.002
	(0.005)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.005)
Constant	-5.192	2.322^{*}	1.856^{*}	2.288^{***}	3.231^{***}	4.240^{***}	7.480^{***}	10.762^{***}	23.628^{***}
	(4.301)	(1.365)	(0.985)	(0.878)	(0.897)	(1.446)	(1.466)	(2.569)	(8.389)
Pseudo-R^2	0.014	0.019	0.017	0.015	0.012	0.010	0.009	0.009	0.011

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XIX: Elasticity of Private Investment-to-Direct Taxes for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	0.715	0.327^{***}	0.045	−0.051	−0.085	-0.230^{***}	-0.319^{***}	-0.593^{***}	-0.956^{**}
	(0.527)	(0.110)	(0.076)	(0.064)	(0.074)	(0.057)	(0.098)	(0.159)	(0.456)
i-g	-0.203^{**}	-0.101^{***}	-0.102^{***}	-0.056^{**}	−0.044	−0.018	−0.027	−0.055	−0.108
	(0.085)	(0.026)	(0.021)	(0.028)	(0.032)	(0.024)	(0.029)	(0.064)	(0.175)
OTD	0.192	−0.235	-0.291^{***}	-0.184^{**}	−0.014	0.151	0.123	0.338^{**}	1.001
	(0.539)	(0.175)	(0.109)	(0.091)	(0.125)	(0.102)	(0.130)	(0.150)	(0.732)
TGGE	13.230^{***}	4.016^{***}	2.077^{*}	1.326^{*}	1.405	−0.194	−2.481	-5.685^{**}	-23.467^{***}
	(4.233)	(1.319)	(1.201)	(0.804)	(1.282)	(1.427)	(2.053)	(2.796)	(6.941)
OG_{dummy}	0.319	0.165	0.079	0.049	0.049	0.012	−0.043	−0.056	0.212
	(0.368)	(0.127)	(0.089)	(0.081)	(0.089)	(0.109)	(0.120)	(0.186)	(0.493)
EB_{dummy}	-0.747^{*}	−0.243	-0.184^{**}	-0.212^{***}	-0.237^{***}	-0.172^{*}	−0.082	−0.019	−0.717
	(0.434)	(0.177)	(0.091)	(0.078)	(0.073)	(0.091)	(0.110)	(0.228)	(0.523)
GCF_{Gov}	-40.933^{*}	-18.035^{**}	-15.658^{**}	-15.654^{***}	-10.733^{*}	−3.397	1.119	12.591	21.243
	(21.200)	(7.489)	(7.031)	(6.009)	(6.147)	(4.756)	(6.337)	(10.754)	(31.259)
FCE_{dummy}	−4.727	1.160	2.048	2.821^{**}	3.009	4.843^{**}	4.642	6.213	38.025^{***}
	(9.572)	(2.160)	(1.697)	(1.301)	(1.965)	(2.128)	(3.156)	(4.051)	(13.888)
REER	0.606	1.568	0.590	0.296	0.015	−0.737	−1.095	−1.447	−1.375
	(1.842)	(0.992)	(0.773)	(0.476)	(0.585)	(0.726)	(0.685)	(1.081)	(4.685)
gr_{GDP}	−0.052	−0.012	-0.041^{*}	−0.020	−0.024	−0.013	−0.028	−0.067	−0.162
	(0.078)	(0.026)	(0.021)	(0.027)	(0.029)	(0.026)	(0.035)	(0.070)	(0.177)
$Debt_{ratio}$	-0.032^{***}	-0.013^{***}	-0.008^{***}	-0.006^{***}	−0.003	0.002	0.009^{***}	0.016^{***}	0.034^{***}
	(0.011)	(0.003)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.008)
Constant	−7.507	−7.377	−1.402	−0.078	0.466	3.365	6.222^{*}	8.087	8.019
	(10.287)	(4.987)	(3.459)	(2.384)	(2.889)	(3.532)	(3.517)	(5.305)	(22.245)
Pseudo-R^2	0.012	0.011	0.008	0.004	0.002	0.002	0.004	0.006	0.009

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XX: Elasticity of Private Consumption-to-Direct Taxes for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	0.538^{***}	0.158^{***}	0.038^{*}	-0.007	-0.084^{***}	-0.113^{***}	-0.212^{***}	-0.353^{***}	-0.791^{***}
	(0.145)	(0.036)	(0.021)	(0.023)	(0.024)	(0.030)	(0.031)	(0.058)	(0.190)
i-g	0.028	-0.023^{***}	-0.027^{***}	-0.023^{***}	-0.021^{***}	-0.013	-0.009	-0.003	0.002
	(0.034)	(0.009)	(0.007)	(0.006)	(0.007)	(0.008)	(0.009)	(0.022)	(0.052)
OTD	0.564^{***}	0.135^{**}	0.013	0.004	-0.001	-0.026	-0.094	-0.103	-0.288
	(0.205)	(0.062)	(0.033)	(0.029)	(0.032)	(0.041)	(0.057)	(0.126)	(0.202)
TGGE	3.765^{*}	1.338^{***}	1.205^{***}	0.792^{**}	0.613	0.567	1.285	0.813	0.029
	(2.159)	(0.474)	(0.287)	(0.374)	(0.412)	(0.487)	(0.856)	(1.302)	(3.073)
OG_{dummy}	0.353^{*}	0.212^{***}	0.169^{***}	0.135^{***}	0.087^{***}	0.139^{***}	0.133^{***}	0.096	0.160
	(0.212)	(0.039)	(0.025)	(0.026)	(0.032)	(0.035)	(0.039)	(0.084)	(0.217)
EB_{dummy}	-0.367^{**}	-0.123^{***}	-0.061	-0.050	-0.046	-0.042	-0.038	-0.042	-0.111
	(0.166)	(0.044)	(0.038)	(0.031)	(0.035)	(0.031)	(0.041)	(0.068)	(0.293)
GCF_{Gov}	-17.451^{*}	-7.727^{***}	-4.431^{***}	-2.238	-2.360	-1.822	-5.414^{*}	-8.328^{**}	-18.323^{**}
	(9.901)	(2.556)	(1.533)	(1.880)	(1.668)	(2.334)	(2.887)	(3.426)	(8.939)
FCE_{Gov}	4.485	1.309	0.038	0.469	0.588	0.929	-0.260	2.094	5.659
	(3.576)	(0.837)	(0.627)	(0.690)	(0.909)	(0.976)	(1.824)	(3.262)	(6.598)
REER	0.172	-0.679^{***}	-0.663^{***}	-0.589^{**}	-0.566^{**}	-0.739^{***}	-1.007^{***}	-1.512^{***}	-2.479
	(1.198)	(0.224)	(0.206)	(0.265)	(0.278)	(0.261)	(0.314)	(0.508)	(1.530)
gr_{GDP}	0.091^{**}	0.011	0.003	0.003	-0.002	0.000	0.000	0.008	0.008
	(0.037)	(0.009)	(0.006)	(0.007)	(0.007)	(0.007)	(0.010)	(0.024)	(0.054)
$Debt_{ratio}$	-0.011^{**}	-0.004^{***}	-0.002^{***}	-0.002^{**}	-0.001^{**}	-0.001	-0.002^{**}	-0.002	-0.002
	(0.004)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.004)
Constant	-6.038	2.059^{**}	2.922^{***}	2.740^{**}	2.929^{**}	3.872^{***}	5.779^{***}	8.341^{***}	14.772^{**}
	(5.622)	(0.872)	(0.921)	(1.251)	(1.338)	(1.247)	(1.648)	(2.512)	(6.731)
Pseudo-R^2	0.017	0.020	0.018	0.013	0.010	0.009	0.008	0.008	0.013

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XXI: Elasticity of Output-to-Indirect Taxes for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	0.108	−0.001	−0.054**	−0.074**	−0.103***	−0.107***	−0.143***	−0.147***	−0.250∗
	(0.087)	(0.037)	(0.027)	(0.029)	(0.033)	(0.035)	(0.041)	(0.052)	(0.138)
i-g	−0.064*	−0.036***	−0.030***	−0.018*	−0.004	−0.004	0.013	0.039**	0.100***
	(0.039)	(0.012)	(0.007)	(0.009)	(0.008)	(0.010)	(0.010)	(0.018)	(0.028)
OTD	−0.070	−0.043	−0.063**	−0.046	−0.024	−0.026	−0.012	−0.000	−0.066
	(0.151)	(0.041)	(0.030)	(0.037)	(0.037)	(0.045)	(0.050)	(0.087)	(0.182)
TGGE	1.646	1.492***	1.098***	1.266***	1.308***	1.663***	1.783***	2.214***	0.931
	(1.646)	(0.430)	(0.356)	(0.467)	(0.361)	(0.482)	(0.506)	(0.823)	(1.491)
OG_{dummy}	0.071	0.091**	0.085***	0.089***	0.102***	0.108***	0.141***	0.183***	0.075
	(0.089)	(0.040)	(0.026)	(0.029)	(0.027)	(0.035)	(0.047)	(0.043)	(0.110)
EB_{dummy}	−0.071	0.027	0.081***	0.101***	0.096***	0.083**	0.099**	0.261***	0.277**
	(0.108)	(0.043)	(0.029)	(0.029)	(0.031)	(0.041)	(0.045)	(0.054)	(0.141)
GCF_{Gov}	−2.761	−5.108***	−5.977***	−4.888***	−5.626***	−4.877***	−5.057**	−7.291***	−18.660***
	(6.105)	(1.798)	(0.972)	(1.176)	(1.242)	(1.435)	(2.271)	(2.492)	(6.719)
FCE_{Gov}	2.621	−0.248	−0.246	−0.734	−0.470	−1.023	−1.677*	−2.945**	−3.293
	(2.674)	(0.539)	(0.625)	(0.763)	(0.694)	(0.894)	(0.862)	(1.479)	(2.672)
REER	0.181	0.113	−0.126	−0.228	−0.358**	−0.761***	−1.136***	−1.312***	−1.410
	(0.630)	(0.221)	(0.208)	(0.158)	(0.161)	(0.212)	(0.282)	(0.448)	(1.069)
gr_{GDP}	0.003	0.010	0.011	0.015*	0.021***	0.016*	0.026**	0.050**	0.110***
	(0.039)	(0.012)	(0.007)	(0.008)	(0.008)	(0.009)	(0.011)	(0.022)	(0.036)
$Debt_{ratio}$	−0.001	−0.002***	−0.002***	−0.001**	−0.002***	−0.003***	−0.003***	−0.003*	−0.001
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.003)
Constant	−1.693	−0.338	1.188	1.651**	2.269***	4.247***	6.131***	7.069***	9.323∗
	(2.868)	(1.039)	(0.906)	(0.733)	(0.726)	(0.976)	(1.420)	(2.069)	(5.004)
Pseudo-R^2	0.048	0.047	0.040	0.030	0.024	0.019	0.014	0.011	0.013

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XXII: Elasticity of Private Investment-to-Indirect Taxes for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	0.985^{**}	0.346	0.200^{*}	0.112	0.027	0.039	0.097	0.004	0.025
	(0.458)	(0.234)	(0.116)	(0.077)	(0.093)	(0.091)	(0.146)	(0.163)	(0.424)
i-g	-0.324^{***}	-0.169^{***}	-0.075^{**}	−0.044	0.029	0.061^{***}	0.078^{**}	0.092^{**}	0.351^{***}
	(0.100)	(0.043)	(0.033)	(0.030)	(0.025)	(0.018)	(0.039)	(0.038)	(0.130)
OTD	−0.387	−0.337	−0.162	−0.107	0.061	0.198^{*}	0.560^{***}	0.704^{**}	1.838^{**}
	(0.256)	(0.213)	(0.116)	(0.108)	(0.092)	(0.116)	(0.154)	(0.298)	(0.773)
TGGE	8.745^{*}	2.284	0.629	0.631	0.221	0.355	1.996	0.794	−8.937
	(4.857)	(2.209)	(1.204)	(1.049)	(1.264)	(1.558)	(2.509)	(3.052)	(5.486)
OG_{dummy}	0.264	−0.067	0.042	0.039	0.085	0.127^{*}	0.099	0.015	-0.651^{*}
	(0.300)	(0.149)	(0.093)	(0.073)	(0.072)	(0.075)	(0.113)	(0.143)	(0.364)
EB_{dummy}	−0.468	-0.345^{*}	-0.295^{***}	-0.201^{*}	−0.171	−0.170	−0.142	−0.010	−0.536
	(0.377)	(0.188)	(0.096)	(0.103)	(0.108)	(0.112)	(0.109)	(0.237)	(0.465)
GCF_{GG}	12.590	−5.777	-16.506^{***}	-10.556^{**}	−3.995	1.596	−0.086	5.843	−0.371
	(20.471)	(5.526)	(4.556)	(4.502)	(5.927)	(5.104)	(5.549)	(9.117)	(12.849)
FCE_{GG}	−0.595	4.975	4.565^{*}	3.876^{*}	5.987^{***}	4.962^{*}	2.769	1.076	11.641
	(7.334)	(4.301)	(2.481)	(2.008)	(1.915)	(2.917)	(4.422)	(5.406)	(9.757)
REER	3.444^{*}	2.237^{**}	1.643^{**}	1.517^{**}	1.439^{**}	0.562	−0.213	−0.813	1.625
	(2.052)	(0.958)	(0.693)	(0.718)	(0.572)	(0.550)	(0.794)	(1.868)	(4.822)
gr_{GDP}	−0.091	−0.036	0.005	0.008	0.061^{***}	0.070^{***}	0.074^{*}	0.053	0.222^{*}
	(0.095)	(0.037)	(0.028)	(0.023)	(0.022)	(0.019)	(0.041)	(0.037)	(0.121)
$Debt_{ratio}$	−0.006	−0.004	−0.002	0.000	0.002	0.004^{*}	0.005	0.006^{*}	0.020^{***}
	(0.008)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.004)	(0.007)
Constant	-20.500^{**}	-10.736^{**}	-6.937^{**}	-6.414^{*}	-7.171^{***}	−3.545	−1.435	2.033	−10.647
	(9.711)	(4.395)	(2.823)	(3.424)	(2.684)	(2.911)	(3.879)	(9.421)	(22.634)
Pseudo-R^2	0.041	0.023	0.013	0.008	0.004	0.004	0.004	0.010	0.026

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}\,p < 0.01$; $^{**}\,p < 0.05$; $^{*}\,p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XXIII: Elasticity of Private Consumption-to-Indirect Taxes for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	0.167^{**}	-0.054	-0.057^{***}	-0.074^{***}	-0.095^{***}	-0.110^{***}	-0.120^{***}	-0.166^{***}	-0.396^{***}
	(0.079)	(0.033)	(0.019)	(0.022)	(0.019)	(0.025)	(0.028)	(0.041)	(0.153)
i-g	-0.059^{**}	-0.031^{***}	-0.026^{***}	-0.019^{***}	-0.002	0.010	0.024^{**}	0.048^{**}	0.087^{***}
	(0.023)	(0.008)	(0.005)	(0.006)	(0.009)	(0.009)	(0.012)	(0.021)	(0.025)
OTD	-0.198	-0.112^{*}	-0.142^{***}	-0.112^{***}	-0.062^{*}	-0.049	-0.022	0.029	0.087
	(0.157)	(0.059)	(0.033)	(0.034)	(0.032)	(0.039)	(0.039)	(0.094)	(0.160)
TGGE	2.418^{**}	1.371^{***}	1.121^{***}	1.418^{***}	1.277^{***}	1.238^{**}	1.369^{**}	1.821^{**}	1.580
	(1.132)	(0.446)	(0.290)	(0.476)	(0.421)	(0.510)	(0.548)	(0.707)	(1.920)
OG_{dummy}	0.045	0.086^{**}	0.118^{***}	0.120^{***}	0.118^{***}	0.133^{***}	0.173^{***}	0.171^{***}	0.133
	(0.093)	(0.038)	(0.026)	(0.029)	(0.027)	(0.033)	(0.040)	(0.055)	(0.140)
EB_{dummy}	-0.055	-0.033	-0.017	0.003	0.009	-0.010	0.019	0.047	0.030
	(0.132)	(0.045)	(0.027)	(0.027)	(0.037)	(0.035)	(0.050)	(0.069)	(0.138)
GCF_{GG}	-9.116^{*}	-9.940^{***}	-9.369^{***}	-7.228^{***}	-6.409^{***}	-6.515^{***}	-6.529^{***}	-8.943^{***}	-14.411^{**}
	(4.821)	(2.011)	(1.462)	(1.722)	(1.528)	(1.578)	(2.038)	(2.566)	(6.747)
FCE_{GG}	1.710	0.635	-0.111	-0.666	-0.270	-0.049	0.600	0.627	1.000
	(2.315)	(0.944)	(0.628)	(0.791)	(0.877)	(1.188)	(1.189)	(1.715)	(3.054)
REER	0.051	0.193	0.110	-0.156	-0.255	-0.322	-0.705^{**}	-1.299^{**}	-1.700
	(0.830)	(0.245)	(0.193)	(0.177)	(0.186)	(0.208)	(0.312)	(0.567)	(1.403)
gr_{GDP}	0.004	0.010	0.005	0.004	0.014^{*}	0.021^{**}	0.029^{***}	0.051^{***}	0.067^{***}
	(0.023)	(0.008)	(0.005)	(0.006)	(0.008)	(0.009)	(0.011)	(0.019)	(0.022)
$Debt_{ratio}$	-0.004^{***}	-0.003^{***}	-0.003^{***}	-0.003^{***}	-0.003^{***}	-0.003^{***}	-0.003^{***}	-0.003^{***}	-0.003
	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)
Constant	-0.372	-0.288	0.653	1.776^{**}	2.044^{**}	2.375^{**}	3.941^{***}	6.506^{**}	9.014
	(3.807)	(0.999)	(0.928)	(0.874)	(0.855)	(1.020)	(1.491)	(2.688)	(6.196)
Pseudo-R^2	0.045	0.040	0.033	0.024	0.018	0.015	0.013	0.010	0.013

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XXIV: Elasticity of Output-to-Social Security contributions for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	0.387^{**}	0.190^{***}	0.140^{***}	0.106^{***}	0.077^{***}	0.032	−0.021	-0.182^{***}	-0.416^{***}
	(0.172)	(0.059)	(0.023)	(0.025)	(0.027)	(0.030)	(0.052)	(0.065)	(0.162)
i-g	0.009	-0.030^{**}	-0.014^{**}	−0.003	0.007	0.020^{***}	0.024^{*}	0.046^{**}	0.093^{***}
	(0.032)	(0.012)	(0.006)	(0.007)	(0.007)	(0.006)	(0.014)	(0.019)	(0.030)
OTD	0.511^{**}	0.079	0.006	−0.012	0.041	0.141^{***}	0.263^{***}	0.283^{***}	0.222
	(0.259)	(0.056)	(0.036)	(0.031)	(0.038)	(0.037)	(0.050)	(0.052)	(0.158)
TGGE	4.267^{**}	1.453^{***}	1.809^{***}	1.960^{***}	1.505^{***}	1.123^{***}	0.622	−0.631	-3.193^{**}
	(1.872)	(0.543)	(0.429)	(0.385)	(0.339)	(0.364)	(0.497)	(0.782)	(1.580)
OG_{dummy}	0.200	0.093^{**}	0.077^{***}	0.042^{*}	0.009	0.002	−0.032	−0.005	0.065
	(0.182)	(0.047)	(0.030)	(0.024)	(0.031)	(0.034)	(0.049)	(0.069)	(0.158)
EB_{dummy}	−0.278	0.091	0.115^{***}	0.068^{**}	0.004	-0.062^{*}	−0.079	0.065	0.349^{***}
	(0.186)	(0.057)	(0.033)	(0.035)	(0.040)	(0.034)	(0.052)	(0.060)	(0.110)
GCF_{GG}	7.906	1.150	−0.816	−2.538	−2.675	−3.385	−3.420	0.349	−1.399
	(7.128)	(2.270)	(1.863)	(1.956)	(2.041)	(2.185)	(2.780)	(2.646)	(9.285)
FCE_{GG}	-17.338^{***}	-6.021^{***}	-3.538^{***}	-3.054^{***}	-1.729^{*}	−0.423	1.498	3.895^{**}	7.833^{*}
	(3.148)	(1.684)	(0.975)	(1.023)	(0.979)	(1.093)	(1.414)	(1.523)	(4.719)
REER	−0.785	-0.639^{***}	-0.540^{***}	-0.289^{**}	−0.381	-0.466^{**}	−0.440	−0.668	−1.194
	(0.732)	(0.219)	(0.184)	(0.143)	(0.285)	(0.219)	(0.332)	(0.450)	(1.398)
gr_{GDP}	0.080^{**}	0.036^{***}	0.048^{***}	0.053^{***}	0.055^{***}	0.060^{***}	0.055^{***}	0.063^{***}	0.106^{***}
	(0.032)	(0.013)	(0.007)	(0.008)	(0.007)	(0.006)	(0.014)	(0.018)	(0.034)
$Debt_{ratio}$	0.002	0.002^{*}	0.001	0.001	0.001	0.002^{***}	0.003^{**}	0.005^{***}	0.008^{***}
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.003)
Constant	1.445	2.889^{**}	2.467^{***}	1.503^{**}	1.827	1.855^{*}	1.220	2.291	5.673
	(4.139)	(1.164)	(0.847)	(0.584)	(1.186)	(0.956)	(1.459)	(2.157)	(6.503)
Pseudo-R^2	0.052	0.044	0.036	0.028	0.021	0.016	0.011	0.008	0.007

Notes: (1)Standard errors in parentheses; (2) Significance levels: $^{***}\ p < 0.01$; $^{**}\ p < 0.05$; $^{*}\ p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XXV: Elasticity of Private Investment-to-Social Security contributions for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	1.296^{**}	0.485^{***}	0.485^{***}	0.423^{***}	0.411^{***}	0.239^{*}	0.179	0.032	−0.613
	(0.505)	(0.156)	(0.149)	(0.113)	(0.111)	(0.130)	(0.127)	(0.173)	(0.569)
i-g	−0.204	-0.095^{**}	−0.041	−0.042	0.007	0.059^{**}	0.120^{***}	0.180^{***}	0.180
	(0.136)	(0.046)	(0.036)	(0.034)	(0.027)	(0.023)	(0.038)	(0.054)	(0.133)
OTD	-1.057^{*}	-0.418^{**}	-0.323^{**}	-0.193^{*}	0.021	0.291	0.449^{*}	0.631^{**}	1.215
	(0.562)	(0.208)	(0.157)	(0.116)	(0.108)	(0.202)	(0.250)	(0.305)	(0.805)
TGGE	23.651^{***}	4.019	2.868	1.091	0.485	−0.219	−1.551	-7.684^{**}	-43.439^{***}
	(7.320)	(2.552)	(1.958)	(1.622)	(1.057)	(1.683)	(2.090)	(3.646)	(6.141)
OG_{dummy}	0.738	0.212	0.049	0.078	−0.027	−0.147	-0.203^{**}	−0.128	−0.765
	(0.501)	(0.130)	(0.120)	(0.091)	(0.078)	(0.091)	(0.101)	(0.228)	(0.492)
EB_{dummy}	−0.227	0.154	0.083	−0.121	-0.198^{*}	−0.260	−0.277	−0.239	−0.435
	(0.721)	(0.162)	(0.165)	(0.131)	(0.116)	(0.191)	(0.175)	(0.296)	(0.681)
GCF_{GG}	−23.250	−11.573	-17.911^{**}	-14.577^{**}	-10.220^{*}	−5.679	−9.538	−0.403	46.148^{*}
	(25.333)	(8.599)	(8.123)	(6.597)	(6.117)	(6.039)	(6.792)	(12.696)	(24.576)
FCE_{GG}	-65.880^{***}	-16.514^{**}	-10.818^{***}	-5.436^{*}	−0.594	3.297	7.006	14.300^{**}	50.629^{***}
	(19.617)	(6.583)	(3.575)	(2.975)	(2.913)	(3.221)	(4.408)	(5.983)	(13.809)
REER	-4.824^{**}	−0.611	0.350	0.334	−0.049	0.582	0.510	−0.785	5.557
	(2.097)	(0.892)	(0.842)	(0.837)	(0.904)	(1.120)	(1.117)	(2.113)	(7.097)
gr_{GDP}	0.021	0.082^{*}	0.105^{***}	0.069^{**}	0.083^{***}	0.109^{***}	0.146^{***}	0.171^{***}	−0.012
	(0.140)	(0.046)	(0.035)	(0.031)	(0.025)	(0.022)	(0.036)	(0.057)	(0.125)
$Debt_{ratio}$	-0.016^{*}	0.006	0.004	0.008^{***}	0.009^{***}	0.012^{***}	0.014^{***}	0.028^{***}	0.054^{***}
	(0.009)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.013)
Constant	27.362^{**}	4.660	0.302	0.078	0.529	−3.734	−3.667	2.587	−18.969
	(10.820)	(4.312)	(3.888)	(3.680)	(4.179)	(5.756)	(5.815)	(10.554)	(33.104)
Pseudo-R^2	0.039	0.028	0.020	0.013	0.009	0.007	0.007	0.010	0.022

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}\,p < 0.01$; $^{**}\,p < 0.05$; $^{*}\,p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XXVI: Elasticity of Private Consumption-to-Social Security contributions for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	0.446^{***}	0.193^{***}	0.098^{***}	0.070^{***}	$0.045*$	0.033	0.008	−0.055	$-0.262*$
	(0.170)	(0.052)	(0.032)	(0.026)	(0.025)	(0.026)	(0.031)	(0.072)	(0.159)
i-g	0.009	−0.000	−0.001	0.008	0.010	0.019	0.030^{**}	0.060^{***}	$0.116**$
	(0.029)	(0.011)	(0.009)	(0.006)	(0.008)	(0.012)	(0.012)	(0.019)	(0.052)
OTD	0.079	−0.049	−0.075	−0.044	−0.027	0.062	0.021	0.085	−0.103
	(0.233)	(0.071)	(0.050)	(0.029)	(0.033)	(0.039)	(0.041)	(0.075)	(0.239)
TGGE	4.479^{**}	2.430^{***}	1.950^{***}	1.499^{***}	1.050^{***}	0.910^{**}	$0.911*$	0.015	−3.263
	(1.971)	(0.914)	(0.454)	(0.366)	(0.360)	(0.412)	(0.534)	(1.197)	(2.079)
OG_{dummy}	0.224	0.175^{***}	0.122^{***}	0.082^{***}	0.057^{***}	$0.042*$	0.050	0.126^{*}	0.342
	(0.147)	(0.047)	(0.037)	(0.030)	(0.022)	(0.025)	(0.038)	(0.072)	(0.213)
EB_{dummy}	0.027	0.038	0.032	−0.031	-0.074^{**}	-0.167^{***}	-0.149^{**}	−0.082	0.132
	(0.235)	(0.097)	(0.047)	(0.029)	(0.032)	(0.037)	(0.059)	(0.064)	(0.182)
GCF_{GG}	7.177	0.821	−2.901	-3.558^{*}	−3.400	−3.918	−2.858	0.236	−3.117
	(5.221)	(2.047)	(1.911)	(1.861)	(2.254)	(2.695)	(3.453)	(5.696)	(10.436)
FCE_{GG}	-17.104^{***}	-6.552^{***}	-3.138^{***}	-1.625^{*}	−0.327	1.011	1.451	4.289	14.209^{***}
	(4.404)	(2.225)	(0.998)	(0.875)	(0.687)	(1.020)	(1.307)	(2.712)	(4.928)
REER	−0.387	-0.866^{***}	-0.455^{*}	−0.262	−0.269	−0.015	−0.434	−0.340	−1.197
	(1.356)	(0.263)	(0.243)	(0.229)	(0.176)	(0.210)	(0.387)	(0.605)	(1.641)
gr_{GDP}	0.071^{***}	0.053^{***}	0.042^{***}	0.042^{***}	0.039^{***}	0.040^{***}	0.046^{***}	0.074^{***}	$0.090*$
	(0.023)	(0.011)	(0.008)	(0.005)	(0.007)	(0.011)	(0.012)	(0.021)	(0.053)
$Debt_{ratio}$	−0.001	−0.000	−0.001	−0.001	−0.000	0.000	0.001	0.002	0.001
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.003)
Constant	1.454	4.171^{***}	2.526^{**}	1.646	1.696^{**}	0.113	2.240	1.254	6.432
	(6.815)	(1.492)	(1.107)	(1.032)	(0.827)	(1.069)	(1.667)	(2.755)	(7.833)
Pseudo-R^2	0.046	0.038	0.026	0.018	0.013	0.011	0.008	0.007	0.009

Notes: (1)Standard errors in parentheses; (2) Significance levels: $^{***}\, p < 0.01$; $^{**}\, p < 0.05$; $^{*}\, p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

4.3.2. Commons Explanatory Variables for Sub-Expenditures

Table XXVII: Elasticity of Output-to-Compensation of Employees for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	0.247**	0.341***	0.318***	0.334***	0.359***	0.350***	0.378***	0.410***	0.389**
	(0.111)	(0.041)	(0.038)	(0.034)	(0.033)	(0.047)	(0.057)	(0.106)	(0.164)
i-g	0.014	−0.014	−0.020*	−0.017	−0.007	0.008	0.028*	0.021	0.050
	(0.031)	(0.015)	(0.010)	(0.011)	(0.012)	(0.015)	(0.015)	(0.020)	(0.046)
OTD	0.284***	0.085	0.050	0.014	0.021	0.078	0.112*	0.201	0.449**
	(0.110)	(0.064)	(0.048)	(0.049)	(0.049)	(0.054)	(0.062)	(0.128)	(0.219)
TGGE	−0.650	1.113	1.436*	1.735***	1.839***	1.970***	1.677*	1.408	−0.465
	(1.832)	(0.914)	(0.776)	(0.430)	(0.470)	(0.660)	(0.876)	(1.073)	(1.605)
OG_{dummy}	0.374***	0.325***	0.206***	0.173***	0.168***	0.205***	0.279***	0.269***	0.384**
	(0.112)	(0.041)	(0.034)	(0.028)	(0.028)	(0.041)	(0.056)	(0.096)	(0.170)
EB_{dummy}	0.424***	0.260***	0.167***	0.150***	0.113***	0.089*	0.140**	0.127	0.103
	(0.163)	(0.058)	(0.059)	(0.038)	(0.032)	(0.047)	(0.058)	(0.097)	(0.211)
GCF_{GG}	−23.432***	−8.719***	−8.227***	−9.420***	−11.665***	−13.815***	−10.320***	−5.455**	9.845
	(5.651)	(2.681)	(1.976)	(1.898)	(1.525)	(2.025)	(1.933)	(2.672)	(9.708)
FCE_{GG}	5.124*	1.406	−0.124	0.115	−0.017	0.388	1.772	4.617*	10.428***
	(2.621)	(1.392)	(1.356)	(0.942)	(1.003)	(1.241)	(1.526)	(2.396)	(3.615)
REER	−1.311***	−0.767***	−0.364**	−0.268*	−0.124	−0.473	−1.362***	−2.365***	−3.988***
	(0.305)	(0.179)	(0.176)	(0.146)	(0.306)	(0.345)	(0.489)	(0.620)	(1.294)
gr_{GDP}	0.085***	0.064***	0.061***	0.069***	0.080***	0.091***	0.111***	0.098***	0.105*
	(0.028)	(0.014)	(0.011)	(0.012)	(0.013)	(0.015)	(0.021)	(0.031)	(0.055)
$Debt_{ratio}$	−0.012***	−0.002	0.000	0.001*	0.002**	0.002*	0.005***	0.007***	0.018***
	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.004)
Constant	4.436**	2.355**	1.046	0.704	0.173	1.540	5.137**	8.992***	14.536**
	(1.743)	(1.032)	(0.939)	(0.793)	(1.459)	(1.666)	(2.456)	(2.880)	(5.899)
Pseudo-R^2	0.065	0.067	0.062	0.060	0.056	0.050	0.042	0.034	0.026

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XXVIII: Elasticity of Private Investment-to-Compensation of Employees for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	-0.391	0.513^{***}	0.607^{***}	0.831^{***}	0.891^{***}	0.886^{***}	0.959^{***}	1.240^{***}	1.639^{***}
	(0.505)	(0.139)	(0.141)	(0.120)	(0.124)	(0.140)	(0.173)	(0.305)	(0.447)
$i\text{-}g$	-0.355^{***}	-0.157^{***}	-0.092^{***}	-0.063^{*}	-0.010	0.023	0.084^{**}	0.088	0.061
	(0.122)	(0.060)	(0.032)	(0.038)	(0.040)	(0.044)	(0.041)	(0.057)	(0.213)
OTD	-0.183	-0.348	-0.215	-0.223	0.049	0.329^{**}	0.496^{**}	0.971^{***}	2.209^{**}
	(0.449)	(0.260)	(0.172)	(0.147)	(0.123)	(0.146)	(0.213)	(0.332)	(1.095)
$TGGE$	19.842^{***}	4.389	4.046^{**}	4.610^{***}	2.880	2.624	1.511	0.469	$-12.826*$
	(7.219)	(3.225)	(2.048)	(1.777)	(2.244)	(1.683)	(2.398)	(3.450)	(7.346)
OG_{dummy}	1.237^{**}	0.636^{***}	0.334^{*}	0.299^{***}	0.376^{***}	0.344^{***}	0.455^{***}	0.651^{***}	0.469
	(0.525)	(0.224)	(0.172)	(0.088)	(0.122)	(0.123)	(0.149)	(0.247)	(0.510)
EB_{dummy}	-0.349	0.330	0.181	-0.067	-0.158	-0.163	-0.208	-0.166	-1.062
	(0.621)	(0.235)	(0.188)	(0.134)	(0.185)	(0.152)	(0.206)	(0.325)	(0.663)
GCF_{GG}	-75.809^{***}	-31.487^{***}	-27.033^{***}	-30.348^{***}	-29.870^{***}	-29.257^{***}	-20.382^{**}	-21.937	-9.688
	(22.684)	(7.321)	(4.995)	(5.246)	(6.944)	(7.382)	(9.098)	(17.627)	(31.098)
FCE_{GG}	-24.207^{**}	-2.980	-3.922	-4.230^{*}	1.661	4.539	8.624^{**}	8.784	12.342
	(11.181)	(5.864)	(3.388)	(2.562)	(3.676)	(3.077)	(4.009)	(7.001)	(12.422)
$REER$	0.061	-1.854^{**}	-1.029	-0.527	-0.336	-0.334	-0.751	-3.322^{*}	-4.015
	(2.690)	(0.783)	(0.778)	(0.674)	(0.867)	(0.750)	(0.844)	(1.808)	(3.671)
gr_{GDP}	-0.135	0.043	0.086^{**}	0.098^{**}	0.145^{***}	0.159^{***}	0.200^{***}	0.185^{**}	0.137
	(0.126)	(0.063)	(0.034)	(0.039)	(0.042)	(0.046)	(0.049)	(0.076)	(0.249)
$Debt_{ratio}$	-0.050^{***}	-0.009	-0.001	0.003	0.009^{*}	0.014^{***}	0.020^{***}	0.032^{***}	0.074^{***}
	(0.015)	(0.006)	(0.004)	(0.004)	(0.005)	(0.004)	(0.004)	(0.008)	(0.020)
Constant	-0.945	8.518^{**}	4.644	2.742	0.201	-1.307	-0.578	9.815	12.954
	(12.647)	(3.927)	(3.591)	(3.173)	(3.939)	(3.238)	(3.236)	(7.772)	(18.470)
Pseudo-R^2	0.033	0.031	0.027	0.024	0.021	0.020	0.020	0.022	0.037

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XXIX: Elasticity of Private Consumption-to-Compensation of Employees for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	0.236^{*}	0.283^{***}	0.296^{***}	0.278^{***}	0.301^{***}	0.318^{***}	0.401^{***}	0.569^{***}	0.546^{***}
	(0.131)	(0.066)	(0.044)	(0.045)	(0.043)	(0.052)	(0.063)	(0.079)	(0.140)
$i\text{-}g$	0.042^{**}	0.005	0.001	0.007	0.011	0.011^{*}	0.015	0.024	0.108^{*}
	(0.018)	(0.010)	(0.007)	(0.010)	(0.007)	(0.006)	(0.015)	(0.031)	(0.057)
OTD	0.184	−0.041	−0.039	−0.040	−0.062	−0.027	0.016	0.108	0.682^{**}
	(0.124)	(0.074)	(0.046)	(0.031)	(0.044)	(0.053)	(0.069)	(0.107)	(0.283)
$TGGE$	−0.736	1.004^{*}	1.849^{***}	1.577^{***}	1.229^{***}	1.078^{**}	1.241	2.320^{*}	0.136
	(1.137)	(0.520)	(0.548)	(0.451)	(0.454)	(0.524)	(0.804)	(1.321)	(2.849)
OG_{dummy}	0.329^{***}	0.314^{***}	0.250^{***}	0.196^{***}	0.211^{***}	0.254^{***}	0.296^{***}	0.368^{***}	0.491^{***}
	(0.106)	(0.043)	(0.030)	(0.031)	(0.036)	(0.030)	(0.045)	(0.070)	(0.182)
EB_{dummy}	0.438^{**}	0.227^{***}	0.150^{***}	0.125^{***}	0.063	−0.010	−0.015	−0.088	-0.518^{**}
	(0.172)	(0.080)	(0.051)	(0.045)	(0.045)	(0.046)	(0.057)	(0.081)	(0.204)
GCF_{GG}	-17.355^{***}	-12.027^{***}	-8.836^{***}	-8.371^{***}	-8.552^{***}	-8.095^{***}	-7.203^{***}	-9.362^{***}	2.520
	(5.051)	(2.475)	(1.726)	(1.600)	(2.280)	(2.142)	(2.691)	(2.721)	(12.325)
FCE_{GG}	6.448^{***}	2.998^{***}	1.394^{*}	1.692^{**}	1.506^{*}	1.775	2.655	3.129	11.526^{*}
	(1.990)	(0.940)	(0.799)	(0.828)	(0.800)	(1.147)	(1.638)	(3.168)	(6.009)
$REER$	-1.118^{**}	-0.689^{***}	-0.613^{***}	-0.427^{**}	−0.267	−0.217	−0.379	-0.807^{***}	−0.899
	(0.542)	(0.244)	(0.187)	(0.205)	(0.206)	(0.222)	(0.248)	(0.307)	(1.247)
gr_{GDP}	0.112^{***}	0.072^{***}	0.069^{***}	0.072^{***}	0.069^{***}	0.063^{***}	0.064^{***}	0.075^{**}	0.140^{**}
	(0.019)	(0.011)	(0.008)	(0.010)	(0.009)	(0.010)	(0.018)	(0.035)	(0.061)
$Debt_{ratio}$	-0.010^{***}	-0.005^{***}	-0.002^{*}	−0.001	0.000	0.001	0.003^{**}	0.003^{**}	0.018^{***}
	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.007)
Constant	3.330	2.547^{*}	2.160^{**}	1.484	1.181	0.956	1.272	2.502	−0.825
	(2.673)	(1.305)	(0.891)	(0.946)	(1.011)	(1.228)	(1.205)	(1.645)	(5.919)
Pseudo-R^2	0.064	0.062	0.051	0.042	0.035	0.031	0.029	0.028	0.026

Notes: (1)Standard errors in parentheses; (2) Significance levels: $^{***}\ p < 0.01$; $^{**}\ p < 0.05$; $^{*}\ p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XXX: Elasticity of Output-to-Government Investment for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	-0.650^{***}	-0.304^{***}	-0.154^{**}	-0.030	-0.005	0.053	0.069	0.092	0.382^{*}
	(0.224)	(0.089)	(0.071)	(0.029)	(0.031)	(0.033)	(0.044)	(0.064)	(0.217)
i	0.030	0.029	0.020^{*}	0.007	0.007^{*}	0.015^{**}	0.022^{**}	0.031^{**}	0.029
	(0.039)	(0.019)	(0.010)	(0.007)	(0.004)	(0.008)	(0.009)	(0.014)	(0.035)
OTD	-0.196	-0.046	-0.054	-0.042	-0.119^{***}	-0.109^{***}	-0.084	-0.010	-0.129
	(0.173)	(0.093)	(0.045)	(0.034)	(0.037)	(0.032)	(0.054)	(0.109)	(0.323)
TGGE	-6.751^{***}	-1.950^{**}	-0.520	0.595^{**}	0.339	0.171	-0.120	-0.506	0.474
	(2.224)	(0.787)	(0.632)	(0.292)	(0.351)	(0.354)	(0.526)	(1.049)	(4.512)
OG_{dummy}	-0.168	0.121	0.088^{*}	0.078^{***}	0.078^{***}	0.062^{**}	0.118^{**}	0.089	-0.024
	(0.129)	(0.093)	(0.049)	(0.027)	(0.026)	(0.029)	(0.050)	(0.073)	(0.160)
EB_{dummy}	-0.075	0.036	0.098^{*}	0.064^{*}	0.091^{***}	0.080^{***}	0.101^{*}	0.080	0.193
	(0.211)	(0.102)	(0.058)	(0.033)	(0.027)	(0.031)	(0.053)	(0.083)	(0.264)
GCF_{GG}	12.308^{*}	8.033^{***}	0.944	-1.756	-3.975^{***}	-6.308^{***}	-7.625^{***}	-13.092^{***}	-25.874^{***}
	(6.588)	(3.085)	(1.626)	(1.068)	(1.248)	(1.647)	(2.434)	(3.480)	(7.475)
FCE_{GG}	10.315^{***}	1.854	2.195^{**}	0.980	1.335^{*}	2.896^{***}	4.779^{***}	7.956^{***}	9.645
	(3.891)	(1.544)	(1.061)	(1.014)	(0.796)	(1.041)	(1.035)	(1.645)	(7.713)
REER	1.546	-0.152	-0.118	-0.009	-0.001	0.181	-0.100	-0.914	-1.596
	(1.289)	(0.620)	(0.223)	(0.202)	(0.247)	(0.312)	(0.385)	(0.759)	(1.768)
gr_{GDP}	0.055^{*}	0.051^{***}	0.055^{***}	0.045^{***}	0.046^{***}	0.059^{***}	0.066^{***}	0.078^{***}	0.075^{*}
	(0.030)	(0.016)	(0.011)	(0.008)	(0.006)	(0.008)	(0.012)	(0.019)	(0.041)
$Debt_{ratio}$	0.008^{***}	0.003^{***}	0.001	-0.001^{**}	-0.001^{***}	-0.002^{***}	-0.002^{***}	-0.004^{***}	-0.009^{**}
	(0.003)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.004)
Constant	-7.116	0.454	0.281	-0.190	0.381	-0.569	0.547	4.122	8.558
	(6.231)	(3.031)	(1.171)	(1.014)	(1.248)	(1.434)	(1.755)	(3.560)	(7.855)
Pseudo-R^2	0.004	0.004	0.008	0.010	0.011	0.011	0.010	0.009	0.007

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XXXI: Elasticity of Private Investment-to-Government Investment for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	−0.754	−0.228*	−0.065	0.071	0.157***	0.196***	0.290***	0.510***	0.806**
	(0.472)	(0.129)	(0.080)	(0.057)	(0.055)	(0.053)	(0.090)	(0.133)	(0.370)
i	0.063	−0.007	−0.006	−0.012	0.002	0.023	0.040	0.022	0.038
	(0.126)	(0.041)	(0.015)	(0.011)	(0.010)	(0.016)	(0.025)	(0.034)	(0.077)
OTD	0.317	−0.122	−0.104	−0.112*	−0.144*	−0.016	0.160	0.296	0.666
	(0.464)	(0.143)	(0.082)	(0.058)	(0.080)	(0.118)	(0.116)	(0.243)	(0.579)
TGGE	0.028	1.247	−0.454	1.255	0.884	0.779	−1.513	−5.049***	−11.666**
	(7.220)	(3.078)	(1.464)	(0.901)	(0.918)	(0.874)	(1.183)	(1.619)	(5.204)
OG_{dummy}	−0.623	0.131	0.189***	0.162***	0.137**	0.114*	0.134	0.008	−0.063
	(0.478)	(0.127)	(0.067)	(0.061)	(0.056)	(0.060)	(0.086)	(0.164)	(0.470)
EB_{dummy}	0.122	0.150	0.071	−0.011	−0.029	−0.072	−0.214*	−0.273	−0.325
	(0.544)	(0.215)	(0.143)	(0.087)	(0.074)	(0.107)	(0.110)	(0.198)	(0.544)
GCF_{GG}	11.785	2.713	−4.189	−6.081**	−9.855***	−13.657***	−18.713***	−18.056**	−47.950***
	(20.283)	(6.059)	(3.961)	(2.778)	(3.493)	(3.620)	(5.113)	(8.845)	(16.889)
FCE_{GG}	−3.941	−5.859	−0.285	−0.649	1.269	3.850*	10.197***	18.369***	44.139***
	(10.450)	(4.847)	(2.552)	(1.903)	(1.440)	(2.071)	(2.221)	(2.862)	(10.039)
REER	−0.621	−2.048**	−1.267***	−0.705	−0.211	0.527	1.385**	0.558	−1.196
	(2.952)	(0.806)	(0.428)	(0.463)	(0.391)	(0.420)	(0.542)	(1.108)	(2.717)
gr_{GDP}	0.200	0.063	0.045***	0.039***	0.051***	0.070***	0.083***	0.042	0.057
	(0.134)	(0.039)	(0.015)	(0.015)	(0.015)	(0.018)	(0.028)	(0.038)	(0.096)
$Debt_{ratio}$	0.015**	0.004	0.000	−0.001**	−0.001***	−0.001***	−0.000	0.001	−0.003
	(0.008)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.008)
Constant	−2.291	9.023**	6.141***	3.390	1.416	−2.659	−7.171***	−3.259	4.261
	(14.655)	(3.858)	(2.096)	(2.262)	(1.889)	(2.114)	(2.484)	(5.190)	(14.217)
Pseudo-R^2	0.005	0.006	0.006	0.006	0.006	0.006	0.006	0.005	0.009

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XXXII: Elasticity of Private Consumption-to-Government Investment for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	-0.481^{***}	-0.242^{***}	-0.114^{***}	-0.052^{*}	-0.009	0.023	0.067^{**}	0.155^{**}	0.299
	(0.115)	(0.075)	(0.034)	(0.029)	(0.020)	(0.028)	(0.032)	(0.061)	(0.189)
i-g	0.077^{***}	0.035^{***}	0.027^{***}	0.022^{***}	0.020^{***}	0.021^{***}	0.022^{***}	0.030^{*}	0.013
	(0.020)	(0.008)	(0.005)	(0.004)	(0.004)	(0.005)	(0.006)	(0.016)	(0.048)
OTD	-0.032	-0.050	-0.103^{***}	-0.103^{***}	-0.111^{***}	-0.136^{***}	-0.152^{***}	-0.141^{**}	-0.032
	(0.168)	(0.073)	(0.033)	(0.031)	(0.034)	(0.042)	(0.045)	(0.063)	(0.219)
TGGE	-4.359^{**}	0.074	0.233	0.554	0.732^{*}	0.821	0.537	1.639^{*}	1.838
	(1.852)	(0.907)	(0.553)	(0.353)	(0.374)	(0.588)	(0.568)	(0.918)	(3.374)
OG_{dummy}	-0.058	0.103^{*}	0.098^{***}	0.100^{***}	0.113^{***}	0.128^{***}	0.155^{***}	0.264^{***}	0.117
	(0.134)	(0.059)	(0.030)	(0.024)	(0.024)	(0.039)	(0.041)	(0.066)	(0.199)
EB_{dummy}	0.168	0.095	0.109^{***}	0.088^{***}	0.088^{***}	0.036	0.052	0.036	-0.077
	(0.167)	(0.076)	(0.024)	(0.026)	(0.023)	(0.041)	(0.055)	(0.101)	(0.249)
GCF_{GG}	15.252^{***}	6.471	0.479	-2.311	-4.274^{***}	-4.525^{***}	-5.349^{***}	-8.857^{***}	-16.630^{***}
	(5.826)	(4.321)	(1.520)	(1.432)	(1.095)	(1.554)	(1.808)	(2.647)	(6.217)
FCE_{GG}	9.152^{**}	-0.232	0.803	1.159	1.176	1.954	3.915^{***}	4.014^{*}	10.789
	(4.087)	(1.596)	(1.439)	(0.843)	(0.798)	(1.332)	(1.366)	(2.163)	(7.629)
REER	0.828	-0.746	-0.105	0.028	-0.005	0.255	-0.122	-1.187	-2.014
	(0.699)	(0.481)	(0.230)	(0.141)	(0.185)	(0.235)	(0.306)	(0.724)	(1.750)
gr_{GDP}	0.107^{***}	0.057^{***}	0.057^{***}	0.054^{***}	0.052^{***}	0.058^{***}	0.057^{***}	0.061^{***}	0.048
	(0.023)	(0.008)	(0.007)	(0.005)	(0.006)	(0.009)	(0.012)	(0.020)	(0.056)
$Debt_{ratio}$	0.007^{***}	0.002	-0.000	-0.001^{***}	-0.002^{***}	-0.002^{***}	-0.003^{***}	-0.006^{***}	-0.009^{***}
	(0.002)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.003)
Constant	-5.791^{*}	2.836	0.405	-0.103	0.197	-0.942	0.847	5.692^{*}	8.943
	(3.328)	(2.423)	(1.036)	(0.697)	(0.848)	(1.110)	(1.334)	(3.396)	(8.026)
Pseudo-R^2	0.004	0.005	0.008	0.009	0.011	0.010	0.010	0.010	0.007

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XXXIII: Elasticity of Output-to-Intermediate Consumption for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	0.401^{***}	0.191^{***}	0.149^{***}	0.125^{***}	0.148^{***}	0.218^{***}	0.253^{***}	0.257^{***}	0.268
	(0.149)	(0.035)	(0.028)	(0.033)	(0.032)	(0.033)	(0.043)	(0.091)	(0.230)
i-g	0.013	-0.024^{**}	-0.029^{***}	-0.025^{**}	-0.015^{*}	−0.006	−0.014	−0.006	0.031
	(0.025)	(0.012)	(0.009)	(0.011)	(0.008)	(0.010)	(0.012)	(0.017)	(0.050)
OTD	−0.085	−0.071	-0.136^{***}	-0.089^{**}	−0.061	−0.000	0.106	0.164	0.103
	(0.257)	(0.058)	(0.034)	(0.039)	(0.047)	(0.064)	(0.090)	(0.160)	(0.219)
TGGE	8.578^{***}	1.853^{***}	0.919	1.319^{***}	1.495^{***}	1.804^{***}	1.885^{**}	1.506	3.479
	(2.336)	(0.697)	(0.573)	(0.479)	(0.501)	(0.607)	(0.812)	(1.459)	(2.931)
OG_{dummy}	0.754^{***}	0.265^{***}	0.147^{***}	0.121^{***}	0.105^{***}	0.122^{***}	0.014	−0.088	-0.760^{***}
	(0.232)	(0.083)	(0.047)	(0.033)	(0.027)	(0.033)	(0.065)	(0.094)	(0.275)
EB_{dummy}	0.107	0.129^{**}	0.189^{***}	0.173^{***}	0.214^{***}	0.184^{***}	0.100	0.212	0.513^{**}
	(0.237)	(0.051)	(0.041)	(0.033)	(0.033)	(0.058)	(0.071)	(0.137)	(0.239)
GCF_{GG}	−8.251	-4.052^{*}	−2.018	-3.486^{*}	−3.390	-4.465^{*}	−6.191	−9.227	−18.722
	(9.291)	(2.440)	(1.865)	(2.074)	(2.356)	(2.493)	(3.890)	(6.458)	(15.027)
FCE_{GG}	−2.714	−0.532	−0.243	−0.691	−0.289	−0.890	−0.617	−0.854	−7.130
	(3.017)	(1.508)	(1.279)	(1.011)	(0.995)	(0.794)	(1.456)	(2.886)	(5.979)
REER	0.834	−0.340	−0.342	−0.327	-0.729^{**}	-1.022^{***}	-0.877^{**}	−1.165	−2.157
	(1.368)	(0.309)	(0.248)	(0.283)	(0.320)	(0.288)	(0.416)	(0.756)	(1.968)
gr_{GDP}	0.097^{***}	0.041^{***}	0.036^{***}	0.042^{***}	0.047^{***}	0.043^{***}	0.022	0.024	0.093
	(0.031)	(0.013)	(0.010)	(0.011)	(0.009)	(0.013)	(0.015)	(0.021)	(0.058)
$Debt_{ratio}$	-0.009^{*}	-0.003^{**}	-0.001^{**}	−0.001	−0.000	−0.001	−0.002	−0.002	−0.003
	(0.005)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.005)
Constant	−7.598	1.209	1.965	1.759	3.420^{**}	4.719^{***}	4.019^{*}	5.779	12.309
	(6.528)	(1.287)	(1.302)	(1.471)	(1.615)	(1.459)	(2.247)	(4.188)	(9.270)
Pseudo-R^2	0.018	0.024	0.025	0.022	0.017	0.013	0.009	0.007	0.008

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XXXIV: Elasticity of Private Investment-to-Intermediate Consumption for common variable

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	0.895^{*}	0.610^{***}	0.584^{***}	0.622^{***}	0.637^{***}	0.594^{***}	0.736^{***}	0.835^{***}	1.604^{**}
	(0.490)	(0.148)	(0.097)	(0.106)	(0.098)	(0.116)	(0.171)	(0.203)	(0.733)
i-g	−0.085	−0.044	-0.061^{**}	-0.063^{***}	−0.030	−0.005	0.067	0.115^{**}	0.153
	(0.113)	(0.046)	(0.027)	(0.023)	(0.025)	(0.030)	(0.042)	(0.049)	(0.140)
OTD	0.255	−0.140	−0.185	−0.048	0.130	0.189	0.628^{***}	1.361^{***}	2.848^{**}
	(0.399)	(0.203)	(0.125)	(0.089)	(0.091)	(0.139)	(0.185)	(0.416)	(1.122)
TGGE	17.455^{**}	5.254^{***}	2.352	0.877	0.536	−0.522	−1.029	−4.474	−13.672
	(7.102)	(1.914)	(1.888)	(1.625)	(1.043)	(1.313)	(1.373)	(2.789)	(8.352)
OG_{dummy}	1.666^{***}	0.501^{***}	0.035	0.121	0.158^{**}	0.229^{*}	0.119	−0.245	-1.321^{**}
	(0.417)	(0.135)	(0.104)	(0.074)	(0.077)	(0.133)	(0.153)	(0.258)	(0.639)
EB_{dummy}	0.343	0.481^{*}	0.274^{**}	0.142	0.130	0.280^{*}	0.328	−0.057	−0.925
	(0.676)	(0.261)	(0.119)	(0.136)	(0.113)	(0.151)	(0.210)	(0.355)	(0.669)
GCF_{GG}	-67.723^{***}	-25.978^{***}	-21.437^{***}	-15.085^{***}	-11.430^{***}	−3.759	−2.312	−15.219	−22.744
	(18.101)	(9.218)	(6.743)	(5.682)	(3.225)	(6.000)	(6.221)	(10.614)	(32.666)
FCE_{GG}	0.614	0.716	−0.374	1.636	4.431^{**}	7.360^{***}	9.534^{***}	19.946^{***}	34.357^{*}
	(13.818)	(3.571)	(3.163)	(2.854)	(1.998)	(2.267)	(3.096)	(5.041)	(19.497)
REER	1.088	−0.569	0.138	−0.247	−0.748	-2.163^{***}	−1.841	−1.027	1.036
	(3.795)	(1.147)	(0.672)	(0.469)	(0.573)	(0.610)	(1.307)	(2.384)	(4.572)
gr_{GDP}	0.165	0.137^{***}	0.101^{***}	0.074^{***}	0.078^{***}	0.070^{**}	0.114^{***}	0.155^{***}	0.178
	(0.103)	(0.036)	(0.026)	(0.026)	(0.026)	(0.030)	(0.040)	(0.055)	(0.167)
$Debt_{ratio}$	-0.020^{**}	-0.006^{**}	−0.001	0.006^{**}	0.009^{***}	0.011^{***}	0.012^{***}	0.017^{***}	0.038^{***}
	(0.008)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.004)	(0.013)
Constant	−15.760	−0.227	−1.005	0.481	1.736	7.886^{**}	4.664	−1.681	−14.799
	(16.933)	(5.461)	(3.113)	(2.252)	(2.687)	(3.090)	(6.422)	(11.825)	(22.937)
Pseudo-R^2	0.019	0.018	0.015	0.013	0.011	0.008	0.007	0.007	0.011

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}\,p < 0.01$; $^{**}\,p < 0.05$; $^{*}\,p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XXXV: Elasticity of Private Consumption-to-Intermediate Consumption for common variable

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	0.252	0.210^{***}	0.160^{***}	0.129^{***}	0.118^{***}	0.113^{***}	0.158^{***}	0.108	0.177
	(0.224)	(0.058)	(0.027)	(0.039)	(0.037)	(0.043)	(0.061)	(0.090)	(0.152)
i-g	0.035	−0.006	−0.013	-0.014^{*}	−0.002	−0.002	0.002	−0.016	0.039
	(0.036)	(0.013)	(0.009)	(0.008)	(0.010)	(0.008)	(0.008)	(0.017)	(0.055)
OTD	0.000	-0.107^{*}	-0.177^{***}	-0.144^{***}	-0.085^{**}	0.002	0.025	−0.010	0.016
	(0.280)	(0.065)	(0.035)	(0.051)	(0.035)	(0.056)	(0.091)	(0.093)	(0.272)
TGGE	8.567^{***}	2.731^{***}	1.820^{***}	1.540^{***}	1.653^{***}	1.870^{***}	2.591^{**}	1.340	−1.028
	(2.700)	(0.729)	(0.445)	(0.396)	(0.435)	(0.562)	(1.096)	(1.441)	(3.157)
OG_{dummy}	0.680^{**}	0.309^{***}	0.176^{***}	0.171^{***}	0.126^{***}	0.117^{***}	0.129^{***}	0.145	-0.472^{**}
	(0.313)	(0.058)	(0.029)	(0.034)	(0.027)	(0.027)	(0.048)	(0.091)	(0.197)
EB_{dummy}	0.142	0.121^{*}	0.112^{***}	0.099^{**}	0.111^{***}	0.079	0.049	0.051	−0.203
	(0.338)	(0.070)	(0.034)	(0.043)	(0.036)	(0.051)	(0.051)	(0.113)	(0.216)
GCF_{GG}	−7.272	−3.532	-3.172^{*}	−2.720	-2.927^{*}	−0.560	−4.438	-9.808^{**}	−15.060
	(11.554)	(3.256)	(1.820)	(1.704)	(1.686)	(1.938)	(2.958)	(4.454)	(10.428)
FCE_{GG}	−1.126	0.343	0.277	0.713	0.612	0.440	−0.561	0.795	3.097
	(3.436)	(1.436)	(0.929)	(0.627)	(0.809)	(0.980)	(1.901)	(2.952)	(5.205)
REER	1.946	−0.467	−0.290	−0.215	-0.565^{*}	-0.640^{***}	-1.014^{**}	-1.421^{**}	−1.454
	(1.507)	(0.407)	(0.217)	(0.357)	(0.336)	(0.235)	(0.394)	(0.694)	(1.228)
gr_{GDP}	0.115^{***}	0.054^{***}	0.042^{***}	0.036^{***}	0.044^{***}	0.035^{***}	0.027^{**}	−0.000	0.068
	(0.036)	(0.013)	(0.010)	(0.009)	(0.011)	(0.011)	(0.011)	(0.020)	(0.062)
$Debt_{ratio}$	-0.014^{**}	-0.004^{***}	-0.003^{***}	-0.002^{***}	-0.002^{***}	-0.001^{**}	-0.003^{**}	-0.003^{**}	0.001
	(0.006)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.004)
Constant	-13.294^{*}	1.314	1.527	1.183	2.611	2.590^{**}	4.571^{**}	7.595^{**}	9.400
	(7.579)	(1.847)	(1.168)	(1.791)	(1.645)	(1.032)	(1.824)	(3.205)	(5.977)
Pseudo-R^2	0.019	0.021	0.020	0.017	0.014	0.010	0.006	0.003	0.004

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XXXVI: Elasticity of Output-to-Social Benefits for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	-0.218	0.237^{***}	0.253^{***}	0.278^{***}	0.344^{***}	0.386^{***}	0.513^{***}	0.596^{***}	1.112^{***}
	(0.372)	(0.056)	(0.036)	(0.039)	(0.045)	(0.044)	(0.053)	(0.080)	(0.264)
i-g	-0.140^{***}	-0.076^{***}	-0.063^{***}	-0.060^{***}	-0.057^{***}	-0.054^{***}	-0.036^{*}	0.001	0.006
	(0.042)	(0.015)	(0.011)	(0.012)	(0.010)	(0.014)	(0.018)	(0.034)	(0.045)
OTD	0.060	0.096	0.047	0.050	0.070	0.129^{***}	0.245^{***}	0.586^{***}	0.655^{**}
	(0.216)	(0.060)	(0.041)	(0.036)	(0.048)	(0.042)	(0.068)	(0.131)	(0.267)
$TGGE$	5.078^{**}	2.173^{**}	1.382^{**}	1.660^{***}	2.117^{***}	2.264^{**}	1.845^{**}	0.290	-3.406
	(2.156)	(0.999)	(0.657)	(0.594)	(0.781)	(0.937)	(0.732)	(1.276)	(3.805)
OG_{dummy}	0.342^{**}	0.288^{***}	0.251^{***}	0.269^{***}	0.276^{***}	0.246^{***}	0.341^{***}	0.455^{***}	0.755^{***}
	(0.153)	(0.050)	(0.042)	(0.040)	(0.053)	(0.063)	(0.064)	(0.105)	(0.279)
EB_{dummy}	-0.604^{***}	0.012	0.063	0.086^{**}	0.124^{***}	0.173^{***}	0.317^{***}	0.355^{***}	0.615^{*}
	(0.214)	(0.071)	(0.039)	(0.043)	(0.047)	(0.063)	(0.068)	(0.119)	(0.315)
GCF_{GG}	-13.413^{**}	-7.635^{***}	-7.760^{***}	-9.392^{***}	-6.101^{**}	-8.544^{***}	-5.746^{*}	-5.827	-0.238
	(5.666)	(1.753)	(1.323)	(2.278)	(2.388)	(2.900)	(3.373)	(5.116)	(10.625)
FCE_{GG}	-1.541	-0.973	-0.487	-0.979	-2.406	-2.927	-2.169	5.230	15.969^{**}
	(5.307)	(1.656)	(1.130)	(1.074)	(1.633)	(1.788)	(1.877)	(3.222)	(6.966)
$REER$	4.783^{***}	0.519	-0.159	-0.440^{***}	-0.622^{***}	-0.920^{***}	-1.574^{***}	-2.905^{***}	-5.691^{**}
	(1.715)	(0.360)	(0.269)	(0.106)	(0.178)	(0.320)	(0.549)	(1.058)	(2.598)
gr_{GDP}	-0.079^{*}	0.002	0.021^{*}	0.025^{*}	0.034^{***}	0.038^{**}	0.056^{***}	0.092^{**}	0.117^{**}
	(0.045)	(0.015)	(0.011)	(0.013)	(0.012)	(0.016)	(0.021)	(0.038)	(0.056)
$Debt_{ratio}$	-0.017^{***}	-0.003^{*}	-0.000	0.000	0.003^{**}	0.004^{***}	0.006^{***}	0.008^{***}	0.018^{***}
	(0.005)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.004)
Constant	-23.036^{***}	-3.276^{*}	0.349	1.733^{***}	2.360^{**}	3.692^{**}	6.003^{***}	9.862^{**}	21.668^{*}
	(7.771)	(1.841)	(1.292)	(0.618)	(1.044)	(1.635)	(2.288)	(4.438)	(11.267)
Pseudo-R^2	0.018	0.034	0.039	0.038	0.035	0.032	0.031	0.027	0.026

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XXXVII: Elasticity of Private Investment-to-Social Benefits for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	-2.132^{**}	-0.233	0.265^{**}	0.470^{***}	0.656^{***}	0.874^{***}	1.114^{***}	1.678^{***}	3.238^{***}
	(0.987)	(0.205)	(0.133)	(0.105)	(0.107)	(0.092)	(0.146)	(0.276)	(0.710)
i-g	-0.650^{***}	-0.365^{***}	-0.243^{***}	-0.204^{***}	-0.154^{***}	-0.129^{***}	-0.076	0.009	0.114
	(0.134)	(0.036)	(0.031)	(0.038)	(0.029)	(0.034)	(0.048)	(0.075)	(0.183)
OTD	-0.862	-0.404	-0.200	-0.081	0.164	0.443^{***}	1.035^{***}	1.920^{***}	4.124^{***}
	(1.043)	(0.282)	(0.156)	(0.171)	(0.120)	(0.137)	(0.196)	(0.448)	(1.195)
TGGE	22.522^{**}	8.260^{***}	5.685^{***}	4.015^{**}	3.422^{*}	2.619	1.401	-3.534	-9.307
	(9.040)	(3.054)	(1.703)	(1.990)	(1.939)	(1.970)	(2.422)	(3.562)	(7.859)
OG_{dummy}	-0.593	-0.022	0.196	0.114	0.128	0.173	0.250	0.570^{**}	0.573
	(0.784)	(0.242)	(0.163)	(0.152)	(0.134)	(0.148)	(0.165)	(0.287)	(0.559)
EB_{dummy}	-0.967	-0.428^{**}	-0.014	-0.136	-0.179	-0.014	0.052	0.104	0.356
	(0.601)	(0.215)	(0.179)	(0.198)	(0.142)	(0.100)	(0.145)	(0.265)	(0.513)
GCF_{GG}	5.409	-15.557^{*}	-10.654^{*}	-19.434^{***}	-18.320^{***}	-16.995^{***}	-11.762	-6.202	52.843
	(19.183)	(8.956)	(5.961)	(4.606)	(5.084)	(5.430)	(7.520)	(14.747)	(40.457)
FCE_{GG}	-22.354	-2.519	-4.029	-2.904	-1.241	1.236	6.395	20.416^{***}	38.591^{***}
	(14.544)	(4.820)	(4.025)	(3.753)	(3.965)	(3.545)	(4.841)	(7.856)	(14.945)
REER	9.929^{***}	1.667	0.686	1.035	0.293	-1.617^{**}	-2.375^{***}	-5.586^{***}	-13.136^{***}
	(3.109)	(1.784)	(0.954)	(0.973)	(1.020)	(0.769)	(0.748)	(1.210)	(3.246)
gr_{GDP}	-0.449^{***}	-0.170^{***}	-0.056^{*}	-0.009	0.028	0.055^{*}	0.098^{*}	0.189^{**}	0.309^{*}
	(0.139)	(0.036)	(0.031)	(0.029)	(0.024)	(0.031)	(0.051)	(0.080)	(0.183)
$Debt_{ratio}$	-0.047^{***}	-0.014^{**}	-0.002	0.003	0.010^{***}	0.017^{***}	0.026^{***}	0.043^{***}	0.092^{***}
	(0.012)	(0.006)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.008)	(0.025)
Constant	-46.198^{**}	-8.202	-4.007	-5.191	-3.032	4.144	4.127	13.592^{**}	34.030^{**}
	(18.346)	(9.054)	(4.621)	(4.833)	(4.872)	(3.785)	(4.083)	(6.052)	(16.924)
Pseudo-R^2	0.029	0.024	0.022	0.020	0.018	0.017	0.016	0.018	0.022

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XXXVIII: Elasticity of Private Consumption-to-Social Benefits for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	−0.335	0.179***	0.204***	0.217***	0.274***	0.338***	0.428***	0.562***	0.943***
	(0.322)	(0.065)	(0.046)	(0.042)	(0.043)	(0.046)	(0.064)	(0.120)	(0.222)
i-g	−0.098**	−0.046***	−0.044***	−0.044***	−0.039***	−0.037***	−0.016	0.005	−0.002
	(0.045)	(0.012)	(0.008)	(0.007)	(0.010)	(0.009)	(0.014)	(0.022)	(0.049)
OTD	−0.033	−0.015	−0.034	−0.051	−0.055	0.021	0.104	0.333***	0.511**
	(0.268)	(0.083)	(0.054)	(0.037)	(0.044)	(0.056)	(0.071)	(0.119)	(0.234)
TGGE	3.239	2.476**	1.976***	1.386***	1.311***	1.381***	0.701	−0.672	−4.802*
	(2.065)	(1.002)	(0.626)	(0.537)	(0.366)	(0.454)	(0.797)	(1.492)	(2.869)
OG_{dummy}	0.259	0.318***	0.273***	0.290***	0.291***	0.306***	0.357***	0.424***	0.773***
	(0.404)	(0.052)	(0.033)	(0.028)	(0.023)	(0.033)	(0.045)	(0.080)	(0.231)
EB_{dummy}	−0.310	−0.003	0.046	0.100***	0.100***	0.075**	0.144***	0.157*	0.241
	(0.231)	(0.078)	(0.043)	(0.032)	(0.033)	(0.037)	(0.051)	(0.092)	(0.219)
GCF_{GG}	−3.205	−8.681**	−8.818***	−8.572***	−6.667***	−4.846**	−0.580	−5.114	2.601
	(9.945)	(4.190)	(2.534)	(2.722)	(2.285)	(2.239)	(2.574)	(5.950)	(9.791)
FCE_{GG}	4.098	0.864	0.476	−0.035	0.144	−0.872	0.737	6.973**	16.867***
	(5.047)	(1.459)	(0.999)	(0.864)	(0.594)	(0.850)	(1.620)	(2.767)	(5.020)
REER	2.588	−0.080	−0.222	−0.593*	−0.499**	−0.878***	−1.351***	−2.538***	−3.813**
	(1.753)	(0.523)	(0.436)	(0.305)	(0.251)	(0.187)	(0.292)	(0.854)	(1.842)
gr_{GDP}	−0.028	0.018*	0.028***	0.024***	0.030***	0.030***	0.054***	0.077***	0.088
	(0.043)	(0.010)	(0.007)	(0.008)	(0.010)	(0.008)	(0.015)	(0.027)	(0.063)
$Debt_{ratio}$	−0.011***	−0.006***	−0.003***	−0.001	−0.000	0.002*	0.004***	0.008***	0.018***
	(0.004)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.004)
Constant	−13.743*	−0.365	0.687	2.914**	2.460**	3.998***	5.481***	9.466**	14.134
	(7.957)	(2.251)	(1.857)	(1.310)	(1.144)	(0.993)	(1.289)	(3.905)	(8.646)
Pseudo-R^2	0.022	0.036	0.038	0.035	0.031	0.027	0.022	0.020	0.026

Notes: (1) Standard errors in parentheses; (2) Significance levels: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XXXIX: Elasticity of Output-to-Social Transfers for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	−0.176	0.150***	0.173***	0.171***	0.202***	0.237***	0.315***	0.455***	0.827***
	(0.148)	(0.040)	(0.022)	(0.024)	(0.023)	(0.027)	(0.039)	(0.058)	(0.147)
i-g	−0.103***	−0.057***	−0.044***	−0.041***	−0.037***	−0.036***	−0.027**	−0.028*	−0.011
	(0.028)	(0.010)	(0.006)	(0.005)	(0.006)	(0.007)	(0.012)	(0.015)	(0.043)
OTD	−0.069	−0.082	−0.066*	−0.060**	−0.048**	−0.014	−0.001	0.063	0.239
	(0.151)	(0.081)	(0.038)	(0.026)	(0.021)	(0.035)	(0.064)	(0.098)	(0.207)
TGGE	4.442*	2.998***	2.405***	2.036***	2.085***	1.722***	1.723***	1.399**	−0.107
	(2.479)	(0.968)	(0.429)	(0.384)	(0.367)	(0.377)	(0.493)	(0.604)	(2.589)
OG_{dummy}	0.466***	0.266***	0.176***	0.164***	0.187***	0.214***	0.234***	0.222***	0.409***
	(0.142)	(0.049)	(0.033)	(0.024)	(0.031)	(0.037)	(0.048)	(0.057)	(0.136)
EB_{dummy}	−0.374**	0.010	0.127***	0.113***	0.092**	0.097***	0.101*	0.086	−0.365**
	(0.157)	(0.063)	(0.028)	(0.031)	(0.037)	(0.036)	(0.058)	(0.085)	(0.182)
GCF_{GG}	−18.245**	−8.052***	−4.260***	−3.560***	−3.668**	−1.857	−2.648	0.205	0.926
	(7.521)	(2.227)	(1.067)	(1.353)	(1.662)	(2.144)	(2.468)	(3.329)	(5.799)
FCE_{GG}	−3.980	−1.300	−1.558***	−1.574***	−1.565***	−1.296*	−0.776	−0.117	4.892
	(5.116)	(1.593)	(0.580)	(0.599)	(0.582)	(0.731)	(1.229)	(1.468)	(6.003)
REER	2.189***	0.472	0.064	−0.243	−0.287*	−0.172	−0.572	−1.262	−2.718**
	(0.844)	(0.339)	(0.200)	(0.208)	(0.163)	(0.224)	(0.446)	(0.798)	(1.205)
gr_{GDP}	−0.035	0.004	0.017**	0.024***	0.034***	0.036***	0.042***	0.040**	0.023
	(0.031)	(0.010)	(0.008)	(0.007)	(0.009)	(0.007)	(0.014)	(0.017)	(0.040)
$Debt_{ratio}$	−0.007***	−0.004***	−0.001**	0.000	0.001	0.002***	0.003***	0.004***	0.006**
	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.003)
Constant	−10.306***	−2.546*	−0.571	0.970	1.139	0.473	2.274	5.233	11.588**
	(3.471)	(1.419)	(0.905)	(1.018)	(0.855)	(1.207)	(2.247)	(3.855)	(5.854)
Pseudo-R^2	0.030	0.040	0.046	0.046	0.044	0.039	0.031	0.021	0.015

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XL: Elasticity of Private Investment-to-Social Transfers for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	0.485	0.296**	0.385***	0.468***	0.659***	0.794***	0.856***	1.096***	2.026***
	(0.400)	(0.147)	(0.101)	(0.077)	(0.080)	(0.071)	(0.136)	(0.196)	(0.457)
i-g	−0.264**	−0.189***	−0.142***	−0.117***	−0.105***	−0.101***	−0.073	−0.055	0.055
	(0.115)	(0.052)	(0.037)	(0.041)	(0.031)	(0.034)	(0.044)	(0.070)	(0.102)
OTD	0.151	−0.374**	−0.415***	−0.249***	−0.071	0.014	0.128	0.346	1.342**
	(0.450)	(0.158)	(0.133)	(0.091)	(0.097)	(0.137)	(0.148)	(0.264)	(0.568)
TGGE	13.566**	3.921	3.733**	3.261***	3.407***	3.363***	2.643	−1.914	−7.616
	(6.225)	(2.964)	(1.541)	(1.159)	(1.282)	(1.297)	(1.662)	(3.185)	(9.566)
OG_{dummy}	0.970***	0.442***	0.333***	0.212***	0.323***	0.401***	0.386***	0.327**	0.011
	(0.257)	(0.132)	(0.084)	(0.072)	(0.069)	(0.085)	(0.108)	(0.153)	(0.362)
EB_{dummy}	−0.833*	−0.097	0.088	−0.004	−0.015	−0.014	−0.006	0.074	−0.341
	(0.428)	(0.166)	(0.132)	(0.108)	(0.085)	(0.103)	(0.144)	(0.247)	(0.377)
GCF_{GG}	−39.515**	−18.902**	−17.713***	−14.627***	−5.770	−7.992	−2.370	0.783	−2.703
	(16.213)	(9.043)	(6.791)	(5.110)	(6.141)	(6.235)	(8.378)	(11.136)	(23.136)
FCE_{GG}	−17.522	−4.940	−4.285	−3.393*	−2.870	−2.236	−0.977	5.716	12.271
	(11.800)	(5.943)	(3.429)	(1.981)	(1.785)	(2.040)	(3.193)	(6.773)	(21.682)
REER	2.128	0.852	0.829	0.801	0.194	−0.159	−0.470	−3.090**	−6.693**
	(2.166)	(1.057)	(0.828)	(0.844)	(0.582)	(0.748)	(0.881)	(1.418)	(3.111)
gr_{GDP}	−0.069	−0.019	0.015	0.025	0.020	0.016	0.039	0.037	0.087
	(0.104)	(0.053)	(0.038)	(0.043)	(0.032)	(0.033)	(0.047)	(0.057)	(0.097)
$Debt_{ratio}$	−0.014	−0.000	0.000	0.004**	0.008***	0.009***	0.011***	0.021***	0.031***
	(0.011)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.005)	(0.012)
Constant	−13.351	−3.518	−2.886	−3.331	−1.800	−0.323	0.699	12.574	27.266*
	(8.652)	(4.634)	(3.795)	(3.859)	(2.880)	(3.764)	(4.622)	(7.843)	(14.467)
Pseudo-R^2	0.021	0.024	0.020	0.019	0.019	0.017	0.014	0.013	0.016

Notes: (1) Standard errors in parentheses; (2) Significance levels: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XLI: Elasticity of Private Consumption-to-Social Transfers for common variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FE	−0.022	0.131***	0.156***	0.156***	0.171***	0.238***	0.316***	0.381***	0.674***
	(0.124)	(0.043)	(0.023)	(0.018)	(0.026)	(0.034)	(0.032)	(0.060)	(0.155)
i-g	−0.057**	−0.023**	−0.023**	−0.021**	−0.023**	−0.020	−0.015*	−0.007	0.015
	(0.023)	(0.010)	(0.011)	(0.009)	(0.011)	(0.012)	(0.009)	(0.018)	(0.053)
OTD	0.059	−0.188***	−0.151***	−0.142***	−0.087*	−0.052	−0.052	−0.032	0.095
	(0.102)	(0.063)	(0.035)	(0.046)	(0.050)	(0.048)	(0.050)	(0.093)	(0.193)
TGGE	6.772***	3.335***	2.505***	2.283***	2.251***	2.169***	2.517***	1.745*	−0.262
	(1.759)	(0.706)	(0.493)	(0.473)	(0.570)	(0.544)	(0.533)	(1.050)	(3.376)
OG_{dummy}	0.401***	0.231***	0.204***	0.186***	0.210***	0.245***	0.273***	0.271***	0.317***
	(0.134)	(0.041)	(0.022)	(0.017)	(0.023)	(0.023)	(0.026)	(0.030)	(0.091)
EB_{dummy}	−0.337***	0.095**	0.084***	0.091***	0.066***	0.011	0.023	−0.061	−0.379*
	(0.125)	(0.038)	(0.021)	(0.025)	(0.025)	(0.036)	(0.046)	(0.083)	(0.216)
GCF_{GG}	−18.255***	−4.807**	−3.705**	−1.829*	−0.908	−2.177	−0.576	1.363	0.325
	(6.197)	(2.143)	(1.640)	(1.105)	(1.437)	(2.278)	(2.126)	(3.336)	(7.820)
FCE_{GG}	−4.271	−2.253*	−0.727	−0.819	−0.888	−0.872	−0.838	−0.134	10.751*
	(3.459)	(1.319)	(0.603)	(0.715)	(0.969)	(0.941)	(0.695)	(1.463)	(6.512)
REER	1.939***	0.350	0.206	0.054	−0.072	−0.439*	−0.785**	−0.932*	−3.278***
	(0.701)	(0.280)	(0.224)	(0.242)	(0.273)	(0.242)	(0.346)	(0.481)	(1.097)
gr_{GDP}	0.016	0.033***	0.031***	0.033***	0.031***	0.029**	0.031***	0.028*	0.015
	(0.027)	(0.011)	(0.011)	(0.009)	(0.011)	(0.012)	(0.008)	(0.016)	(0.055)
$Debt_{ratio}$	−0.010***	−0.003***	−0.002***	−0.001***	−0.000	−0.000	0.000	0.001	0.000
	(0.002)	(0.001)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.004)
Constant	−10.822***	−1.745	−1.111	−0.325	0.070	1.835	3.273*	4.218*	14.274***
	(3.071)	(1.194)	(1.015)	(1.155)	(1.362)	(1.320)	(1.728)	(2.379)	(5.339)
Pseudo-R^2	0.030	0.036	0.039	0.036	0.032	0.027	0.022	0.013	0.012

Notes: (1) Standard errors in parentheses; (2) Significance levels: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

4.3.3. Different Explanatory Variables for Sub-Revenues

Table XLII: Elasticity of Output-to-Direct Taxes for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FCE_{Priv}	3.362	−0.071	−0.478	−0.983*	−2.080***	−1.856***	−1.729**	−0.212	3.216
	(5.330)	(1.430)	(0.551)	(0.537)	(0.651)	(0.573)	(0.821)	(1.472)	(2.999)
GDP_{pc}	0.122	−0.108	−0.041	−0.080	−0.062	0.011	0.119	0.350***	0.897***
	(0.474)	(0.107)	(0.066)	(0.052)	(0.057)	(0.060)	(0.079)	(0.119)	(0.246)
$Debt_{pc}$	0.105	0.041	−0.031	−0.040	−0.080**	−0.126***	−0.172***	−0.263***	−0.670***
	(0.301)	(0.064)	(0.039)	(0.038)	(0.040)	(0.038)	(0.048)	(0.082)	(0.133)
GCF_{Priv}	4.709**	3.527***	2.624***	2.165***	1.481***	1.941***	1.870***	2.090*	3.681
	(1.937)	(0.715)	(0.307)	(0.265)	(0.352)	(0.482)	(0.649)	(1.069)	(3.301)
Sav_{Priv}	1.365	0.230	0.165	0.072	−0.443	−0.223	−0.080	1.258	5.171**
	(5.247)	(1.889)	(0.573)	(0.482)	(0.497)	(0.474)	(0.655)	(1.270)	(2.396)
i	0.042	−0.012	−0.027**	−0.030***	−0.030***	−0.054***	−0.061***	−0.074***	−0.145***
	(0.060)	(0.025)	(0.012)	(0.011)	(0.011)	(0.010)	(0.014)	(0.018)	(0.042)
DI_{Priv}	−3.108	−0.538	−0.072	−0.001	0.887*	0.643	0.667	−0.028	−1.483
	(4.985)	(1.443)	(0.433)	(0.439)	(0.480)	(0.476)	(0.712)	(1.228)	(2.486)
u	−0.004	−0.017	−0.013**	−0.012**	−0.001	0.005	0.007	0.015	0.041
	(0.022)	(0.012)	(0.006)	(0.005)	(0.006)	(0.005)	(0.006)	(0.011)	(0.025)
$Interest$	−37.563**	−8.621	1.698	3.920*	5.927**	10.507***	13.485***	19.125***	39.676***
	(18.677)	(6.172)	(2.841)	(2.277)	(2.341)	(2.543)	(2.911)	(4.921)	(12.254)
$TGGR$	−1.398	0.787	0.102	0.004	−0.086	−0.170	−0.004	−0.455	0.184
	(1.258)	(0.523)	(0.235)	(0.251)	(0.271)	(0.270)	(0.393)	(0.536)	(1.765)
Constant	−2.030	0.636	0.983*	1.877***	2.195***	1.943***	1.250	−0.335	−3.246
	(3.893)	(0.747)	(0.503)	(0.362)	(0.494)	(0.557)	(0.766)	(1.337)	(3.568)
Pseudo-R^2	0.008	0.012	0.011	0.009	0.007	0.007	0.006	0.005	0.007

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XLIII: Elasticity of Private Investment-to-Direct Taxes for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
$TGGR$	10.022^{*}	6.003^{**}	2.507	1.489	0.920	−0.090	−1.878	−5.441	−5.146
	(5.826)	(2.377)	(1.782)	(1.666)	(1.572)	(1.864)	(2.111)	(3.390)	(8.411)
TR_{Gov}	−5.660	−2.278	−0.503	0.135	0.792	0.765	0.637	−0.809	-18.282^{*}
	(8.347)	(2.520)	(1.840)	(1.126)	(1.579)	(1.928)	(2.059)	(3.326)	(9.559)
$NULC$	0.907	1.312	−0.318	−0.481	−0.146	−0.103	−0.206	−0.381	−2.197
	(2.334)	(0.891)	(0.516)	(0.428)	(0.477)	(0.471)	(0.397)	(0.743)	(2.075)
DT	−10.441	-3.913^{*}	−1.994	−1.074	−0.523	1.650	3.969^{*}	8.898^{***}	26.125^{**}
	(7.226)	(2.047)	(1.359)	(1.561)	(1.288)	(1.522)	(2.142)	(2.901)	(11.718)
u	−0.145	-0.045^{*}	−0.014	0.004	0.033^{*}	0.058^{***}	0.097^{***}	0.112^{***}	0.159^{***}
	(0.090)	(0.024)	(0.012)	(0.012)	(0.018)	(0.018)	(0.022)	(0.019)	(0.056)
$PVDebt$	-15.084^{**}	-15.014^{***}	-10.921^{***}	-6.913^{***}	-7.967^{***}	-5.912^{***}	-5.573^{***}	-5.125^{***}	0.118
	(6.662)	(3.532)	(2.546)	(1.853)	(1.290)	(1.660)	(1.623)	(1.949)	(5.789)
gr_{Debt}	−0.022	-0.013^{*}	−0.004	−0.000	0.007^{**}	0.007^{**}	0.002	0.004	0.016
	(0.022)	(0.007)	(0.005)	(0.005)	(0.003)	(0.003)	(0.004)	(0.010)	(0.026)
$HICP$	-5.777^{**}	-2.478^{**}	−0.614	0.710	0.653	1.162	2.891^{***}	5.085^{***}	11.072^{***}
	(2.840)	(1.165)	(0.791)	(0.941)	(0.957)	(0.876)	(1.097)	(1.710)	(3.103)
$HICP_E$	2.721^{**}	0.513	0.240	−0.282	−0.330	−0.341	-0.797^{*}	-1.436^{*}	−2.194
	(1.369)	(0.394)	(0.319)	(0.329)	(0.330)	(0.364)	(0.476)	(0.742)	(1.467)
CAB	0.001	0.000	−0.000	−0.001	−0.001	−0.001	−0.001	−0.001	−0.002
	(0.026)	(0.011)	(0.009)	(0.003)	(0.003)	(0.003)	(0.013)	(0.034)	(0.084)
Constant	7.329	1.290	2.700	0.231	−0.728	-2.816^{*}	-7.383^{***}	-11.776^{***}	-24.068^{***}
	(6.155)	(3.669)	(2.094)	(2.011)	(1.719)	(1.601)	(2.568)	(3.477)	(6.489)
Pseudo-R^2	0.010	0.009	0.006	0.004	0.003	0.003	0.005	0.008	0.014

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XLIV: Elasticity of Private Consumption-to-Direct Taxes for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
Sav_{Priv}	5.546^{*}	3.140^{***}	0.977	−0.147	0.091	0.304	0.731	1.370	3.377
	(3.319)	(1.175)	(1.146)	(0.740)	(0.566)	(0.752)	(1.068)	(1.879)	(3.139)
DI_{Priv}	-9.153^{***}	-4.130^{***}	−1.782	−0.523	−0.515	-1.142^{**}	−1.395	−0.847	−1.559
	(3.490)	(1.159)	(1.113)	(0.727)	(0.427)	(0.504)	(0.921)	(1.508)	(2.911)
SB	−11.711	−2.192	−0.904	−0.859	−0.617	−0.211	0.883	3.932	9.396^{**}
	(7.170)	(1.948)	(1.121)	(0.782)	(1.203)	(1.258)	(1.702)	(2.397)	(4.734)
TR_{Gov}	4.188	1.178	0.350	0.306	0.314	0.461	−0.404	-2.222^{*}	-5.263^{*}
	(3.561)	(1.332)	(0.775)	(0.586)	(0.655)	(0.543)	(0.685)	(1.186)	(2.701)
CE	−13.044	-5.934^{***}	−2.273	−0.849	0.987	1.552	3.422	4.901^{**}	15.712^{*}
	(9.025)	(1.999)	(1.388)	(1.005)	(1.173)	(1.493)	(2.448)	(2.447)	(9.035)
DT	3.102	2.068^{**}	1.075^{*}	0.728	0.295	0.384	0.122	1.275	1.429
	(4.451)	(0.887)	(0.612)	(0.574)	(0.580)	(0.669)	(1.301)	(1.145)	(2.916)
FCE_{Priv}	8.650^{***}	3.880^{***}	1.657	0.490	0.541	1.153^{**}	1.271	1.367	2.195
	(2.394)	(1.011)	(1.081)	(0.740)	(0.518)	(0.569)	(1.107)	(1.564)	(3.131)
GCF_{Priv}	3.174	3.799^{***}	3.309^{***}	2.595^{***}	2.566^{***}	2.789^{***}	3.310^{***}	3.236^{**}	5.253^{*}
	(2.154)	(1.025)	(0.688)	(0.464)	(0.379)	(0.540)	(0.821)	(1.269)	(2.804)
$HICP$	1.737^{*}	0.439	0.135	0.040	0.002	−0.033	−0.085	−0.002	−1.301
	(0.974)	(0.436)	(0.215)	(0.164)	(0.133)	(0.153)	(0.216)	(0.282)	(0.798)
CAB	−0.000	−0.001	−0.001	−0.001	−0.001	−0.001	−0.001	−0.001	−0.002
	(0.005)	(0.004)	(0.003)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.005)
Constant	−5.528	−1.416	−0.412	−0.050	−0.005	0.202	0.466	−0.449	4.478
	(4.571)	(2.057)	(0.974)	(0.743)	(0.654)	(0.689)	(1.132)	(1.406)	(4.093)
Pseudo-R^2	0.009	0.011	0.008	0.006	0.005	0.005	0.004	0.005	0.011

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XLV: Elasticity of Output-to-Indirect Taxes for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FCE_{Priv}	6.659^{*}	1.153	0.678	0.270	0.101	−0.192	-1.548^{*}	-3.671^{***}	−3.120
	(3.401)	(0.856)	(0.712)	(0.479)	(0.561)	(0.631)	(0.934)	(0.999)	(2.210)
GDP_{pc}	0.152	0.035	−0.005	0.032	0.046	0.087^{*}	0.132^{**}	0.374^{***}	0.805^{***}
	(0.194)	(0.060)	(0.039)	(0.051)	(0.050)	(0.050)	(0.067)	(0.093)	(0.147)
$Debt_{pc}$	-0.272^{**}	-0.118^{***}	-0.093^{***}	-0.084^{***}	-0.091^{***}	-0.088^{***}	-0.103^{***}	-0.173^{***}	-0.268^{*}
	(0.107)	(0.022)	(0.021)	(0.025)	(0.031)	(0.033)	(0.038)	(0.045)	(0.140)
GCF_{Priv}	4.571^{***}	3.008^{***}	1.998^{***}	1.902^{***}	1.676^{***}	1.640^{***}	0.627	−1.128	−2.298
	(1.471)	(0.375)	(0.391)	(0.417)	(0.417)	(0.440)	(0.552)	(0.753)	(1.514)
Sav_{Priv}	5.686	1.745^{**}	1.436^{**}	0.834^{*}	1.040^{*}	0.942	−0.612	-3.713^{***}	-4.096^{*}
	(3.822)	(0.791)	(0.726)	(0.465)	(0.551)	(0.624)	(1.042)	(0.887)	(2.433)
i	-0.100^{***}	-0.042^{***}	-0.026^{**}	−0.014	−0.006	0.005	0.017	0.031	0.059
	(0.033)	(0.015)	(0.011)	(0.009)	(0.011)	(0.012)	(0.018)	(0.023)	(0.042)
Sav_{Priv}	−4.059	-1.148^{**}	−0.740	−0.143	0.110	0.553	1.992^{**}	4.666^{***}	4.641^{*}
	(3.474)	(0.494)	(0.611)	(0.439)	(0.449)	(0.536)	(0.893)	(0.996)	(2.577)
u	-0.037^{**}	-0.026^{***}	-0.028^{***}	-0.022^{***}	-0.014^{***}	-0.010^{***}	-0.019^{***}	-0.023^{***}	−0.005
	(0.015)	(0.006)	(0.005)	(0.004)	(0.004)	(0.003)	(0.005)	(0.007)	(0.017)
$Interest$	16.150^{***}	8.764^{***}	5.787^{***}	4.258^{***}	2.558	0.916	3.325	7.466	17.959^{**}
	(3.851)	(1.811)	(1.346)	(1.422)	(2.177)	(2.095)	(2.749)	(4.844)	(6.984)
$TGGR$	5.422^{***}	1.556^{***}	1.085^{***}	0.810^{***}	0.869^{***}	0.920^{***}	0.623^{*}	−0.494	-2.225^{**}
	(1.083)	(0.358)	(0.260)	(0.284)	(0.276)	(0.203)	(0.352)	(0.565)	(0.988)
Constant	−2.850	0.237	0.950^{**}	0.505	0.387	−0.138	−0.215	−1.659	-4.267^{**}
	(2.350)	(0.830)	(0.474)	(0.582)	(0.511)	(0.555)	(0.618)	(1.015)	(1.822)
Pseudo-R^2	0.032	0.027	0.021	0.014	0.010	0.010	0.007	0.008	0.013

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XLVI: Elasticity of Private Investment-to-Indirect Taxes for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
$TGGR$	15.769^{***}	6.088^{**}	1.967	1.813	2.384	3.451^{*}	1.548	−1.706	-15.200^{***}
	(6.115)	(2.844)	(1.827)	(1.983)	(1.935)	(2.089)	(2.766)	(3.322)	(5.489)
TR_{Gov}	-15.313^{***}	-5.294^{**}	−1.559	−1.797	-3.316^{*}	-4.385^{**}	−2.833	−0.833	1.522
	(5.592)	(2.562)	(1.763)	(1.517)	(1.750)	(1.742)	(2.257)	(2.984)	(4.032)
$NULC$	1.374	−0.311	−0.338	−0.242	-0.731^{**}	-0.653^{*}	−0.799	-1.352^{**}	−0.915
	(1.642)	(0.858)	(0.539)	(0.340)	(0.343)	(0.389)	(0.495)	(0.608)	(1.872)
DT	−5.707	−2.142	0.254	0.802	0.682	0.036	1.402	2.213	12.667^{***}
	(3.963)	(2.127)	(1.044)	(1.410)	(1.457)	(1.572)	(2.121)	(2.220)	(4.523)
u	0.024	−0.021	−0.016	0.010	0.026^{**}	0.036^{**}	0.046^{*}	0.063^{*}	0.269^{***}
	(0.050)	(0.017)	(0.016)	(0.015)	(0.010)	(0.016)	(0.024)	(0.034)	(0.048)
$PVDebt$	-27.387^{***}	-17.667^{***}	-8.629^{***}	-3.951^{**}	−2.554	−0.467	3.900^{**}	6.029^{*}	13.936^{***}
	(5.548)	(2.589)	(2.105)	(1.745)	(1.906)	(1.767)	(1.728)	(3.342)	(2.175)
gr_{Debt}	-0.044^{*}	-0.019^{**}	−0.008	−0.004	0.004	0.002	0.001	0.010	0.021
	(0.023)	(0.008)	(0.006)	(0.006)	(0.005)	(0.004)	(0.008)	(0.008)	(0.020)
$HICP$	−2.248	−0.495	0.355	1.471	2.024^{**}	2.201^{***}	2.516^{**}	4.660^{***}	7.959^{**}
	(2.886)	(1.884)	(1.153)	(0.945)	(0.832)	(0.802)	(1.199)	(1.316)	(3.293)
$HICP_E$	0.239	0.124	−0.057	−0.460	−0.191	−0.110	0.036	−0.508	−1.071
	(1.142)	(0.846)	(0.580)	(0.580)	(0.524)	(0.489)	(0.794)	(0.798)	(1.575)
CAB	0.002	0.001	0.000	−0.000	−0.000	−0.001	−0.001	−0.001	−0.003
	(0.025)	(0.017)	(0.016)	(0.016)	(0.015)	(0.013)	(0.017)	(0.016)	(0.015)
Constant	−1.837	1.831	0.240	-3.137^{*}	-4.354^{***}	-5.745^{***}	-6.360^{***}	-9.747^{***}	-20.013^{***}
	(4.509)	(1.852)	(1.445)	(1.603)	(1.308)	(1.647)	(1.776)	(2.927)	(6.447)
Pseudo-R^2	0.029	0.016	0.007	0.004	0.004	0.004	0.006	0.012	0.041

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XLVII: Elasticity of Private Consumption-to-Indirect Taxes for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
Sav_{Priv}	6.448^{***}	1.549^{*}	0.953	0.975	0.806	0.412	0.121	−0.153	−1.159
	(2.378)	(0.929)	(0.811)	(0.824)	(0.632)	(0.927)	(0.963)	(1.614)	(3.826)
DI_{Priv}	-5.197^{***}	-2.280^{***}	−1.073	−0.985	−0.761	−0.253	0.269	−0.354	−0.256
	(1.657)	(0.809)	(0.766)	(0.723)	(0.564)	(0.748)	(0.748)	(0.725)	(2.545)
SB	-6.272^{*}	−2.365	0.423	0.833	0.794	1.076	0.502	−0.406	1.232
	(3.704)	(1.652)	(0.776)	(0.662)	(0.670)	(0.937)	(1.223)	(2.305)	(5.859)
TR_{Gov}	5.205^{**}	1.869^{***}	0.086	−0.329	−0.157	−0.382	0.236	1.013	0.139
	(2.051)	(0.716)	(0.523)	(0.503)	(0.507)	(0.747)	(0.740)	(1.424)	(3.142)
CE	−0.385	−0.475	−1.341	−1.059	−0.728	−0.249	1.213	1.945	5.844
	(3.182)	(2.080)	(1.638)	(0.798)	(0.812)	(0.764)	(1.053)	(1.691)	(4.920)
DT	3.803^{***}	2.071^{*}	2.051^{**}	1.740^{***}	1.426^{***}	0.955^{**}	0.521	0.423	0.434
	(1.220)	(1.106)	(0.858)	(0.419)	(0.306)	(0.445)	(0.424)	(0.926)	(1.688)
FCE_{Priv}	6.862^{***}	2.513^{***}	1.617^{**}	1.650^{**}	1.240^{*}	0.562	0.136	0.624	0.608
	(1.877)	(0.914)	(0.737)	(0.791)	(0.649)	(0.895)	(0.921)	(0.997)	(2.708)
GCF_{Priv}	5.371^{***}	3.695^{***}	3.356^{***}	3.122^{***}	2.707^{***}	2.434^{***}	2.457^{***}	1.834^{**}	0.021
	(1.266)	(0.673)	(0.557)	(0.649)	(0.576)	(0.529)	(0.656)	(0.897)	(1.721)
$HICP$	-1.356^{***}	-0.302^{**}	−0.081	−0.157	−0.145	−0.140	-0.238^{*}	-0.358^{**}	-0.725^{**}
	(0.303)	(0.147)	(0.139)	(0.124)	(0.115)	(0.105)	(0.135)	(0.174)	(0.363)
CAB	0.000	0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.001
	(0.014)	(0.015)	(0.014)	(0.009)	(0.005)	(0.002)	(0.000)	(0.003)	(0.008)
Constant	4.210^{***}	1.027	−0.055	0.413	0.575	0.741	1.032	2.031^{**}	4.170^{**}
	(1.249)	(0.750)	(0.620)	(0.620)	(0.611)	(0.515)	(0.696)	(0.828)	(1.762)
Pseudo-R^2	0.028	0.021	0.016	0.012	0.009	0.006	0.006	0.004	0.006

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}\,p < 0.01$; $^{**}\,p < 0.05$; $^{*}\,p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XLVIII: Elasticity of Output-to-Social Security contributions for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FCE_{Priv}	8.060^{***}	2.602^{*}	1.656^{**}	0.538	-0.550	-1.307^{**}	-1.926^{***}	-1.944	-7.301^{*}
	(1.942)	(1.420)	(0.704)	(0.679)	(0.566)	(0.574)	(0.698)	(1.273)	(3.750)
GDP_{pc}	-0.659^{***}	-0.260^{***}	-0.103^{*}	-0.038	-0.079	-0.082	-0.151^{*}	-0.127	-0.377
	(0.242)	(0.092)	(0.059)	(0.061)	(0.058)	(0.076)	(0.086)	(0.155)	(0.401)
$Debt_{pc}$	0.092	0.063	-0.013	-0.022	-0.001	0.010	0.056	0.080	0.020
	(0.121)	(0.072)	(0.050)	(0.035)	(0.042)	(0.053)	(0.053)	(0.066)	(0.141)
GCF_{Priv}	6.072^{***}	5.063^{***}	3.968^{***}	3.218^{***}	2.405^{***}	1.695^{***}	1.269^{**}	-0.044	-1.756
	(1.510)	(1.106)	(0.542)	(0.401)	(0.400)	(0.417)	(0.582)	(0.936)	(3.087)
Sav_{Priv}	6.582^{***}	1.697	1.909^{**}	0.599	0.079	-0.090	-0.044	-0.499	-2.918
	(2.384)	(1.865)	(0.915)	(0.738)	(0.687)	(0.839)	(0.760)	(1.170)	(3.739)
i	0.004	-0.028^{***}	-0.025^{**}	-0.012	-0.008	0.007	0.020	0.024	0.031
	(0.030)	(0.011)	(0.012)	(0.011)	(0.013)	(0.012)	(0.020)	(0.024)	(0.048)
DI_{Priv}	-13.238^{***}	-4.515^{***}	-2.531^{***}	-0.925	-0.141	0.344	0.423	0.599	1.875
	(2.009)	(1.385)	(0.709)	(0.586)	(0.427)	(0.492)	(0.575)	(1.088)	(3.287)
u	0.010	0.002	0.006	0.004	0.005	0.009^{**}	0.014	0.008	0.036
	(0.017)	(0.008)	(0.004)	(0.005)	(0.004)	(0.004)	(0.010)	(0.009)	(0.023)
$Interest$	9.682	5.452	3.769	3.137	3.684	2.324	1.569	1.645	16.206
	(9.385)	(3.567)	(2.815)	(2.076)	(2.630)	(2.064)	(3.071)	(4.262)	(13.387)
$TGGR$	-4.765^{**}	-1.793^{*}	-0.176	0.054	0.066	0.073	-0.190	-0.725	-0.474
	(2.003)	(1.020)	(0.479)	(0.491)	(0.450)	(0.475)	(0.514)	(0.831)	(1.078)
Constant	10.902^{***}	3.963^{***}	1.867^{***}	0.979^{*}	1.485^{***}	1.698^{**}	2.581^{***}	2.817^{*}	8.280^{*}
	(2.480)	(1.026)	(0.559)	(0.551)	(0.442)	(0.692)	(0.930)	(1.701)	(4.933)
Pseudo-R^2	0.031	0.016	0.012	0.009	0.005	0.004	0.002	0.003	0.005

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table XLIX: Elasticity of Private Investment-to-Social Security contributions for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
$TGGR$	9.563^{*}	6.158^{**}	2.522	1.513	−1.428	−2.497	-4.345^{*}	-11.276^{***}	-26.461^{***}
	(5.472)	(2.494)	(2.498)	(2.456)	(2.538)	(1.847)	(2.239)	(3.376)	(10.002)
TR_{Gov}	−7.757	−2.619	−3.472	−1.707	1.525	3.392	4.051	5.529	3.093
	(6.299)	(2.796)	(2.324)	(2.788)	(2.948)	(2.198)	(2.824)	(4.438)	(7.432)
$NULC$	2.353^{**}	0.291	−0.405	-1.033^{***}	-1.907^{***}	-2.107^{***}	-1.927^{***}	-3.020^{***}	-6.805^{**}
	(1.144)	(0.511)	(0.486)	(0.357)	(0.369)	(0.517)	(0.661)	(1.138)	(3.246)
DT	-32.383^{***}	-16.192^{***}	-7.575^{***}	-5.745^{***}	−2.544	−1.722	−0.491	7.046^{*}	15.508
	(8.702)	(2.756)	(2.500)	(1.580)	(1.834)	(1.887)	(2.874)	(3.952)	(10.489)
u	−0.083	−0.023	0.022	0.062^{***}	0.076^{***}	0.102^{***}	0.114^{***}	0.235^{***}	0.463^{***}
	(0.079)	(0.030)	(0.028)	(0.020)	(0.023)	(0.020)	(0.039)	(0.068)	(0.134)
$PVDebt$	-47.881^{***}	-31.192^{***}	-19.175^{***}	-12.597^{***}	-7.237^{***}	-6.056^{**}	−3.173	−2.532	−1.105
	(10.692)	(5.178)	(4.137)	(3.003)	(2.697)	(2.600)	(1.946)	(2.027)	(5.746)
gr_{Debt}	-0.057^{**}	-0.028^{***}	-0.020^{**}	-0.011^{*}	−0.008	0.004	0.006	0.020	0.054^{*}
	(0.024)	(0.010)	(0.008)	(0.006)	(0.007)	(0.007)	(0.007)	(0.015)	(0.028)
$HICP$	−2.978	-2.602^{**}	-2.289^{**}	−0.325	1.584^{*}	2.444^{**}	2.842^{**}	6.636^{***}	14.948^{***}
	(2.598)	(1.321)	(1.087)	(0.836)	(0.890)	(1.009)	(1.425)	(1.864)	(5.528)
$HICP_E$	−0.768	0.923^{*}	1.733^{***}	1.133^{**}	0.687^{*}	0.586	0.459	−0.266	−1.625
	(1.313)	(0.484)	(0.539)	(0.476)	(0.384)	(0.392)	(0.519)	(0.844)	(3.052)
CAB	0.001	0.000	−0.000	−0.000	−0.001	−0.001	−0.001	−0.002	−0.004
	(0.024)	(0.007)	(0.007)	(0.007)	(0.011)	(0.011)	(0.011)	(0.014)	(0.039)
Constant	5.614	5.539^{**}	4.867^{***}	1.618	−0.407	-2.740^{*}	-3.798^{*}	-10.999^{***}	-18.710^{***}
	(5.359)	(2.754)	(1.679)	(1.432)	(1.679)	(1.495)	(2.300)	(3.041)	(6.035)
Pseudo-R^2	0.045	0.030	0.018	0.011	0.007	0.008	0.009	0.014	0.024

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}\,p < 0.01$; $^{**}\,p < 0.05$; $^{*}\,p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table L: Elasticity of Private Consumption-to-Social Security contributions for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
Sav_{Priv}	3.238	0.559	−0.063	−0.390	0.042	−0.622	−1.230*	−1.810*	−3.972
	(2.755)	(1.177)	(0.640)	(0.498)	(0.525)	(0.649)	(0.746)	(1.088)	(3.731)
DI_{Priv}	−9.263***	−3.830***	−2.639***	−1.949***	−1.570***	−1.049***	−0.638	0.328	2.178
	(2.577)	(1.182)	(0.493)	(0.651)	(0.423)	(0.404)	(0.505)	(1.028)	(3.118)
SB	12.356*	5.052***	3.850***	3.498***	2.330*	1.220	−0.321	−1.370	−7.799
	(7.232)	(1.204)	(0.986)	(0.917)	(1.284)	(1.199)	(1.360)	(3.017)	(5.824)
TR_{Gov}	−8.927*	−1.754	−0.768	−0.460	0.019	0.841	1.451	1.730	4.112
	(5.040)	(1.349)	(0.878)	(0.944)	(0.835)	(0.790)	(0.890)	(1.831)	(4.348)
CE	−12.535**	−7.746***	−4.808***	−2.828**	−0.708	−0.355	0.953	0.350	0.942
	(5.380)	(2.219)	(1.326)	(1.262)	(1.012)	(1.618)	(1.754)	(3.665)	(5.653)
DT	−9.784***	−3.588***	−2.778***	−1.828**	−1.096**	−0.243	−0.103	0.587	2.441
	(3.441)	(1.051)	(0.845)	(0.840)	(0.545)	(0.711)	(1.059)	(1.463)	(3.099)
FCE_{Priv}	5.161*	2.598**	1.889***	1.500**	1.425***	1.358**	1.366**	1.255	1.022
	(2.686)	(1.098)	(0.489)	(0.656)	(0.550)	(0.594)	(0.676)	(1.230)	(4.077)
GCF_{Priv}	3.016	3.492***	3.139***	3.092***	2.782***	2.674***	1.968***	1.452*	−2.126
	(1.938)	(0.943)	(0.592)	(0.564)	(0.519)	(0.625)	(0.585)	(0.880)	(1.590)
$HICP$	−0.873*	−0.646***	−0.506***	−0.323***	−0.264***	−0.168*	0.105	0.536***	0.449
	(0.500)	(0.222)	(0.133)	(0.099)	(0.099)	(0.092)	(0.092)	(0.175)	(0.509)
CAB	−0.000	−0.001	−0.001	−0.001	−0.001	−0.001	−0.001	−0.001	−0.002
	(0.010)	(0.009)	(0.007)	(0.004)	(0.002)	(0.003)	(0.005)	(0.008)	(0.009)
Constant	9.357***	4.846***	3.586***	2.303***	1.704***	0.968**	−0.296	−2.427***	−1.639
	(2.096)	(1.173)	(0.668)	(0.515)	(0.496)	(0.403)	(0.453)	(0.859)	(2.301)
Pseudo-R^2	0.038	0.030	0.021	0.014	0.010	0.007	0.005	0.005	0.004

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}\,p < 0.01$; $^{**}\,p < 0.05$; $^{*}\,p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

4.3.4. Different Explanatory Variables for Sub-Expenditures

Table LI: Elasticity of Output-to-Compensation of Employees for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FCE_{Priv}	0.864	2.068	1.645*	1.305	0.996	1.702**	1.909	1.924	3.924
	(2.614)	(1.458)	(0.888)	(0.894)	(0.702)	(0.744)	(1.232)	(1.327)	(3.309)
GDP_{pc}	0.187	0.028	0.055	−0.064	−0.092	−0.059	−0.048	−0.095	−0.170
	(0.243)	(0.103)	(0.077)	(0.074)	(0.071)	(0.069)	(0.110)	(0.152)	(0.380)
$Debt_{pc}$	−0.308***	−0.138**	−0.065	0.015	0.067	0.127*	0.209**	0.311***	0.434***
	(0.110)	(0.064)	(0.047)	(0.048)	(0.057)	(0.070)	(0.082)	(0.090)	(0.108)
GCF_{Priv}	4.016***	4.248***	3.689***	3.791***	3.174***	3.170***	2.763***	2.151*	1.288
	(1.499)	(0.821)	(0.564)	(0.491)	(0.417)	(0.494)	(0.733)	(1.101)	(1.367)
Sav_{Priv}	1.043	1.723	0.504	1.157	1.470**	2.349***	1.759*	1.998	5.163
	(2.865)	(1.655)	(1.190)	(0.798)	(0.710)	(0.610)	(1.039)	(1.225)	(3.666)
i	0.016	−0.010	−0.019	−0.010	0.007	0.021	0.016	0.031	−0.043
	(0.029)	(0.020)	(0.013)	(0.011)	(0.015)	(0.019)	(0.024)	(0.026)	(0.059)
DI_{Priv}	−3.345	−3.637**	−1.73^{7**}	−2.122***	−1.879***	−2.101***	−2.000***	−1.362	−1.351
	(2.300)	(1.429)	(0.742)	(0.695)	(0.594)	(0.553)	(0.712)	(1.032)	(2.766)
u	−0.102***	−0.030***	−0.015**	−0.006*	−0.007	0.000	0.005	0.013	0.026
	(0.024)	(0.010)	(0.006)	(0.004)	(0.005)	(0.006)	(0.008)	(0.015)	(0.024)
$Interest$	19.995***	9.141**	3.98^{7**}	0.084	−3.886*	−8.277*	−11.283**	−19.807***	−13.384
	(6.417)	(4.096)	(2.020)	(1.536)	(2.361)	(4.274)	(5.586)	(6.954)	(15.258)
$TGGR$	−1.911	1.000*	1.250***	0.968**	0.873	0.478	−0.153	−0.217	−0.288
	(1.280)	(0.561)	(0.320)	(0.408)	(0.532)	(0.651)	(0.865)	(0.796)	(1.927)
Constant	2.972	1.627*	−0.130	1.009	1.125*	0.283	−0.081	−0.507	−1.136
	(2.189)	(0.960)	(0.781)	(0.709)	(0.595)	(0.654)	(1.340)	(1.626)	(4.693)
Pseudo-R^2	0.031	0.021	0.015	0.012	0.011	0.009	0.007	0.008	0.012

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table LII: Elasticity of Private Investment-to-Compensation of Employees for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
$TGGR$	2.629	5.906^{***}	3.67^{**}	2.680	4.604	0.554	−2.488	-7.924^{*}	-33.021^{***}
	(7.108)	(2.064)	(1.706)	(2.349)	(2.876)	(2.760)	(3.758)	(4.294)	(7.272)
TR_{Gov}	4.742	-3.947^{**}	-4.664^{***}	-4.154^{**}	-6.587^{***}	-3.949^{*}	−2.468	−1.393	10.251
	(5.604)	(2.005)	(1.313)	(1.918)	(2.469)	(2.386)	(3.140)	(3.958)	(6.860)
$NULC$	0.960	−0.555	−0.679	-1.354^{***}	-2.080^{***}	-2.269^{***}	-2.786^{***}	-4.230^{***}	-8.190^{***}
	(2.697)	(0.461)	(0.515)	(0.501)	(0.553)	(0.608)	(0.968)	(1.235)	(2.607)
DT	−3.847	-3.650^{**}	−0.965	0.660	0.741	3.059	3.538	6.092^{*}	20.378^{***}
	(5.840)	(1.451)	(1.235)	(1.996)	(2.406)	(2.015)	(2.932)	(3.646)	(4.705)
u	-0.289^{***}	-0.064^{***}	−0.011	0.053^{***}	0.096^{***}	0.103^{***}	0.139^{***}	0.236^{***}	0.539^{***}
	(0.088)	(0.019)	(0.019)	(0.019)	(0.015)	(0.022)	(0.034)	(0.065)	(0.137)
$PVDebt$	-63.049^{***}	-44.143^{***}	-31.72^{***}	-24.142^{***}	-16.753^{***}	-10.078^{**}	-11.620^{***}	-11.107^{**}	-18.845^{**}
	(10.801)	(5.192)	(5.112)	(4.930)	(5.177)	(4.215)	(3.155)	(4.649)	(7.366)
gr_{Debt}	−0.014	-0.025^{***}	-0.036^{***}	-0.026^{***}	-0.027^{***}	-0.027^{***}	-0.029^{**}	-0.030^{*}	-0.045^{**}
	(0.022)	(0.006)	(0.005)	(0.009)	(0.008)	(0.007)	(0.012)	(0.016)	(0.019)
$HICP$	−3.552	-2.041^{**}	-1.777^{*}	-2.188^{*}	−1.475	−1.589	−1.361	1.386	6.799
	(4.358)	(0.934)	(0.976)	(1.239)	(1.458)	(1.424)	(1.662)	(2.734)	(4.831)
$HICP_E$	−1.808	0.261	1.148^{**}	2.310^{***}	2.935^{***}	3.524^{***}	4.252^{***}	4.953^{***}	6.146^{***}
	(1.520)	(0.487)	(0.459)	(0.608)	(0.713)	(0.796)	(0.781)	(0.962)	(2.128)
CAB	0.002	0.001	0.001	0.000	−0.000	−0.000	−0.001	−0.001	−0.003
	(0.031)	(0.012)	(0.006)	(0.003)	(0.007)	(0.007)	(0.003)	(0.021)	(0.038)
Constant	17.959^{***}	9.165^{***}	5.700^{***}	5.627^{***}	2.852	3.043	2.440	−4.382	−9.363
	(4.505)	(1.469)	(1.966)	(2.135)	(2.700)	(2.895)	(3.139)	(4.828)	(6.793)
Pseudo-R^2	0.034	0.033	0.026	0.019	0.016	0.016	0.018	0.023	0.040

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}\,p < 0.01$; $^{**}\,p < 0.05$; $^{*}\,p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table LIII: Elasticity of Private Consumption-to-Compensation of Employees for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
Sav_{Priv}	1.991	0.992	0.723	0.701	0.861	1.066	0.227	−0.337	1.263
	(2.282)	(1.094)	(0.715)	(0.745)	(0.605)	(0.753)	(0.986)	(1.298)	(3.802)
DI_{Priv}	-5.416^{***}	-3.680^{***}	-3.073^{***}	-2.890^{***}	-3.410^{***}	-3.435^{***}	-3.084^{***}	-2.559^{***}	−1.805
	(1.336)	(0.631)	(0.458)	(0.378)	(0.408)	(0.639)	(0.705)	(0.749)	(3.162)
SB	-9.013^{*}	−2.300	−1.319	0.794	0.580	1.493	1.194	−1.273	9.294
	(5.131)	(2.382)	(1.614)	(1.406)	(1.461)	(1.598)	(1.810)	(2.948)	(6.475)
TR_{Gov}	−2.363	−1.176	0.224	−0.432	0.211	−0.201	0.510	2.020	−4.578
	(3.318)	(2.056)	(1.059)	(1.037)	(0.839)	(0.987)	(1.005)	(1.337)	(3.536)
CE	−6.915	-6.519^{**}	-5.258^{***}	-4.056^{***}	-2.888^{*}	-4.358^{**}	-6.513^{**}	-5.874^{*}	−12.880
	(5.999)	(2.922)	(1.682)	(1.410)	(1.487)	(1.842)	(2.581)	(3.331)	(8.621)
DT	5.948^{**}	3.477^{**}	3.687^{***}	2.931^{***}	2.693^{***}	3.546^{***}	4.087^{***}	4.782^{***}	7.079^{**}
	(2.666)	(1.573)	(0.753)	(0.485)	(0.544)	(0.737)	(1.014)	(1.050)	(3.408)
FCE_{Priv}	4.379^{*}	3.237^{***}	3.400^{***}	3.197^{***}	4.060^{***}	4.366^{***}	4.429^{***}	5.044^{***}	7.323^{*}
	(2.315)	(0.702)	(0.521)	(0.485)	(0.465)	(0.653)	(0.924)	(1.126)	(4.055)
GCF_{Priv}	0.974	2.102^{**}	3.026^{***}	3.456^{***}	3.520^{***}	3.617^{***}	3.339^{***}	2.933^{***}	0.197
	(1.041)	(0.949)	(0.551)	(0.608)	(0.551)	(0.529)	(0.602)	(0.814)	(2.178)
$HICP$	-1.481^{***}	-0.692^{***}	-0.241^{***}	−0.062	0.118	0.371^{**}	0.813^{***}	1.438^{***}	3.037^{***}
	(0.401)	(0.173)	(0.092)	(0.116)	(0.093)	(0.144)	(0.149)	(0.214)	(0.677)
CAB	0.000	−0.000	−0.000	−0.000	−0.001	−0.001	−0.001	−0.001	−0.001
	(0.007)	(0.005)	(0.007)	(0.006)	(0.003)	(0.002)	(0.002)	(0.004)	(0.020)
Constant	9.542^{***}	4.819^{***}	1.757^{***}	0.786	−0.201	-1.348^{*}	-3.256^{***}	-6.467^{***}	-13.808^{***}
	(1.656)	(0.945)	(0.469)	(0.565)	(0.517)	(0.727)	(0.766)	(1.035)	(3.009)
Pseudo-R^2	0.034	0.024	0.017	0.013	0.011	0.010	0.010	0.013	0.016

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table LIV: Elasticity of Output-to-Government Investment for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FCE_{Priv}	4.179	3.257**	1.946***	1.737***	1.301***	0.879	0.622	−0.977	−5.956
	(3.874)	(1.449)	(0.664)	(0.520)	(0.441)	(0.693)	(0.840)	(1.275)	(3.650)
GDP_{pc}	0.097	0.238*	0.095	0.121*	0.207***	0.288***	0.314***	0.442**	0.830***
	(0.485)	(0.135)	(0.085)	(0.064)	(0.069)	(0.082)	(0.102)	(0.180)	(0.264)
$Debt_{pc}$	0.030	−0.054	−0.041	−0.031	−0.073	−0.119**	−0.099	−0.183*	−0.329*
	(0.228)	(0.096)	(0.071)	(0.056)	(0.054)	(0.060)	(0.065)	(0.110)	(0.185)
GCF_{Priv}	3.957*	3.665***	3.754***	2.678***	2.370***	2.436***	3.002***	3.605***	4.076
	(2.071)	(1.020)	(0.651)	(0.489)	(0.362)	(0.369)	(0.696)	(1.167)	(2.977)
Sav_{Priv}	2.767	0.972	1.762*	2.057**	1.917***	1.910**	2.334**	2.105	−0.513
	(4.021)	(1.596)	(0.969)	(0.812)	(0.734)	(0.788)	(1.035)	(1.560)	(4.145)
i	0.010	0.026*	0.028***	0.030***	0.020***	0.014	0.021**	0.009	−0.014
	(0.036)	(0.014)	(0.008)	(0.010)	(0.007)	(0.009)	(0.009)	(0.012)	(0.030)
DI_{Priv}	−5.395	−2.415*	−2.036***	−1.638**	−0.778	−0.301	−0.026	0.410	3.069
	(3.992)	(1.357)	(0.743)	(0.645)	(0.509)	(0.528)	(0.501)	(0.925)	(2.855)
u	0.042*	0.022**	0.009*	−0.001	−0.001	0.001	0.000	0.015**	0.039*
	(0.024)	(0.010)	(0.005)	(0.004)	(0.004)	(0.004)	(0.006)	(0.008)	(0.023)
$Interest$	15.789*	2.223	0.932	−2.736	−1.589	−0.693	−2.095	0.508	4.937
	(8.091)	(4.031)	(3.763)	(2.728)	(2.379)	(2.122)	(2.433)	(4.085)	(7.700)
$TGGR$	−0.967	−0.520	1.307**	0.851**	0.583*	0.664*	0.297	−0.065	−1.608
	(2.035)	(0.755)	(0.553)	(0.331)	(0.312)	(0.402)	(0.654)	(1.039)	(2.466)
Constant	−1.746	−3.061**	−1.701***	−1.527***	−2.068***	−2.510***	−2.795***	−2.499	−3.000
	(4.559)	(1.302)	(0.649)	(0.460)	(0.490)	(0.629)	(1.021)	(1.611)	(3.754)
Pseudo-R^2	0.002	0.003	0.004	0.005	0.005	0.006	0.006	0.007	0.007

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table LV: Elasticity of Private Investment-to-Government Investment for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
$TGGR$	7.368	−1.392	−1.367	−1.747	−2.308**	−3.845***	−7.046***	−12.883***	−27.011***
	(10.626)	(2.854)	(1.230)	(1.127)	(1.083)	(1.296)	(1.841)	(2.454)	(6.908)
TR_{Gov}	−8.766	−0.675	−0.445	−0.326	1.089	3.492**	6.378***	8.961***	18.026**
	(11.199)	(3.203)	(1.202)	(0.946)	(0.993)	(1.411)	(1.883)	(2.793)	(7.376)
$NULC$	2.957	−0.016	−0.306	−0.430*	−0.609**	−1.023***	−1.947***	−2.546***	−4.232***
	(2.833)	(0.650)	(0.443)	(0.252)	(0.291)	(0.367)	(0.542)	(0.780)	(1.537)
DT	−2.684	−0.677	0.949	1.608**	2.279***	3.536***	5.919***	12.213***	22.764***
	(7.378)	(2.322)	(0.933)	(0.801)	(0.672)	(1.250)	(1.525)	(2.688)	(4.079)
u	0.044	0.034	0.026**	0.018**	0.012	0.011	0.024**	0.040*	0.153**
	(0.050)	(0.026)	(0.013)	(0.009)	(0.009)	(0.009)	(0.012)	(0.024)	(0.066)
$PVDebt$	−5.831	−8.273***	−7.062***	−5.447***	−4.853***	−3.402***	−3.321***	−2.305*	−6.387
	(5.425)	(1.802)	(1.171)	(1.166)	(1.525)	(1.118)	(0.947)	(1.296)	(4.765)
gr_{Debt}	−0.057	−0.019*	−0.014**	−0.007	−0.005	−0.001	0.000	−0.006	−0.003
	(0.037)	(0.012)	(0.007)	(0.004)	(0.004)	(0.005)	(0.004)	(0.005)	(0.008)
$HICP$	−4.421	−1.731*	−1.643***	−1.299**	−1.240*	−0.504	1.739	3.252*	4.172
	(4.683)	(0.972)	(0.581)	(0.523)	(0.643)	(0.668)	(1.074)	(1.759)	(3.407)
$HICP_E$	−1.330	0.118	0.726**	0.866***	0.957***	0.723**	0.024	−0.300	1.201
	(1.551)	(0.484)	(0.284)	(0.267)	(0.302)	(0.332)	(0.367)	(0.828)	(1.791)
CAB	0.001	−0.000	−0.000	−0.001	−0.001	−0.001	−0.001	−0.001	−0.002
	(0.005)	(0.000)	(0.002)	(0.002)	(0.002)	(0.005)	(0.008)	(0.005)	(0.008)
Constant	8.875	7.172***	5.761***	4.558***	4.868***	4.784***	2.776	1.929	2.545
	(7.440)	(2.069)	(1.198)	(1.063)	(0.904)	(1.135)	(1.856)	(3.917)	(7.639)
Pseudo-R^2	0.003	0.004	0.005	0.005	0.004	0.004	0.005	0.006	0.011

Notes: (1) Standard errors in parentheses; (2) Significance levels: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table LVI: Elasticity of Private Consumption-to-Government Investment for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
Sav_{Priv}	−0.109	1.526	1.643*	1.797***	1.780**	1.786***	2.996***	3.396*	4.869*
	(4.221)	(1.098)	(0.964)	(0.665)	(0.742)	(0.535)	(0.898)	(1.816)	(2.779)
DI_{Priv}	−1.785	−3.137***	−2.278***	−1.967***	−1.582**	−1.513***	−1.824**	−1.423	−3.314
	(3.886)	(0.677)	(0.584)	(0.617)	(0.646)	(0.469)	(0.817)	(1.114)	(2.795)
SB	−2.761	1.883	0.816	−1.055	−0.369	0.334	−2.718	−3.611	−10.632
	(4.303)	(2.512)	(2.044)	(1.775)	(1.107)	(1.392)	(1.843)	(3.312)	(8.163)
TR_{Gov}	0.560	−1.587	−1.093	0.492	0.577	0.690	2.765**	3.384*	8.806
	(2.729)	(2.146)	(1.125)	(1.315)	(0.726)	(1.134)	(1.399)	(1.972)	(5.411)
CE	2.524	−3.603	−3.652**	−3.017**	−2.735**	−1.671	−0.577	−2.196	1.177
	(5.137)	(3.584)	(1.700)	(1.435)	(1.269)	(1.714)	(2.289)	(3.933)	(7.810)
DT	−0.369	1.097	2.008**	2.070***	1.888***	1.495*	1.769*	3.090**	1.305
	(2.156)	(1.442)	(0.814)	(0.535)	(0.433)	(0.787)	(0.931)	(1.527)	(2.673)
FCE_{Priv}	1.667	3.165***	2.301***	2.186***	1.753**	1.502***	1.860*	1.995	2.676
	(4.437)	(1.114)	(0.801)	(0.689)	(0.709)	(0.524)	(0.949)	(1.388)	(2.936)
GCF_{Priv}	−3.131	1.447	1.658***	1.824***	2.134***	2.870***	2.865***	4.273***	5.586**
	(4.268)	(0.926)	(0.566)	(0.499)	(0.412)	(0.424)	(0.684)	(1.272)	(2.840)
$HICP$	−0.881	−0.866***	−0.662***	−0.459***	−0.561***	−0.606***	−0.773***	−0.656**	−1.255***
	(0.668)	(0.261)	(0.170)	(0.134)	(0.111)	(0.147)	(0.202)	(0.305)	(0.437)
CAB	−0.001	−0.002	−0.002	−0.002*	−0.002	−0.002	−0.002	−0.002	−0.002
	(0.005)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.003)	(0.011)
Constant	4.085	4.202***	3.291***	2.193***	2.534***	2.607***	3.355***	2.474	6.354***
	(3.400)	(1.256)	(0.819)	(0.670)	(0.508)	(0.615)	(0.917)	(1.578)	(2.463)
Pseudo-R^2	0.002	0.003	0.004	0.006	0.007	0.007	0.006	0.006	0.004

Notes: (1) Standard errors in parentheses; (2) Significance levels: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table LVII: Elasticity of Output-to-Intermediate Consumption for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FCE_{Priv}	12.824^{***}	5.532^{***}	1.976^{*}	0.238	-0.818	-1.556^{*}	-2.907^{**}	-5.426^{**}	-11.200^{*}
	(3.760)	(2.091)	(1.173)	(0.835)	(0.759)	(0.802)	(1.312)	(2.725)	(6.640)
GDP_{pc}	0.124	-0.151^{*}	-0.152	-0.240^{***}	-0.219^{***}	-0.169^{**}	-0.160^{*}	-0.100	0.236
	(0.291)	(0.091)	(0.094)	(0.051)	(0.068)	(0.076)	(0.094)	(0.126)	(0.531)
$Debt_{pc}$	-0.152	-0.021	-0.002	0.006	-0.016	-0.036	-0.085	-0.167^{*}	-0.594^{*}
	(0.138)	(0.062)	(0.039)	(0.021)	(0.040)	(0.051)	(0.053)	(0.094)	(0.342)
GCF_{Priv}	12.364^{***}	7.503^{***}	4.576^{***}	3.663^{***}	3.076^{***}	2.834^{***}	2.420^{*}	1.160	-2.681
	(2.172)	(1.277)	(0.999)	(0.613)	(0.770)	(0.936)	(1.252)	(1.816)	(3.634)
Sav_{Priv}	17.638^{***}	6.519^{***}	3.279^{**}	2.761^{***}	2.056^{***}	1.005	0.494	-1.539	-4.619
	(3.966)	(2.447)	(1.509)	(0.841)	(0.776)	(0.661)	(1.286)	(2.950)	(6.848)
i	0.136^{***}	0.006	-0.010	-0.014	-0.028^{***}	-0.034^{***}	-0.048^{***}	-0.069^{***}	-0.146^{**}
	(0.050)	(0.021)	(0.014)	(0.009)	(0.011)	(0.011)	(0.014)	(0.023)	(0.073)
DI_{Priv}	-12.186^{***}	-5.947^{***}	-2.470^{*}	-1.329^{*}	-0.281	0.222	0.643	2.863	8.842
	(3.677)	(2.131)	(1.284)	(0.769)	(0.538)	(0.498)	(1.214)	(2.651)	(6.082)
u	-0.053	-0.020^{*}	-0.015^{*}	-0.006	0.007	0.009	0.015	0.017	0.059
	(0.042)	(0.012)	(0.008)	(0.007)	(0.005)	(0.006)	(0.009)	(0.021)	(0.086)
$Interest$	5.927	0.668	-1.698	-0.644	0.769	1.433	6.622^{**}	17.694^{***}	43.053^{**}
	(8.154)	(2.444)	(3.040)	(1.396)	(1.471)	(1.753)	(2.833)	(4.972)	(17.792)
$TGGR$	6.862^{***}	3.352^{***}	1.750^{***}	1.850^{***}	1.750^{***}	1.789^{***}	1.385^{***}	-0.105	-1.635
	(2.210)	(0.701)	(0.403)	(0.301)	(0.245)	(0.394)	(0.475)	(0.784)	(2.785)
Constant	-5.090	0.085	1.120	2.263^{***}	2.331^{***}	2.285^{***}	3.484^{***}	4.550^{***}	5.770
	(3.772)	(0.881)	(1.028)	(0.640)	(0.633)	(0.770)	(0.960)	(1.736)	(4.526)
Pseudo-R^2	0.015	0.010	0.008	0.009	0.008	0.007	0.005	0.003	0.006

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table LVIII: Elasticity of Private Investment-to-Intermediate Consumption for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
$TGGR$	13.976^{***}	5.357^{**}	3.332^{*}	3.213	2.511	2.421	0.880	2.846	-14.045
	(3.793)	(2.568)	(1.919)	(2.321)	(2.514)	(2.747)	(3.757)	(4.041)	(8.839)
TR_{Gov}	0.288	0.048	-3.606^{**}	-4.045^{*}	-3.907^{*}	-3.310	-3.352	-8.606^{**}	1.836
	(5.239)	(1.915)	(1.629)	(2.211)	(2.112)	(2.406)	(3.062)	(4.061)	(11.322)
$NULC$	0.023	-0.027	-0.794	-1.161^{**}	-1.932^{***}	-2.047^{***}	-2.012^{***}	-2.295^{**}	-1.440
	(1.890)	(0.995)	(0.557)	(0.508)	(0.407)	(0.417)	(0.585)	(1.002)	(3.521)
DT	-10.262^{**}	-4.759^{**}	-1.513	-1.754	-1.378	-2.050	0.276	2.168	5.292
	(4.365)	(2.277)	(1.734)	(1.797)	(1.858)	(2.206)	(2.788)	(3.126)	(5.308)
u	-0.254^{***}	-0.075^{***}	-0.003	0.019	0.057^{***}	0.057^{***}	0.088^{***}	0.166^{***}	0.484^{***}
	(0.069)	(0.029)	(0.019)	(0.019)	(0.016)	(0.018)	(0.028)	(0.046)	(0.139)
$PVDebt$	-32.758^{***}	-29.380^{***}	-21.551^{***}	-14.854^{***}	-8.105^{***}	-3.875^{**}	-3.745^{*}	-2.642	-3.564
	(4.337)	(3.368)	(2.794)	(3.280)	(2.566)	(1.677)	(1.919)	(3.137)	(10.819)
gr_{Debt}	-0.087^{**}	-0.057^{***}	-0.032^{***}	-0.028^{***}	-0.023^{***}	-0.016^{**}	-0.017^{**}	-0.018^{**}	-0.042
	(0.042)	(0.015)	(0.009)	(0.009)	(0.008)	(0.008)	(0.009)	(0.008)	(0.030)
$HICP$	-3.516	-2.104	0.346	0.804	2.295^{**}	2.393^{***}	1.835	2.874^{*}	-1.659
	(3.157)	(1.843)	(1.058)	(0.924)	(0.950)	(0.777)	(1.179)	(1.617)	(4.617)
$HICP_E$	0.692	0.140	0.248	0.667	0.842^{**}	1.318^{***}	2.032^{***}	2.384^{***}	5.490^{***}
	(1.598)	(0.721)	(0.542)	(0.431)	(0.367)	(0.434)	(0.701)	(0.727)	(2.054)
CAB	0.003	0.001	0.001	0.000	-0.000	-0.001	-0.001	-0.001	-0.002
	(0.015)	(0.013)	(0.004)	(0.003)	(0.006)	(0.009)	(0.009)	(0.025)	(0.012)
Constant	7.795^{*}	7.321^{***}	0.603	-1.191	-4.789^{**}	-6.360^{***}	-6.465^{***}	-11.143^{***}	-3.450
	(4.075)	(2.619)	(1.279)	(1.738)	(1.881)	(1.721)	(2.286)	(4.211)	(8.584)
Pseudo-R^2	0.024	0.019	0.013	0.009	0.009	0.008	0.007	0.008	0.010

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table LIX: Elasticity of Private Consumption-to-Intermediate Consumption for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
Sav_{Priv}	16.166^{***}	3.178^{**}	1.527	1.280	0.940	0.490	−0.909	−3.522	-10.235^{***}
	(5.378)	(1.382)	(0.953)	(0.905)	(0.882)	(0.724)	(0.811)	(2.261)	(3.961)
DI_{Priv}	-14.444^{***}	-3.389^{***}	-2.045^{***}	-1.434^{**}	-1.208^{**}	−0.344	0.556	2.415	8.107^{*}
	(4.645)	(1.066)	(0.723)	(0.633)	(0.541)	(0.596)	(0.838)	(2.195)	(4.304)
SB	−2.740	6.271^{**}	3.011^{*}	3.222^{***}	2.795^{***}	3.051^{***}	3.244^{**}	3.656	−5.652
	(6.834)	(2.646)	(1.822)	(0.964)	(0.992)	(0.840)	(1.310)	(3.358)	(7.924)
TR_{Gov}	2.487	-3.331^{**}	−1.692	-1.510^{**}	−0.793	−0.851	−0.617	−0.682	4.786
	(4.439)	(1.631)	(1.107)	(0.639)	(0.629)	(0.591)	(0.825)	(2.585)	(6.156)
CE	3.226	-3.748^{**}	−1.711	−0.367	0.920	3.000^{**}	5.014^{**}	2.593	−4.093
	(8.827)	(1.696)	(1.531)	(1.182)	(1.438)	(1.510)	(2.051)	(3.413)	(8.964)
DT	3.449	2.061^{**}	1.417^{*}	0.993	0.169	−0.471	−0.607	−0.759	0.917
	(3.452)	(0.846)	(0.754)	(0.656)	(0.531)	(0.682)	(0.819)	(1.479)	(4.012)
FCE_{Priv}	12.926^{***}	3.300^{***}	1.856^{**}	1.239^{*}	0.979	0.098	−1.028	−2.713	−5.576
	(4.992)	(1.116)	(0.863)	(0.697)	(0.653)	(0.631)	(0.759)	(2.088)	(4.266)
GCF_{Priv}	12.160^{***}	6.532^{***}	5.058^{***}	4.840^{***}	5.045^{***}	4.554^{***}	4.240^{***}	3.485^{**}	−1.446
	(3.714)	(0.874)	(0.703)	(0.661)	(0.735)	(0.530)	(0.674)	(1.743)	(3.841)
$HICP$	-1.293^{**}	−0.061	0.351^{**}	0.297^{**}	0.326^{**}	0.339^{**}	0.235^{**}	0.384^{*}	−0.607
	(0.527)	(0.213)	(0.174)	(0.132)	(0.147)	(0.139)	(0.107)	(0.222)	(0.603)
CAB	0.000	−0.000	−0.000	−0.000	−0.000	−0.001	−0.001	−0.001	−0.001
	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)
Constant	4.540^{**}	−0.344	-1.802^{*}	-1.624^{**}	-1.798^{**}	-1.916^{***}	-1.465^{**}	−1.696	3.165
	(2.267)	(1.017)	(0.946)	(0.787)	(0.752)	(0.720)	(0.726)	(1.474)	(3.471)
Pseudo-R^2	0.008	0.007	0.006	0.006	0.006	0.006	0.005	0.002	0.003

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}\,p < 0.01$; $^{**}\,p < 0.05$; $^{*}\,p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table LX: Elasticity of Output-to-Social Benefits for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FCE_{Priv}	20.364^{***}	12.145^{***}	6.893^{***}	3.844^{***}	2.756^{***}	0.814	−0.573	−1.987	-16.126^{***}
	(6.934)	(2.397)	(1.935)	(1.197)	(0.845)	(0.794)	(1.089)	(1.922)	(4.996)
GDP_{pc}	0.502	−0.104	-0.209^{**}	-0.319^{***}	-0.370^{***}	-0.392^{***}	-0.654^{***}	-0.605^{***}	-1.334^{***}
	(0.315)	(0.147)	(0.096)	(0.085)	(0.076)	(0.075)	(0.121)	(0.192)	(0.317)
$Debt_{pc}$	−0.309	−0.092	−0.065	0.014	0.073^{*}	0.077	0.236^{***}	0.387^{***}	1.086^{***}
	(0.304)	(0.068)	(0.050)	(0.049)	(0.043)	(0.052)	(0.079)	(0.124)	(0.294)
GCF_{Priv}	6.985^{**}	6.568^{***}	4.304^{***}	3.730^{***}	3.414^{***}	2.229^{***}	2.397^{**}	1.647	3.950
	(2.886)	(1.074)	(0.807)	(0.661)	(0.524)	(0.834)	(0.996)	(1.378)	(3.102)
Sav_{Priv}	14.995^{*}	10.084^{***}	4.684^{**}	1.716	1.266	0.348	0.907	−0.966	-13.433^{**}
	(7.655)	(2.598)	(2.316)	(1.571)	(1.373)	(1.136)	(1.431)	(2.285)	(5.680)
i	−0.096	-0.078^{***}	-0.065^{***}	-0.058^{***}	-0.062^{***}	-0.064^{***}	-0.061^{**}	-0.073^{**}	-0.121^{*}
	(0.072)	(0.024)	(0.019)	(0.014)	(0.016)	(0.018)	(0.025)	(0.034)	(0.062)
DI_{Priv}	-15.641^{**}	-12.689^{***}	-7.637^{***}	-4.820^{***}	-4.036^{***}	-3.349^{***}	-2.964^{***}	-2.033^{*}	2.549
	(6.698)	(2.442)	(1.904)	(1.264)	(0.819)	(0.824)	(0.917)	(1.206)	(3.097)
u	-0.120^{***}	-0.055^{***}	-0.050^{***}	-0.043^{***}	-0.029^{***}	-0.019^{***}	−0.011	0.013	0.144^{***}
	(0.043)	(0.012)	(0.006)	(0.007)	(0.007)	(0.007)	(0.009)	(0.014)	(0.050)
$Interest$	12.493	11.957^{***}	5.656^{*}	0.888	−1.486	−0.046	-7.507^{*}	-16.767^{**}	-39.718^{***}
	(14.345)	(3.973)	(3.404)	(2.245)	(1.644)	(3.037)	(4.523)	(6.949)	(14.682)
$TGGR$	6.194	3.790^{***}	3.357^{***}	2.637^{***}	1.887^{***}	1.430^{*}	1.581^{*}	0.304	−3.089
	(4.588)	(1.001)	(0.798)	(0.704)	(0.661)	(0.782)	(0.918)	(1.451)	(3.424)
Constant	−6.195	1.803	3.028^{***}	3.802^{***}	4.341^{***}	5.678^{***}	7.535^{***}	7.057^{***}	14.866^{***}
	(4.788)	(1.644)	(1.102)	(0.923)	(0.946)	(0.962)	(1.476)	(2.324)	(3.656)
Pseudo-R^2	0.023	0.023	0.017	0.012	0.009	0.008	0.007	0.008	0.016

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table LXI: Elasticity of Private Investment-to-Social Benefits for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
$TGGR$	23.652^{***}	12.088^{***}	8.821^{***}	8.864^{***}	11.550^{***}	11.566^{***}	14.090^{***}	16.292^{***}	17.604
	(8.846)	(4.001)	(2.248)	(2.310)	(2.828)	(3.107)	(3.995)	(3.574)	(12.209)
TR_{Gov}	0.351	-3.466	-4.506^{**}	-6.010^{***}	-10.523^{***}	-13.525^{***}	-18.147^{***}	-28.804^{***}	-52.645^{***}
	(10.418)	(3.047)	(2.075)	(2.119)	(2.191)	(2.247)	(3.127)	(3.692)	(8.370)
$NULC$	6.821^{***}	2.494^{***}	1.461^{***}	0.807	-0.182	-1.987^{**}	-3.021^{***}	-3.339^{***}	-2.397
	(2.282)	(0.930)	(0.473)	(0.549)	(0.668)	(0.830)	(0.792)	(0.969)	(2.343)
DT	-9.771	-7.632^{**}	-4.765^{*}	-3.070	-2.879	-1.248	-1.618	1.379	7.091
	(8.296)	(2.988)	(2.444)	(1.925)	(2.397)	(2.665)	(3.666)	(3.971)	(11.075)
u	-0.449^{***}	-0.124^{*}	-0.054^{***}	-0.028^{*}	0.001	0.052^{*}	0.111^{***}	0.215^{***}	0.546^{***}
	(0.170)	(0.069)	(0.020)	(0.016)	(0.021)	(0.028)	(0.037)	(0.060)	(0.110)
$PVDebt$	-31.784^{**}	-35.974^{***}	-35.662^{***}	-31.216^{***}	-23.074^{***}	-20.936^{***}	-20.400^{***}	-20.892^{***}	-17.215^{***}
	(14.754)	(5.218)	(3.223)	(2.663)	(4.746)	(2.557)	(3.788)	(5.739)	(5.613)
gr_{Debt}	0.005	-0.017^{**}	-0.027^{***}	-0.024^{***}	-0.031^{***}	-0.028^{***}	-0.029^{***}	-0.034^{***}	-0.051^{**}
	(0.018)	(0.009)	(0.005)	(0.005)	(0.007)	(0.004)	(0.004)	(0.008)	(0.020)
$HICP$	1.848	-2.338	-2.582^{***}	-2.188^{**}	-1.099	1.054	1.908	2.235	-0.531
	(3.125)	(1.521)	(0.983)	(0.937)	(1.187)	(1.385)	(1.318)	(1.706)	(3.552)
$HICP_E$	-7.570^{***}	-1.156^{*}	0.254	0.965^{***}	1.619^{***}	2.183^{***}	3.517^{***}	6.164^{***}	12.814^{***}
	(1.532)	(0.606)	(0.453)	(0.355)	(0.473)	(0.404)	(0.582)	(0.833)	(1.553)
CAB	0.003	0.001	0.001	0.001	0.001	0.000	-0.000	-0.001	-0.002
	(0.013)	(0.004)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.004)	(0.025)
Constant	-14.734^{**}	0.913	1.946	0.392	-2.781	-6.183^{**}	-11.148^{***}	-21.646^{***}	-38.774^{***}
	(6.716)	(3.471)	(2.584)	(2.221)	(2.694)	(2.647)	(2.538)	(3.284)	(5.322)
Pseudo-R^2	0.034	0.027	0.025	0.021	0.017	0.016	0.016	0.018	0.024

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}\,p < 0.01$; $^{**}\,p < 0.05$; $^{*}\,p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table LXII: Elasticity of Private Consumption-to-Social Benefits for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
Sav_{Priv}	22.277^{***}	7.877^{***}	1.994	−0.264	−0.848	0.702	−0.053	−2.471	-13.609^{**}
	(5.256)	(3.049)	(1.531)	(1.204)	(1.158)	(1.102)	(1.337)	(2.492)	(5.496)
DI_{Priv}	-24.115^{***}	-11.343^{***}	-6.559^{***}	-4.527^{***}	-3.638^{***}	-4.265^{***}	-3.611^{***}	−0.839	9.059
	(4.438)	(2.491)	(1.237)	(1.201)	(1.044)	(0.587)	(0.852)	(2.154)	(5.804)
SB	−6.554	-10.228^{***}	-5.070^{**}	-3.778^{**}	−1.184	0.254	1.453	1.818	−9.348
	(6.068)	(3.034)	(2.271)	(1.702)	(1.464)	(1.520)	(1.835)	(3.098)	(7.658)
TR_{Gov}	10.943^{***}	7.238^{***}	4.039^{***}	2.192^{*}	0.627	−0.699	-2.646^{**}	-4.779^{***}	−2.408
	(3.816)	(2.027)	(1.483)	(1.208)	(0.970)	(0.878)	(1.072)	(1.522)	(4.918)
CE	0.529	−2.127	-6.067^{***}	-7.076^{***}	-6.782^{***}	-7.911^{***}	-6.861^{**}	-10.575^{***}	-18.397^{**}
	(7.623)	(3.224)	(1.742)	(1.253)	(1.474)	(1.664)	(2.762)	(3.410)	(7.291)
DT	5.189^{*}	3.891^{***}	3.744^{***}	3.495^{***}	3.013^{***}	4.044^{***}	5.071^{***}	6.607^{***}	10.919^{***}
	(3.048)	(0.987)	(0.478)	(0.524)	(0.679)	(0.938)	(1.258)	(1.411)	(3.349)
FCE_{Priv}	24.960^{***}	12.356^{***}	7.087^{***}	4.654^{***}	3.798^{***}	4.982^{***}	4.120^{***}	2.194	−5.940
	(4.938)	(2.959)	(1.501)	(1.409)	(1.232)	(0.942)	(1.166)	(2.450)	(6.187)
GCF_{Priv}	10.190^{***}	5.082^{***}	4.661^{***}	3.737^{***}	3.331^{***}	3.269^{***}	2.989^{***}	2.813^{**}	−3.337
	(2.062)	(1.177)	(0.743)	(0.622)	(0.723)	(0.797)	(0.905)	(1.335)	(3.480)
$HICP$	-2.519^{***}	-1.149^{***}	-0.376^{**}	−0.040	0.376^{***}	0.701^{***}	1.167^{***}	2.147^{***}	4.331^{***}
	(0.554)	(0.239)	(0.172)	(0.155)	(0.139)	(0.117)	(0.181)	(0.304)	(0.735)
CAB	0.001	0.001	0.000	0.000	0.000	−0.000	−0.000	−0.000	−0.001
	(0.005)	(0.004)	(0.006)	(0.007)	(0.009)	(0.007)	(0.007)	(0.007)	(0.008)
Constant	9.713^{***}	5.262^{***}	2.267^{**}	1.424^{*}	−0.377	-1.819^{**}	-3.595^{***}	-7.875^{***}	-16.359^{***}
	(2.622)	(1.324)	(0.922)	(0.782)	(0.678)	(0.725)	(0.948)	(1.505)	(3.449)
Pseudo-R^2	0.022	0.021	0.016	0.012	0.009	0.008	0.009	0.012	0.019

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table LXIII: Elasticity of Output-to-Social Transfers for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
FCE_{Priv}	5.483^{**}	2.385^{**}	1.082	0.495	−0.318	−0.876	−1.107	−1.591	-4.329^{*}
	(2.736)	(1.002)	(0.695)	(0.516)	(0.530)	(0.743)	(0.870)	(1.466)	(2.300)
GDP_{pc}	1.304^{***}	0.567^{***}	0.210^{**}	0.025	−0.069	-0.132^{**}	-0.287^{***}	-0.478^{***}	-1.004^{***}
	(0.202)	(0.137)	(0.087)	(0.057)	(0.045)	(0.065)	(0.081)	(0.143)	(0.351)
$Debt_{pc}$	-0.271^{***}	-0.182^{***}	-0.096^{***}	−0.023	0.027	0.040	0.035	0.110	0.354^{**}
	(0.066)	(0.038)	(0.028)	(0.023)	(0.024)	(0.041)	(0.050)	(0.094)	(0.171)
GCF_{Priv}	7.527^{***}	4.684^{***}	3.586^{***}	3.526^{***}	3.478^{***}	3.641^{***}	2.564^{***}	1.573^{**}	0.130
	(1.509)	(0.637)	(0.420)	(0.388)	(0.369)	(0.518)	(0.584)	(0.770)	(1.416)
Sav_{Priv}	2.021	1.127	1.158^{**}	1.672^{***}	1.262^{**}	1.099	1.624	1.901	2.422
	(3.386)	(1.064)	(0.524)	(0.483)	(0.540)	(0.784)	(1.042)	(1.575)	(2.979)
i	0.027	−0.027	-0.050^{***}	-0.033^{***}	-0.018^{*}	−0.018	-0.032^{*}	−0.013	0.017
	(0.044)	(0.020)	(0.011)	(0.009)	(0.009)	(0.014)	(0.019)	(0.039)	(0.078)
DI_{Priv}	1.117	0.354	−0.521	-0.760^{**}	−0.172	0.217	−0.103	−0.911	−0.805
	(2.918)	(0.735)	(0.475)	(0.384)	(0.484)	(0.764)	(0.894)	(1.712)	(2.635)
u	-0.079^{**}	-0.021^{***}	−0.008	−0.001	−0.002	0.001	−0.002	0.007	0.048
	(0.033)	(0.007)	(0.007)	(0.005)	(0.004)	(0.005)	(0.007)	(0.013)	(0.036)
$Interest$	6.033	2.597	3.762^{**}	1.222	−1.328	−2.019	−0.484	−5.508	−15.431
	(9.193)	(3.798)	(1.529)	(1.361)	(1.779)	(2.737)	(2.314)	(3.912)	(11.824)
$TGGR$	−0.316	1.250^{***}	1.180^{***}	1.304^{***}	1.302^{***}	1.457^{***}	1.544^{***}	1.510^{***}	1.534
	(1.206)	(0.472)	(0.379)	(0.359)	(0.282)	(0.383)	(0.425)	(0.522)	(1.783)
Constant	-16.095^{***}	-6.862^{***}	-2.242^{**}	−0.551	0.102	0.688	3.028^{***}	5.585^{***}	10.788^{***}
	(2.701)	(1.914)	(0.999)	(0.698)	(0.434)	(0.664)	(0.781)	(1.281)	(4.036)
Pseudo-R^2	0.027	0.019	0.019	0.017	0.015	0.011	0.007	0.004	0.008

Notes: (1) Standard errors in parentheses; (2) Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table LXIV: Elasticity of Private Investment-to-Social Transfers for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
$TGGR$	1.416	5.461*	4.328**	3.185*	2.212	3.335*	3.066	−3.901	−7.404
	(5.818)	(2.947)	(1.788)	(1.763)	(2.091)	(1.869)	(3.106)	(4.500)	(7.895)
TR_{Gov}	2.574	−3.880**	−4.115***	−2.880*	−2.131	−2.519	−3.771	−0.656	−10.279
	(5.533)	(1.968)	(1.491)	(1.596)	(2.312)	(1.976)	(3.367)	(4.050)	(9.270)
$NULC$	2.308	0.654	−0.150	−0.319	−0.787**	−1.291***	−2.129***	−2.205**	−2.302
	(1.713)	(0.680)	(0.356)	(0.255)	(0.364)	(0.388)	(0.417)	(1.034)	(2.044)
DT	2.810	−1.646	−1.024	−1.274	−0.049	−0.343	−0.051	3.177	10.395
	(5.482)	(2.362)	(1.414)	(1.439)	(1.466)	(1.953)	(1.976)	(3.932)	(6.741)
u	−0.106*	−0.015	0.003	0.024**	0.051***	0.072***	0.082***	0.145***	0.316***
	(0.064)	(0.018)	(0.011)	(0.012)	(0.012)	(0.013)	(0.016)	(0.041)	(0.071)
$PVDebt$	−44.873***	−29.517***	−20.824***	−16.661***	−13.852***	−11.018***	−8.782***	−9.763**	−4.477
	(6.348)	(3.734)	(4.026)	(3.408)	(2.256)	(2.737)	(2.180)	(4.268)	(4.333)
gr_{Debt}	−0.027*	−0.019***	−0.022***	−0.019***	−0.017***	−0.015***	−0.013**	−0.016**	−0.019
	(0.015)	(0.006)	(0.005)	(0.006)	(0.005)	(0.004)	(0.005)	(0.007)	(0.013)
$HICP$	−0.527	−0.484	−0.597	−0.327	1.121	2.063**	2.904***	2.798*	5.507
	(2.205)	(1.493)	(0.921)	(0.748)	(1.075)	(0.899)	(0.831)	(1.573)	(3.518)
$HICP_E$	−2.784***	−0.579	0.549	0.824**	0.735	0.657	1.196***	2.237***	3.068*
	(0.818)	(0.530)	(0.429)	(0.324)	(0.483)	(0.448)	(0.430)	(0.633)	(1.828)
CAB	0.002	0.001	0.001	0.000	0.000	−0.000	−0.000	−0.001	−0.002
	(0.027)	(0.009)	(0.005)	(0.004)	(0.004)	(0.003)	(0.003)	(0.005)	(0.008)
Constant	1.649	−0.088	−0.013	−1.214	−4.883***	−6.663***	−8.268***	−9.841***	−22.039***
	(4.055)	(2.235)	(1.104)	(1.211)	(1.608)	(1.567)	(1.750)	(2.556)	(4.936)
Pseudo-R^2	0.020	0.020	0.016	0.013	0.013	0.012	0.011	0.013	0.020

Notes: (1)Standard errors in parentheses; (2) Significance levels: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.

Table LXV: Elasticity of Private Consumption-to-Social Transfers for specific variables

	Deciles								
Variables	I	II	III	IV	V	VI	VII	VIII	IX
Sav_{Priv}	3.387	2.749^{***}	1.608^{***}	0.888^{**}	1.117^{**}	1.140	0.936	0.423	−1.229
	(2.528)	(1.013)	(0.532)	(0.435)	(0.466)	(0.813)	(1.020)	(1.087)	(2.588)
DI_{Priv}	-5.009^{*}	-3.718^{***}	-2.179^{***}	-1.676^{***}	-1.414^{**}	-1.206^{*}	-1.583^{*}	-1.236^{**}	0.578
	(2.861)	(1.024)	(0.655)	(0.376)	(0.566)	(0.690)	(0.829)	(0.589)	(2.025)
SB	-10.288^{***}	−0.874	0.334	0.773	1.803	2.908^{**}	2.638	0.177	0.341
	(3.821)	(1.455)	(1.168)	(0.773)	(1.252)	(1.249)	(2.038)	(2.145)	(4.182)
TR_{Gov}	8.029^{***}	2.157^{**}	1.356^{*}	1.293^{**}	0.707	0.329	0.403	0.853	−1.193
	(2.366)	(0.841)	(0.784)	(0.576)	(0.696)	(0.673)	(0.912)	(1.199)	(2.720)
CE	2.924	-7.926^{***}	-5.587^{***}	-3.831^{***}	-3.880^{***}	-3.562^{***}	−2.682	−2.516	14.526^{**}
	(3.378)	(1.717)	(1.112)	(0.828)	(1.151)	(1.078)	(2.046)	(3.020)	(6.119)
DT	2.285	3.470^{***}	2.193^{***}	1.295^{***}	0.967^{*}	1.106^{*}	0.439	0.537	−1.323
	(1.962)	(0.833)	(0.653)	(0.424)	(0.536)	(0.593)	(0.778)	(0.995)	(3.695)
FCE_{Priv}	5.017^{***}	4.013^{***}	2.416^{***}	1.625^{***}	1.467^{***}	1.359^{*}	1.871^{*}	1.846^{**}	−0.699
	(1.783)	(0.886)	(0.621)	(0.362)	(0.511)	(0.779)	(1.017)	(0.827)	(2.214)
GCF_{Priv}	6.191^{***}	4.382^{***}	3.773^{***}	4.127^{***}	4.380^{***}	4.964^{***}	4.649^{***}	2.518^{***}	1.663
	(1.971)	(0.837)	(0.485)	(0.393)	(0.434)	(0.576)	(0.817)	(0.809)	(2.577)
$HICP$	-1.186^{**}	−0.118	−0.041	0.194^{*}	0.406^{***}	0.546^{***}	0.644^{***}	0.837^{***}	1.932^{***}
	(0.590)	(0.210)	(0.099)	(0.102)	(0.110)	(0.127)	(0.182)	(0.252)	(0.452)
CAB	0.000	0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.001
	(0.005)	(0.004)	(0.006)	(0.005)	(0.005)	(0.005)	(0.006)	(0.007)	(0.011)
Constant	3.651	0.319	−0.024	-1.066^{***}	-2.053^{***}	-2.883^{***}	-3.055^{***}	-3.215^{***}	-8.455^{***}
	(3.074)	(0.978)	(0.397)	(0.390)	(0.507)	(0.557)	(0.774)	(1.208)	(2.322)
Pseudo-R^2	0.011	0.012	0.015	0.014	0.012	0.009	0.006	0.004	0.006

Notes: (1)Standard errors in parentheses; (2) Significance levels: $^{***}\ p < 0.01$; $^{**}\ p < 0.05$; $^{*}\ p < 0.1$; (3) Total observations are 2268 for the 27 countries panel data. This value divided by 9 deciles gives the 252 observations per decile.