Journal of International Economics 96 (2015) S56–S75

Contents lists available at ScienceDirect

Journal of International Economics

journal homepage: www.elsevier.com/locate/jie

Fiscal consolidation with tax evasion and corruption

Evi Pappa *, Rana Sajedi, Eugenia Vella

European University Institute, Florence 50133, Italy

ARTICLE INFO

Article history:
Received 21 August 2014
Received in revised form 12 December 2014
Accepted 12 December 2014
Available online 23 December 2014

Jel classification:
E02
E62
H30

Keywords:
Tax evasion
Corruption
Austerity
VAR
DSGE-model

ABSTRACT

Cross-country evidence highlights the importance of tax evasion and corruption in determining the size of fiscal multipliers. We introduce these two features in a New Keynesian model and revisit the effects of fiscal consolidations. VAR evidence for Italy suggests that spending cuts reduce tax evasion, while tax hikes increase it. In the model, spending cuts induce a reallocation of production towards the formal sector, thus reducing tax evasion. Tax hikes increase the incentives to produce in the less productive shadow sector, implying higher output and unemployment losses. Corruption further amplifies these losses by requiring larger hikes in taxes to reduce debt. We use the model to assess the recent fiscal consolidation plans in Greece, Italy, Portugal and Spain. Our results corroborate the evidence of increasing levels of tax evasion during these consolidations and point to significant output and welfare losses, which could be reduced substantially by combating tax evasion and corruption.

1. Introduction

When there is an income tax, the just man will pay more and the unjust less on the same amount of income. Plato, The Republic, Book I, 343-D

The recent fiscal crisis has sparked a considerable amount of research measuring the macroeconomic effects of fiscal consolidations.[1] This literature, however, has left aside two crucial political economy aspects, namely the presence of tax evasion and corruption. This is surprising, given that they are important features in many of the countries adopting consolidation policies, as seen in Fig. 1. In addition, there is growing evidence that tax evasion and corruption have increased in recent years. For example, a recent report by the technical staff of the Spanish Finance Ministry (Gestha, 2014) indicates that the shadow economy in Spain increased by 6.8 percentage points between 2008 and 2012, reaching 24.6% of GDP. At the same time, a special Greek police task force reported in 2013 that the number of cases of public corruption increased by 33% between 2011 and 2012.[2] The aim of this paper is to revisit the effects of government expenditure cuts and labor tax hikes on output, unemployment and welfare, when tax evasion and corruption are present.

We treat tax evasion as synonymous with the shadow economy, which, according to Buehn and Schneider (2012, p.175–176), comprises “all market-based, lawful production or trade of goods and services deliberately concealed from public authorities in order to evade either payment of income, value added or other taxes, or social security contributions”. Fiscal policy has an impact on the size of the shadow economy since it affects the incentives to tax evade both directly, through the tax burden, and indirectly, through its effects on the formal economy. Thus, a fiscal consolidation can have important secondary effects if it generates a reallocation of resources between the formal and informal sectors.[3] Corruption, in our paper, refers to the embezzlement of public funds. The presence of corruption can hamper the ability of the government to raise revenue, and thus distort the effects of fiscal consolidations. Tax evasion and corruption often coexist and possibly interact. For instance, Buehn and Schneider (2012) indicate that there is a positive correlation between the two.

Many authors have studied whether it is preferable to rely on spending cuts or tax hikes when consolidating the public deficit. Overall, the

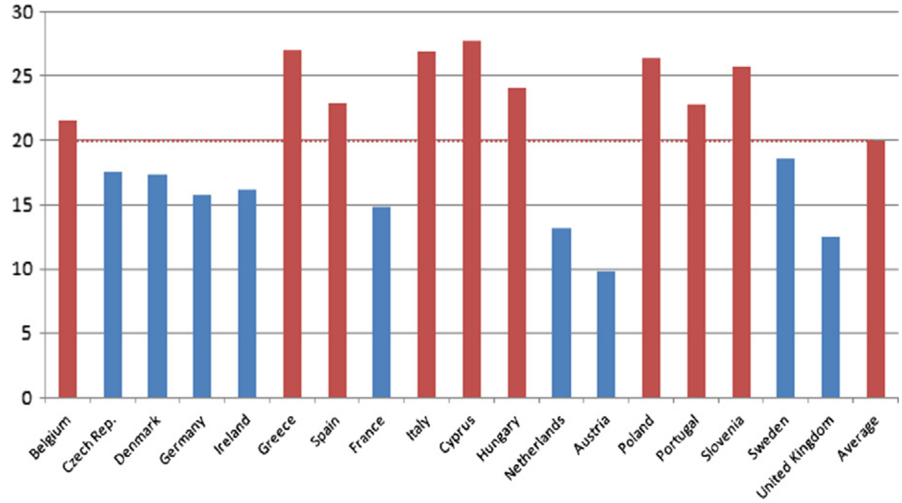
* Corresponding author. Tel.: +39 055 4685908.
E-mail addresses: evi.pappa@eui.eu (E. Pappa), rana.sajedi@eui.eu (R. Sajedi), eugenia.vella@eui.eu (E. Vella).

[1] The implementation of the Maastricht Treaty in the mid 1990s initiated a wave of research on the effects of consolidations. For examples, see the survey in Perotti (1996).

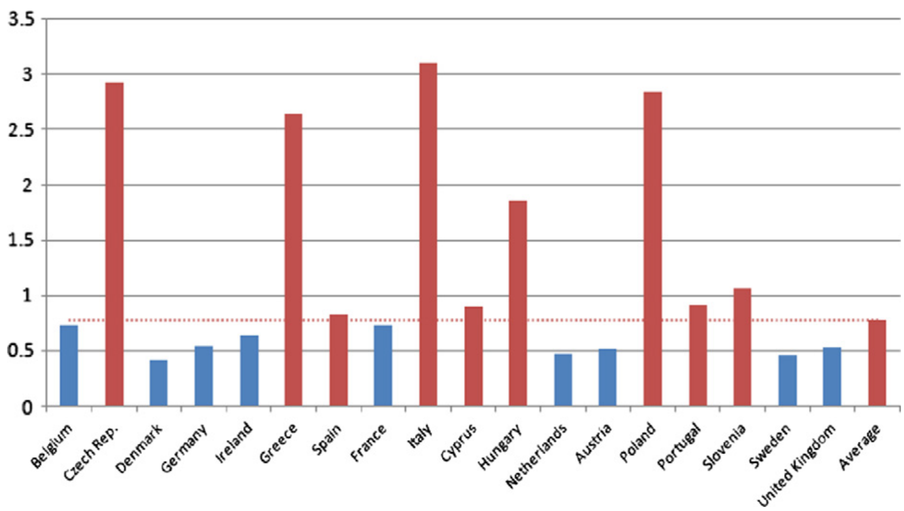
[2] See http://greece.greekreporter.com/2013/04/02/greek-police-public-worker-corruption-soars/.

[3] For example, using a model calibrated to firm-level data for Greece, Pappadà and Zylberberg (2014) show that the increase in tax evasion can explain three quarters of the revenue leakages following the 2010 VAT hikes, when only half of the expected increase in revenue was realized. Colombo et al. (forthcoming) also show empirical evidence of a rise in the shadow economy in recent years, although their focus is on the role of the banking crisis.

http://dx.doi.org/10.1016/j.jinteco.2014.12.004
0022-1996/



Shadow Economy (% GDP), Average over 1999-2010
Source: Schneider and Buehn (2012).



Control of Corruption Index, Average over 1998-2010
Source: World Bank Global Governance Indicators.

Note: The dotted line indicates the average for the countries considered.

Fig. 1. Shadow economy and corruption in european countries.

findings are not conclusive. Using multi-year fiscal consolidation data for 17 OECD countries over the period 1980–2005, Alesina et al. (2013) show that expenditure-based adjustments are typically associated with mild and short-lived recessions, and in some cases with no recession at all, while tax-based corrections are followed by deep and prolonged recessions. On the other hand, Erceg and Lindé (2013) reach a different conclusion. Using a two-country Dynamic Stochastic General Equilibrium (DSGE) model of a currency union, they show that, in the short run, a spending cut depresses output by more than a labor tax hike, because of the limited accommodation by the central bank and the fixed exchange rate. However, this is reversed in the long run as real interest and exchange rates adjust towards their flexible price levels.

Indeed, there is strong evidence that the effects of fiscal consolidations are not yet fully understood. Blanchard and Leigh (2013) examine the impact of the recent fiscal consolidations in 26 OECD countries. They regress the forecast errors of output growth between 2010 and 2011 on the planned consolidation of public deficit, and find that the forecasts underestimate the size of fiscal multipliers. As shown in the next section, the underestimation of fiscal multipliers is more pronounced in countries with a higher level of tax evasion and/or corruption, suggesting that these two features amplify the effects of fiscal consolidations.

Reliable time series data on tax evasion is typically hard to get. Luckily, the Italian National Institute of Statistics (ISTAT) has created and regularly updated a time series of informal employment in Italy, which is consistent with international standards and, in particular, with the 1993 System of National Accounts. Apart from data availability, Italy is a fitting case for studying tax evasion and corruption. Firstly, there is abundant evidence of a large shadow economy, with estimates varying between 15% and 30% of GDP (see e.g. Ardizzi et al., 2012; Orsi et al., 2014, and Schneider and Buehn, 2012). Secondly, Busato and Chiarini (2004) have shown that incorporating the shadow economy in an RBC model for Italy considerably improves the fit to the data. Thirdly, Italy scores poorly in international rankings of institutional quality: it is currently ranked 72nd among 176 countries with a score of 42/100 in Transparency International's Corruption Perception Index and 25nd among