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Macroeconomic effects of structural reforms and fiscal consolidations: Trade-offs and complementarities

Dimitris Papageorgiou*, Evangelia Vourvachaki

Bank of Greece, Economic Analysis and Research Department, 21 El. Venizelos Ave., GR-10250 Athens, Greece

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ABSTRACT

This paper studies the impact of product and labour market structural reforms and the effects of their joint implementation with alternative debt consolidation strategies. The set-up is a dynamic general equilibrium model calibrated for the Greek economy. The results show that structural reforms produce important long-run GDP gains that materialize earlier, the faster the reforms are implemented. When implemented jointly with fiscal consolidations, structural reforms may amplify the short-run costs of fiscal tightening. The GDP dynamics depend on the fiscal instrument used for public debt consolidation. In the long run, however, there are complementarity gains irrespective of the fiscal instrument used.

1. Introduction

In this paper we investigate the macroeconomic effects of structural policies that remove obstacles to the efficient allocation of resources and correct potential market failures. In this regard, we address the following questions: What is the impact of structural reforms in product and labour markets in the short and long run? What is the role of the pace and timing of implementing a reform? We further consider cross-policy interactions. In particular, we examine the impact of structural reforms when they are implemented jointly with debt consolidation policies: Do structural reforms alleviate the costs of debt consolidation? To do so, we provide a quantitative assessment of different policies using a dynamic general equilibrium model that is calibrated for the Greek economy.

Our findings point out strong positive long-run GDP gains from implementing structural reforms in the product and labour markets. Namely, reductions of 10 percentage points (pp) in non-tradable price and private-sector wage markups result in gains that amount to around 9% of GDP. These gains materialize earlier the sooner and the faster the reforms are implemented. The results also suggest that structural reforms do not unambiguously lessen the pain of debt consolidation. The fiscal instrument used to consolidate public debt matters for the impact of the simultaneous implementation of structural reforms and debt consolidation in the short to medium-term. A capital tax-based debt consolidation when combined with product market reforms is found to be the most recessionary option in terms of GDP losses in the short run. Labour market reforms amplify the costs of fiscal tightening only when simultaneously implemented with a labourtax-based debt consolidation. In the long run, the gains of simultaneous implementation of structural reforms and debt consolidation complement each other. As an illustration, a 10pp reduction of the public debt-to-GDP ratio combined with a 10pp reduction in markup induces additional GDP gains in the range of 0.4%-4%, depending on the policy mix. The main mechanism at work is that structural reforms improve the economy's productive capacity on a permanent basis, thereby increasing the tax base. As a result, structural reforms create additional fiscal room that can be used to further decrease tax rates and/or increase government expenditures. This mechanism works in the opposite direction in the short

* Corresponding author.
E-mail addresses: dpapag@aueb.gr, dpapageorgiou@bankofgreece.gr (D. Papageorgiou), evourvachaki@bankofgreece.gr (E. Vourvachaki).

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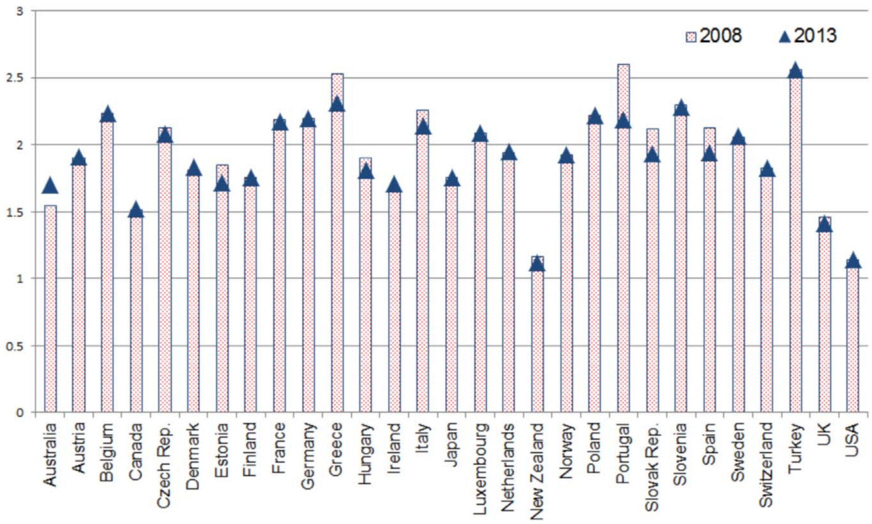

Fig. 1. Regulatory obstacles in product and labour markets. Note: The mean value of OECD indices of Employment Protection Legislation for regular contracts and overall Product Market Regulation for each year and country. Both indices range between 0 and 6, with lower index scores denoting a lower degree of regulatory obstacles to competition and lower employment protection, respectively.

run depending on the instrument used to achieve debt consolidation.

Our results have strong policy implications, particularly for the Euro Area (EA) countries. The recent double-dip recession in the EA due to the 2007-2008 financial crisis and the subsequent sovereign debt crisis triggered a strong demand for structural reforms in markets featuring regulatory obstacles to competition. It also triggered demand for consolidating public debt in countries that needed to restore their public finance sustainability and market confidence. While the EA is back on the recovery track, the need for further structural reforms and tight fiscal balances remains high. This is because structural reforms are seen as a means to improve EA structural competitiveness and resilience to adverse shocks in the future. Together with fiscal consolidations they aim to address current and future global imbalances (e.g. see European Commission, 2014; IMF, 2015a; OECD, 2015).

As concerns the regulatory obstacles to competition in product and labour markets, Fig. 1 presents the mean scores in the OECD indices for Product Market Regulation and Employment Protection Legislation for the years 2008 and 2013. Comparing the scores across time reveals a substantial reform effort in the EA-periphery between 2008 and 2013. At the same time, most of the EA-periphery countries undertook structural reforms together with large-scale fiscal consolidation (see European Commission, 2014; OECD, 2013).

A notable example in this respect is Greece. In particular, Greece ranked first among OECD countries according to its degree of adoption of structural policies between 2011-2012 (see OECD, 2013). Also, Greece implemented a large and sustainable fiscal consolidation effort that resulted in a budget deficit reduction by 12.4pp of GDP between 2009–2013 (21pp of GDP reduction in terms of structural deficit; see IMF, 2015b). In light of these, this paper studies the effects of structural reforms and debt consolidation policies for the Greek economy.

The model we employ is a New-Keynesian dynamic general equilibrium model for a small open economy with no monetary policy independence. The model features a tradable and a non-tradable sector and monopolistic competition in labour and product markets that allow us to study the impact of a number of competition enchasing reforms. It also incorporates a detailed fiscal policy block that makes the model well-suited to examine the impact of tax- and spending-based fiscal consolidation strategies.

In the absence of an independent monetary authority, fiscal policy is the only available stabilization tool, which is a feature that characterizes economies that are members of a currency union. The model further includes a number of stylized financial market imperfections, such as liquidity constrained households, working capital loans and a sovereign risk channel that are found to be important determinants for the transmission of fiscal policy shocks. Finally, the model features a number of nominal and real frictions, such as price and wage rigidities, habit formation in consumption, investment adjustment costs and variable capital utilization that have been empirically identified as playing an important role for the transmission of structural shocks in the short run (see e.g. Christiano et al., 2005; Mertens and Ravn, 2011). The dynamic and other stochastic properties of a closely related stochastic version of the model we employ are reported in Papageorgiou (2014), who shows that this type of model captures quite well the dynamic features of the Greek economy.

The approach taken is summarized as follows: We first calibrate the model for the Greek economy over the 2000–2009 period, namely the pre-crisis period. Then, departing from the benchmark calibrated economy we investigate the short- and long-run effects of the different policies. The analysis is conducted in a fully deterministic environment under perfect foresight.

The implications of this study are more general than the selected country application. It relates to the literature that investigates the interaction between structural reforms and fiscal policies in the context of general equilibrium models. A number of studies use Dynamic Stochastic General Equilibrium (DSGE) models to investigate the macroeconomic implications of fiscal consolidations alone, e.g. Coenen et al. (2008), Erceg and Linde (2013) and Forni et al. (2010a), or the implications of structural reforms alone, e.g.