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## Should euro area countries cut taxes on labour or capital in order to boost their growth?☆

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## ABSTRACT

The large imbalances within the euro area have led to a renewed interest in tax policies that could reduce labour costs and thus improve competitiveness and growth. In this paper, we consider whether it would be more growth-enhancing for euro area countries to, instead, use capital income tax cuts. To address this issue, we focus on the open-economy dimension and make simplifying assumptions concerning the completeness of insurance markets. Using a DSGE model calibrated for France within the euro area, we show that the increase in output resulting from tax cuts on capital income would indeed be higher than the increase in output resulting from tax cuts on labour, both in the short and long run. Importantly, the strong response of output to capital income tax cuts appears to be partly explained by the particularly high level of capital income taxes in France. Moreover, such tax cuts would be less efficient if they were expected to be only temporary. Finally, we illustrate our main points through a recent fiscal package implemented in France, which combines labour and capital income tax cuts. After briefly assessing this package, we find that investment and real output would have been more strongly boosted in the medium run if this package had been focused to a larger extent on reductions in capital income taxes.

### 1. Introduction

Since the launch of the euro, internal imbalances have been a strong feature of the euro area. In the absence of exchange rate adjustments, some international institutions have recommended cutting labour taxes (notably through a shift towards the consumption tax) in order to improve competitiveness, employment and growth in countries suffering from current account deficits (e.g. [IMF, 2014](#); [European Commission, 2013](#)). In practice, some governments implemented such tax reforms, e.g. Germany in 2006, while others have simultaneously reduced taxes on labour and on capital income, e.g. France in 2013. So far, the debate about the design of tax reforms has mainly focused on the effect of labour tax cuts and on the degree to which they target low wages.<sup>1</sup>

In this paper, we consider whether it would be more growth-enhancing for euro area countries to use capital income cuts rather than labour tax cuts. More precisely, we consider two alternative schemes for tax alleviation: cutting on capital income tax, for both corporate income and capital owned by households; and reducing employers' social contributions, with a more direct impact on labour costs. In contrast with the literature pioneered by [Chamley \(1986\)](#) and [Judd \(1985\)](#) on capital income optimal taxation, we adopt a positive approach: we try to assess what DSGE models with usual frictions can tell us about the impact of such taxes on key macroeconomic variables, instead of looking at their optimal level with respect to welfare. We focus on the open-economy dimension and leave for further research the analysis of such effects for

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<sup>1</sup> See for example [Cahuc and Carcillo \(2014\)](#) for a study related to this targeting issue of cuts on labour income tax. [Berson et al. \(2016\)](#) have recently applied a general equilibrium approach to this targeting issue. Previously, several other studies had more generally studied the impact of fiscal shifts from the labour income tax to the consumption tax, e.g. [Langot et al. \(2012\)](#), [Fève et al. \(2010\)](#), [Farhi et al. \(2014\)](#) or [Lipinska and von Thadden \(2009\)](#). An exception is a recent paper of [Bussière et al. \(2017\)](#), who also considered cuts of capital income tax, but this paper is focused on fiscal shocks in the United States, a country with a flexible exchange rate contrary to euro area countries. Finally, [Gomes et al. \(2016\)](#) deal with fiscal devaluation in the euro area within EAGLE, a DSGE model close to ours.

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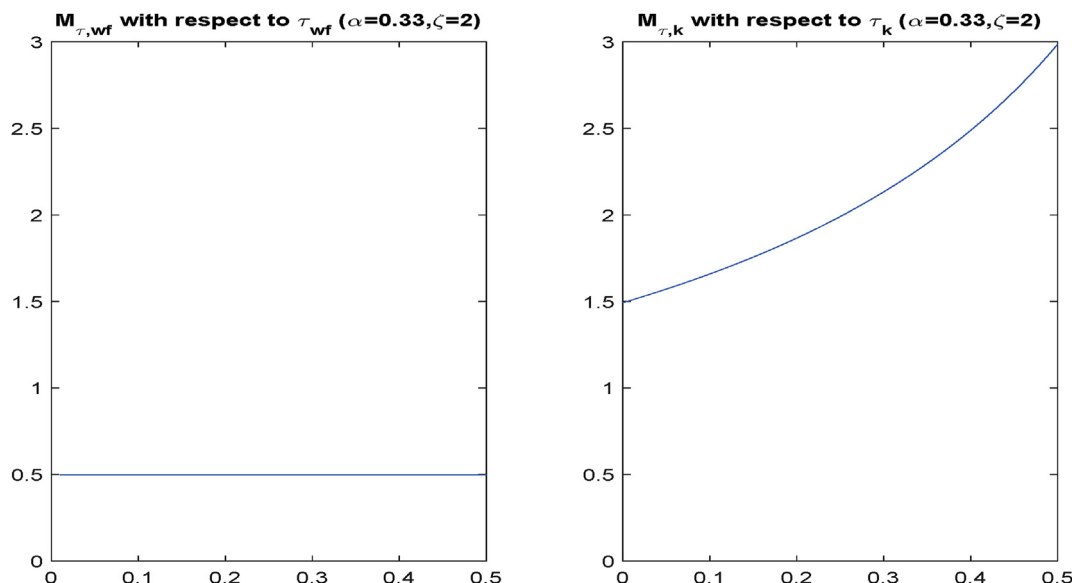


Fig. 1. Capital and labour tax multipliers as a function of tax-rate levels.

incomplete insurance-market economies.<sup>2</sup>

The contribution of this paper is twofold. In a first stage, we provide simple intuitions about the different impact of these two instruments on economic growth by using a simple Real Business Cycle (RBC) model. Indeed, we demonstrate the stronger long-run effect on output for permanent reductions in capital income taxes. Moreover, this effect is non-linear: the size of this effect increases with the level of capital income tax from which the cut is implemented. Second, we refine this quantitative analysis by building a larger DSGE model with more realistic features<sup>3</sup> and calibrated for France within the euro area. France is chosen as an example of a euro area country with current account deficits that recently experienced labour and capital income tax alleviation. Against this backdrop, we show that permanent shocks on capital income taxes have a stronger impact on output both in the short and long run. This conclusion is reinforced for France, given the high level of capital income taxation compared to the rest of the euro area. Still, reductions in capital income taxes would be less efficient if they are only temporary, or alternatively if their implementation is perceived as imperfectly credible.

We also illustrate these points by taking into account a package of fiscal reforms implemented in France since 2013: the *Credit d'Impôt pour la Compétitivité et l'Emploi (CICE)*, which was subsequently incorporated into a broader *Responsibility and Solidarity Pact* (“*Pacte de Responsabilité et Solidarité*” – PRS) in January 2015. Roughly speaking, these reforms involve reductions in labour and capital income taxes, financed by tax hikes on consumption and decreases in government spending. We first provide an assessment of this package as it was implemented. Then we show that it would have raised investment and output by a larger amount if the tax cuts had been more focused on capital income. With such an alternative package, employment would have fallen somewhat in the short run (due to a degree of substitution in capital for labour) but would

have risen more in the medium run given the higher increase in output.

The DSGE model we build to address these issues, called the *France in Euro Area Model (FREAM)*, has the following features. First, its core is similar to that of *Smets and Wouters (2003)*, which incorporates the main frictions necessary for obtaining realistic impulse responses. Second, the French economy is modeled as an open-economy which trades with the rest of the euro area (REA) and an exogenous rest of the world, so as to take account of the effect of competitiveness gains. Third, the reduced weight of France within the monetary policy matters for the real interest rate reaction and its impact on investment dynamics. Fourth, we distinguish between public investment and public consumption to account for a potential negative impact of governments’ investment cuts on the supply side of the economy.

This model is close to *NAWM*, a 2-country model of the euro area and the United States, developed at the ECB by *Coenen et al. (2008)*. However, it allows to distinguish France within the euro area. In this sense, it is very similar to *EAGLE (Euro Area and Global Economy)*,<sup>4</sup> which also builds on *NAWM*. *FREAM* is nevertheless simpler than *EAGLE* in two ways. First, *EAGLE* consists of four endogenous blocks (Germany, the rest of the euro area, the US and the rest of the world) instead of two endogenous ones (France, the rest of the euro area) and an exogenous rest of the world for *FREAM*. Secondly, *EAGLE* features tradable and non-tradable intermediate goods instead of only tradable intermediate goods in the case of *FREAM*. This lightened structure for *FREAM* makes it easier to understand the effects resulting from the interactions between regions.

This paper is structured as follows. After providing simple intuitions about the long-run impact of capital and labour taxes in a simple RBC model (Section 2), we will briefly present a more detailed DSGE framework for studying the effect of such taxes in euro area countries (Section 3). Then, we present the simulations results obtained with this model for standard shocks (Section 4). Finally, we apply our framework to the analysis of fiscal reforms implemented in France since 2013 (Section 5) and we then conclude (Section 6).

<sup>2</sup> It is worth mentioning, however, that we retain two features which limit the completeness of insurance markets: non-Ricardian households and imperfect substitution of internationally exchanged bonds. In a closed-economy framework, the role of incomplete markets for tax multipliers has been studied in *Heathcote (2005)*.

<sup>3</sup> These features include the open economy dimension of euro area countries, the role of monetary policy, the calibration of a detailed fiscal block, the presence of non-Ricardian households and the usual set of real/nominal frictions.

<sup>4</sup> See *Gomes et al. (2012)* for a presentation of *EAGLE*.

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