Journal of Macroeconomics 50 (2016) 307–324

Contents lists available at ScienceDirect

Journal of Macroeconomics

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

German labor market and fiscal reforms 1999–2008: Can they be blamed for intra-euro area imbalances?

Niklas Gadatsch[a], Nikolai Stähler[b,*], Benjamin Weigert[b]

[a] German Council of Economic Experts, Gustav-Stresemann-Ring 11, 65180 Wiesbaden, Germany
[b] Deutsche Bundesbank, Wilhelm-Epstein-Str. 14, 60431 Frankfurt, Germany

ARTICLE INFO

Article history:
Received 6 July 2016
Revised 1 November 2016
Accepted 3 November 2016
Available online 11 November 2016

JEL Classification:
H2
J6
E32
E62

Keywords:
Fiscal policy
Labor market reforms
DSGE modeling
Macroeconomics

ABSTRACT

In this paper, we assess the impact of major German structural reforms from 1999 to 2008 on key macroeconomic variables. These reforms, especially the *Hartz* labor market reforms, are considered by many to be the root of observed imbalances in the Euro Area. Our simulations within a two-country monetary union DSGE model show that, in terms of German GDP, consumption, investment and (un)employment, the reforms had clearly favorable effects, though the impact on the German current account was only minor. Also, the rest of the Euro Area benefited from positive spillover effects. Hence, our analysis suggests that the reforms cannot be held responsible for the macroeconomic imbalances currently visible in the Euro Area.

1. Introduction

At the beginning of the 2000s, Germany was called the “sick man” of Europe because of comparatively low GDP growth, relatively high unemployment and low international competitiveness. Nowadays, the German economy is frequently referred to as Europe’s (growth) engine. Germany has increased price and cost competitiveness significantly since the beginning of the 2000s, building up high current account surpluses and a positive net foreign asset position in the process. Based on data from Gadatsch et al. (2016), German price and cost competitiveness vis-à-vis the rest of the Euro Area increased by roughly 15% from 2000 until the crisis in 2008, and Germany’s trade balance-to-GDP ratio vis-à-vis the Euro Area increased by roughly 3 percentage points.[1] Furthermore, Germany’s labor market developments were more stable relative to the rest of the Euro Area since the mid-2000s. From its peak, the unemployment rate declined by roughly 4 percentage points until the financial crisis, whereas it declined by only 1.5 percentage points in the rest of the euro area during the same time. GDP figures yield a similar impression. These divergent developments have triggered heated debates about Germany’s role for intra-Euro Area imbalances (see, among others, Chen and Tressel, 2012; Hobza and Zeugner, 2014; Kollmann et al., 2015, as

* Corresponding author.
E-mail address: nikolai.staehler@bundesbank.de (N. Stähler).

[1] Price competitiveness is measured as the ratio of the GDP deflator of the Euro Area *without Germany* and Germany. Cost competitiveness is based on nominal private wages.

http://dx.doi.org/10.1016/j.jmacro.2016.11.002
0164-0704/

well as the literature and newspaper articles discussed in the lattermost paper for an overview). In particular, far-reaching labor market reforms in the first decade of the new millennium, the so-called *Hartz* reforms, are often considered as a major factor that contributed to the observed developments (see Kollmann et al., 2015). Some politicians or authors like (Kollmann et al., 2015) conclude that similar reforms may be needed elsewhere in the Euro Area.[2]

Yet, the German *Hartz* reforms were only part of an array of structural reforms, starting already in 1999 to address Germany's sluggish economic performance since the end of the reunification boom and to meet future challenges for the social security system. These reforms included not only labor market reforms, but also fiscal reforms which changed inter alia the mix of taxes. To grasp the full impact of specifically these policy measures on the evolution of key macroeconomic variables in Germany and the rest of the Euro Area, this paper offers a comprehensive analysis by means of a structural model. To this end, we build a two-country monetary union DSGE model with a complex frictional labor market structure and a comprehensive fiscal block, both enabling us to mimic the relevant policy changes in detail.

We find that, in terms of German GDP, consumption, investment and (un)employment, the reforms had favorable effects. The most important measures for these developments were the *Hartz* reforms, i.e. reforms entailing improvements in the matching efficiency between unemployed workers and firms as well as a decrease in the generosity of the unemployment insurance system, followed by the reductions in labor taxation and by the decrease in social security contributions combined with increases in consumption taxes. Such a tax shift is termed fiscal devaluation in the literature because it tends to improve international price competitiveness (see literature discussion below). Furthermore, the reforms were beneficial to the rest of the Euro Area because of positive spillovers in terms of output, consumption and investment. The reforms also activated intra-European trade, generating higher German exports as a result of its improved price competitiveness and higher imports resulting from a positive wealth effect in Germany. The overall impact of the reform on the German current account was only minor, however. Hence, our analysis suggests that the specific reform agenda cannot be held responsible for the observed macroeconomic imbalances in the Euro Area.

The model results further imply that the *Hartz* reforms reduced real wages and may have contributed to the observed wage moderation since the turn of the millennium.[3] Because the increase in employment overcompensated for the decline in real wages, aggregate disposable income rose and the reforms did not have a dampening effect on aggregate consumption. This also increased German demand for products from rest of the Euro Area. Therefore, the reforms did not cause harmful "beggar-thy-neighbor" effects for Germany's trade partners in the Euro Area, but quite the opposite. This finding is in line with an empirical assessment of the effects of German wage moderation on intra-Euro Area imbalances (see Bettendorf and León-Ledesma, 2015).

In terms of the question we analyze, our study is closely related to Kollmann et al. (2015). Estimating a large-scale DSGE model, they find that labor market reforms and shocks to the time preference rate were important drivers in explaining German current account developments. In the present paper, we simulate the (non-linear) effects of the reform measures on several macro variables and find that they cannot be held responsible. We believe that the more complex search labor market structure, also differentiating between short and long-term unemployment, and the comprehensive fiscal block in our model are more suitable to address the labor market reforms and tax shifts conducted at that time. Given the detailed modeling, the reform measures, in particular labor market reforms, change the incentive structure and reduce distortions, thereby generating a more positive wealth effect compared to Kollmann et al. (2015). As a result, households increase consumption including imports, which benefits Germany and the rest of the Euro Area. At the same time, the reform measures increase competitiveness and exports of Germany. As the effects even out, the impact on the current account is only minor. As a robustness check, we also include a stylized simulation in which households' time preferences are changed. In line with Kollmann et al. (2015), changes in time preferences may indeed have played a major role in explaining the German current account developments.

More related to our paper in terms of the modelling approach are several studies analyzing the effects of the labor market reforms in structural equilibrium models with search unemployment. Krause and Uhlig (2012) and Launov and Wälde (2013a) focus on *Hartz IV* (the reduction in the generosity of the unemployment insurance system) only, while Krebs and Scheffel (2013) and Busl and Seymen (2013) also consider the effects of *Hartz III* (improvements in labor market matching efficiency). All papers focus on domestic effects except for Busl and Seymen (2013). They further analyze the spillover effects of the *Hartz* reforms on the Euro Area using a standard two-country real business cycle model, enhanced by matching frictions in the labour market. Dao (2013b) analyzes international spillovers of *Hartz IV* within a DSGE model, albeit excluding search unemployment.

Regarding the effects on domestic macroeconomic variables, in particular unemployment, our results are in the range of the literature, but at the lower bottom. Different results in the literature have their roots in different assumptions about the magnitude of (i) the decrease of unemployment assistance for long-term unemployed and (ii) the increase in matching

[2] To see how seriously this argument is being taken, note that, before actually initiating the recent labor market reforms, the current French president Francois Hollande stated in his mid-term speech on September 18, 2014 that France cannot be expected to accomplish reforms within 5 years for which Germany needed 10 years and, according to him, had a better (overall) economic environment.

[3] Dustmann et al. (2014) show that, even before the *Hartz* reforms, wages declined and international competitiveness of firms rose in Germany. According to them, this evolution was a result of the "localization of industrial relations", i.e. a "decentralization of the wage-setting process from the industry level to the firm level". Arent and Nagl (2013) provide empirical evidence that the *Hartz* reforms seem to have magnified the trend of declining real wages Germany.