Comments on "Market reforms in the time of imbalance" by M. Cacciatore, R. Duval, G. Fiori and F. Ghironi ☆

Robert Kollmann [a,b,c,*], Lukas Vogel [d]

[a] ECARES, Université Libre de Bruxelles, Belgium
[b] Université Paris-Est, France
[c] CEPR, United Kingdom
[d] DG ECFIN, European Commission, Belgium

1. Overview

To raise employment and output growth in Europe, the leading multilateral economic institutions (EU Commission, IMF, OECD) routinely recommend 'structural reforms' of product and labor markets that increase competition and employment flexibility. Existing model-based analyses of those reforms generally use standard New Keynesian dynamic stochastic

general equilibrium (DSGE) models in which pro-competition reforms are represented as exogenous reductions in markups (see e.g., Everaert and Schule. (2008), Roeger et al. (2008), Gomes et al. (2013) and Kollmann et al. (2015)).

The Cacciatore, Duval, Fiori and Ghironi ['CDFG'] paper greatly improves the toolbox for modeling structural reforms in a DSGE framework, by allowing for richer and more realistic firm dynamics and labor market frictions than conventional policy models. This enables the paper to highlight important transmission channels of reforms that are ignored by conventional models. CDFG consider a two-country world with *flexible* prices and wages; each country is inhabited by a representative family whose members engage in *efficient* risk sharing. The two key features of the CDFG model are endogenous firm entry and exit, and search and matching frictions in the labor market. These features allow a rich analysis of price and wage dynamics and markups. In the CDFG framework, a pro-competition product market reform (modeled as a reduction in entry barriers) facilitates entry of highly productive new firms, and triggers the exit of less productive incumbent firms. This process leads to a reallocation of labor to more productive firms that is costly and time consuming (due to the search and matching frictions). In the short-run, a product market reform lowers thus domestic output and employment, while raising domestic real activity in the long-run. A reduction in job security (cut in worker firing costs) is likewise predicted to trigger a short-term output drop, followed by a long-term rise in real activity. Interestingly, a cut in unemployment benefits (UB) is predicted to raise employment and output, both in the short-run *and* in the long-run (no intertemporal trade-off), as a UB cut does not trigger a rise in job destruction, but leads to an immediate rise in hiring (due to a fall in workers' reservation wages). Importantly, the model predicts that a UB cut boosts output more when the economy is in a recession than in normal times. By contrast, the short-term output costs of a product market deregulation, and of a cut in firing costs, are greater when these reforms are undertaken in a recession, as the labor market is less fluid in a recession (lower job finding rate of unemployed workers). The spillover of reforms undertaken in just one country to foreign real activity is negative for product market reforms, and positive for labor market reforms. However, due to opposing competitiveness and income effects, the cross-country spillovers of reforms are generally much weaker than domestic output responses. Product market reforms are predicted to worsen the current account of the country that implements these reforms (due to a strong rise in domestic investment), while labor market reforms improve the current account.

2. Comments

2.1. Empirical evidence on aggregate effects of structural reforms

Empirical studies generally find that structural reforms increase real activity in the long-run, but that their short-term effect on employment and output can be negative; see, e.g., Bouis et al. (2012), Babecky and Havranek. (2014) and McAdam and Stracca. (2015). The CDFG model captures that intertemporal tradeoff.[1] Using panel regressions for OECD countries, Bouis et al. (2012) investigate whether the employment effects of structural reforms depend on the phase of the business cycle in which the reforms are implemented. Empirically, a reduction in job security is less expansionary in a recession than in normal times, which is consistent with the CDFG model. The data show also that an unemployment benefits (UB) cut is *less* expansionary in a recession than in normal times; see Bouis et al. (2012; Table 3). The CDFG model fails to capture this empirical finding. The analysis below suggests that financial frictions might account for the state-dependence of the impact of UB reforms documented by Bouis et al. (2012).

2.2. Household heterogeneity, nominal rigidities

In a world with uninsurable risk, structural reforms may hurt a *subset* of the population, which may make reforms politically costly. Also, nominal rigidities affect the transmission of aggregate shocks. The CDFG model abstracts from both issues—it would be very useful to incorporate these dimensions into the CDFG framework. By contrast, conventional DSGE policy models allow to address distributional issues, as these models typically assume heterogeneous households and incomplete financial markets; furthermore, these models assume nominal rigidities. As an example, consider the empirically *estimated* three-country New Keynesian model presented by Kollmann et al. (2015). That model assumes two types of households: 'Ricardian' households (capitalists) who freely trade in asset markets and own all domestic firms, and financially constrained households (workers) who do not hold financial assets. A UB cut raises the incentive to work, which lowers the real wage. This triggers a persistent rise in the income and consumption of Ricardian households (due to a rise in profits), while the consumption of financially constrained households falls persistently (reduction in wage income and in UB income). Thus, the consumption responses of the two households are negatively correlated.

The Kollmann et al. (2015) model also predicts that the adverse effect of a UB cut for financially constrained households is stronger in a recession (when more financially constrained households are unemployed) than in normal times. Hence, a UB cut implemented in a recession triggers a *weaker* rise in aggregate demand, GDP and employment, which accords with the

---

[1] Conventional New Keynesian models too can generate transitory output contractions after reforms. With nominal rigidities, a pro-competition reform induces a *gradual* decline in consumer prices which may raise the real interest rate and lower aggregate demand and output in the short-run. This mechanism is especially potent when interest rate policy is constrained by the zero lower bound (e.g., Eggertsson et al. (2014), Vogel. (2014)).

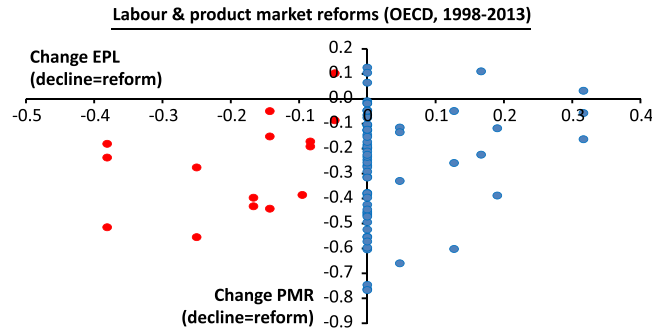**Labour & product market reforms (OECD, 1998-2013)**

Fig. 1.
Source: OECD, own calculations.

empirical evidence (see Section 2.1). The redistributive effect of a UB cut depends also on the adjustment speed of prices and wages. It is weaker under sticky prices and wages than under price and wage flexibility. Under nominal rigidities (as assumed in the baseline version of the Kollmann et al. (2015) model), aggregate output rises on impact when a UB cut occurs. With price and wage flexibility, the real wage falls more rapidly, financially constrained households experience a sharper consumption drop, and aggregate GDP *falls* on impact (but rises in the long-run). Hence, nominal rigidities change the sign of the short-term output response to a UB cut.

With household heterogeneity, distributional implications can differ across policy measures. For example, in the Kollmann et al. (2015) model, a product market reform (represented as a cut in price mark-ups) raises the real income and consumption of financially constrained households (workers), while reducing the real income of Ricardian households (capitalists). A combination of labor and product market reforms would generate positive employment and GDP effects, but dampen the distributional impact associated with the individual measures. The packaging of individual measures into reform bundles has been advocated in the political economy literature as a strategy to soften distributional conflicts and overcome related resistance to reforms (e.g., Drazen. (2002)).

Empirical evidence for OECD countries shows that labor market reforms are typically accompanied by product market reforms. As a rough measure, the scatter plot in Fig. 1 shows combinations of labor and product market reforms in OECD countries during the years 1998–2003. Labor market 'reforms' are defined as policy measures that trigger a reduction in the aggregate index of employment protection legislation (EPL) constructed by the OECD; analogously, product market 'reforms' represent reductions in the OECD product market regulation (PMR) index. In Fig. 1, reforms are considered over 5-year intervals (1998–2003, 2003–2008, and 2008–2013). Each point represents a combination of changes of EPL and PMR indices observed in one of the OECD countries, during one of the 5-year intervals. With rare exceptions, EPL changes are accompanied by PMR changes, within the 5 year intervals in the sample. Fig. 1 shows also that labor market institutions are much more persistent than product market regulations. There are many instances of zero change in the EPL index (observations on the *y*-axis), but none of zero change in the PMR index (observations on the *x*-axis). While there are several episodes of EPL index increases, only few PMR increases are observed. The persistence of EPL may be a reflection of the distributional effects of and associated resistance to EPL changes, or an expression of beneficial aspects of EPL (see next section).

2.3. Richer micro-foundations needed for analysis of structural reforms

In the CDFG world, unemployment insurance (UI) is wasteful because of its disincentive effect on labor supply; there is no need for UI because efficient private insurance markets are assumed. In other terms, the CDFG model implies that UI should be abolished. That recommendation has to be taken with caution. In a more realistic setting with *incomplete* financial markets, UI can raise welfare *and* may even lead to higher output (by inducing workers to accept high productivity jobs that have high unemployment risk); e.g., Acemoglu and Shimer (1999). A balanced assessment of labor market reforms thus requires a model with richer microeconomic foundations that capture not only the social costs but also the potential benefits of labor market institutions such has UI and job security guarantees.

3. Conclusion

Cacciatore, Duval, Fiori and Ghironi provide a very valuable contribution that highlights the role of firm entry and exit and of labor market frictions for the macroeconomic effects of structural reforms. Their work also suggests promising avenues for future research.

References

Acemoglu, Daron, Shimer, Robert, 1999. Efficient unemployment insurance. J. Polit. Econ. 107, 893–928.

Babecky, Jan, Havranek, Tomas, 2014. Structural reforms and growth in transition: a meta-analysis. Econ. Transit. 22, 13–42.

Bouis, Romain, Causa, Orsetta, Demmou, Lilas, Duval, Romain, Zdzinicka, Aleksandra, 2012. The short term effects of structural reforms: an empirical analysis. OECD Economics Department Working Paper 949.

Drazen, Alan, 2002. Political Economy in Macroeconomics. Princeton University Press, Princeton, NJ.

Eggertsson, Gauti, Ferrero, Andrea, Raffo, Andrea, 2014. Can structural reforms help Europe? J. Monet. Econ. 61, 2–22.

Everaert, Luc, Schule, Werner, 2008. Why it pays to synchronize structural reforms in the Euro area across markets and countries. IMF Staff Pap. 55, 356–366.

Gomes, Sandra, Jacquinot, Pascal, Mohr, Matthias, Pisani, Massimiliano, 2013. Structural reforms and macroeconomic performance in the Euro area countries: a model-based assessment. Int. Financ. 16, 23–44.

Kollmann, Robert, Ratto, Marco, Roeger, Werner, in't Veld, Jan, Vogel, Lukas, 2015. What drives the German current account? And how does it affect other EU member states? Econ. Policy 40, 47–93.

McAdam, Peter, Stracca, Livio, 2015. Structural Reforms For Inclusive Growth? Empirical Evidence from the OECD. European Central Bank, Mimeo.

Roeger, Werner, Varga, Janos, in't Veld, Jan, 2008. Structural Reforms in the EU: A Simulation-Based Analysis Using the QUEST Model with Endogenous Growth. European Commission, Economic Papers 351.

Vogel, Lukas, 2014. Structural Reforms at the Zero Bound. European Commission, Economic Papers 537.