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By Paloma Lopez-Garcia and Filippo di Mauro

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By Sebastian Schmidt

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ASSESSING COMPETITIVENESS: INITIAL RESULTS FROM THE NEW COMPNET MICRO-BASED DATABASE

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The design of policies aimed at enhancing productivity may benefit greatly from disaggregated information on competitiveness. Unfortunately, comparable microeconomic data across-countries remain largely unavailable. This article presents a new firm-level database built by the Competitiveness Research Network (CompNet), a European System of Central Banks (ESCB) research network. This database allows the investigation of how productivity, size and unit labour costs interact and evolve in firms at different tails of the productivity distribution. This new cross-country database, and its potential to expand, could be of great policy value.

Better knowledge of the underlying distribution of firm-level size and productivity might be required in order to assess aggregate productivity growth, and thus competitiveness.

Recent policy debate has increasingly used a more all-encompassing definition of competitiveness, with a special focus on its drivers at the firm level and its impact on growth and productivity (Altomonte et al. (2012)). Moreover, widespread heterogeneity in a firm's performance has been well documented

(Caves (1998), Bartelsman and Doms (2000)), thus highlighting the limits of models based on the representative agent hypothesis for the analysis of competitiveness. In policy terms, one important implication of firm heterogeneity is that a similar policy intervention may produce different results depending on the initial distribution of firms' productivity, even if average productivity is the same (see Melitz and Redding (2013)). Moreover, Di Giovanni and Levchenko (2010) show that, if the distribution of firms' performance is very asymmetric, aggregate performance measures such as exports closely track those of the largest/most productive firms in the economy. These findings suggest that better knowledge of the underlying distribution of firm-level performance as well as of firm dynamics at different segments of the distribution might be required in order to attain a comprehensive assessment of competitiveness.

In the European context, an additional limitation to such a broader assessment of competitiveness is the lack of sufficient and comparable firm-level data across countries. More precisely, while significant research in the area of firm heterogeneity has already been initiated by a number of national central banks (NCBs), most of these studies are mostly confined to the national level. This is because there are a number of issues (confidentiality, different methodologies, non-overlapping years) which limit comparability across existing datasets, thus hampering country benchmarking. This article presents a new firm-level-based dataset built by an ESCB research network (CompNet), as well as some of its preliminary findings. This new cross-country database and its potential future expansion could be of great policy value.

CompNet's research infrastructure and micro-founded database

The CompNet team has established a potentially very powerful research infrastructure in that it allows research teams to interact in order to respond to policy-relevant issues, drawing on firm-level data. Since individual firm-level data are confidential and cannot be shared outside the respective countries, a "distributed micro data approach" (see Bartelsman et al. (2004, 2009)) was adopted. Hence a small ECB team has coordinated 13 national teams, mostly at NCBs, which have run – on their computers and using their national firm-level data – a common protocol to retrieve indicators and statistical moments aggregated at the detailed industry level to preserve confidentiality.

The indicators computed provide comparable key stylised facts at the industry/year level for each country. These concern productivity, size and labour cost performance, as well as the dynamics of underlying heterogeneous firms.

The indicators computed in the exercise are based on a huge sample of about 700,000 firms per year from 11 EU countries over 15 years and operating across 58 sectors. They provide comparable key stylised facts at the industry/year level for each country. These concern labour productivity and total factor productivity, as well as to the size and unit labour cost performance and dynamics of underlying heterogeneous firms. The paper documenting its construction (ECB WP 1634) shows that the indicator database is somewhat superior for some countries in terms of the coverage and representativeness of the sample to existing comparable datasets (such as Amadeus). Moreover, the advantage of CompNet's



database with respect to the existing information included in aggregate statistics – including at the sector level – is that it keeps much of the richness of firm-level data in terms of the full distribution of variables or joint correlations. This additional information will enable researchers to more correctly measure variations in productivity performance across countries, industries and time periods, as well as to better assess the impact of policies, given the underlying distribution of firms.

The initial set-up costs for CompNet's research infrastructure were high, as agreement needed to be reached on a number of technical features that were required to ensure full cross-country comparability (e.g. what indicators to construct and how to do so, how to treat outliers, variable definitions, use of deflators, time horizon, etc.). The marginal costs of additional policy and/or research analysis will, however, be relatively low.

Main initial results

Chart 1 (below) shows the standard deviation of firm productivity within sectors (two-digit industries) vis-à-vis the standard deviation of the average productivity across sectors. The figure indicates that the heterogeneity of firms' performance within narrowly defined sectors can be at least as large as that across sectors. Moreover, Chart 2 shows that not only is productivity

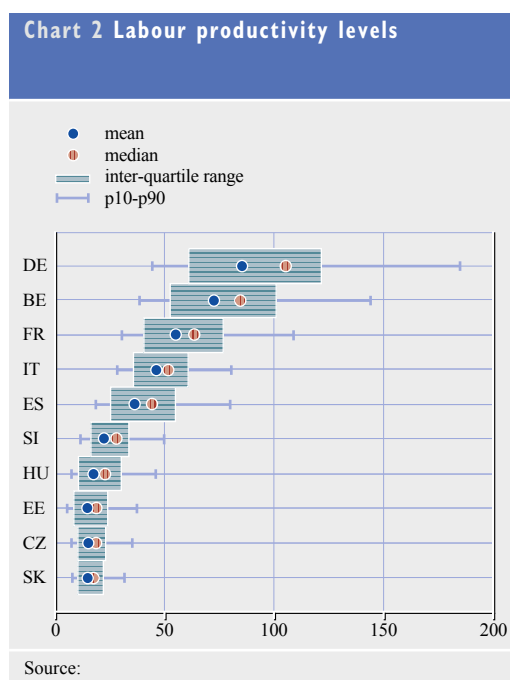
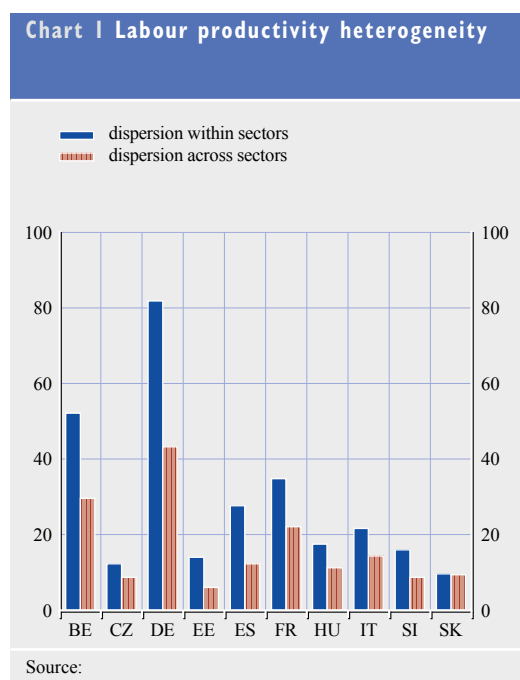
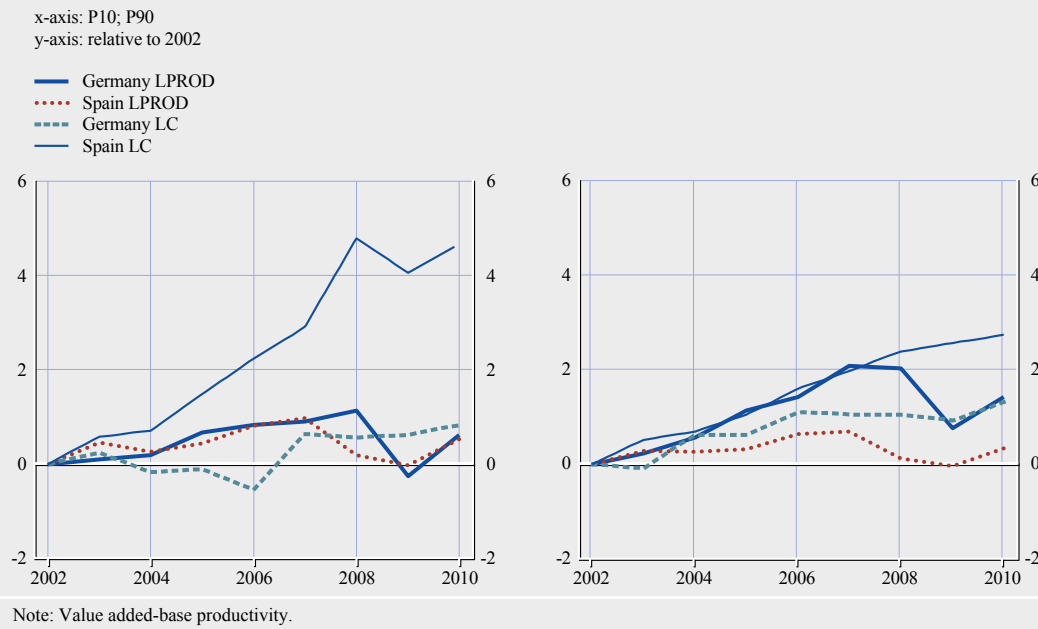



Chart 3 Evolution of labor productivity and labour cost Tradables


distribution very dispersed, it is also very asymmetric. The difference between the median and the mean (always much higher) within a given industry/country is statistically significant.

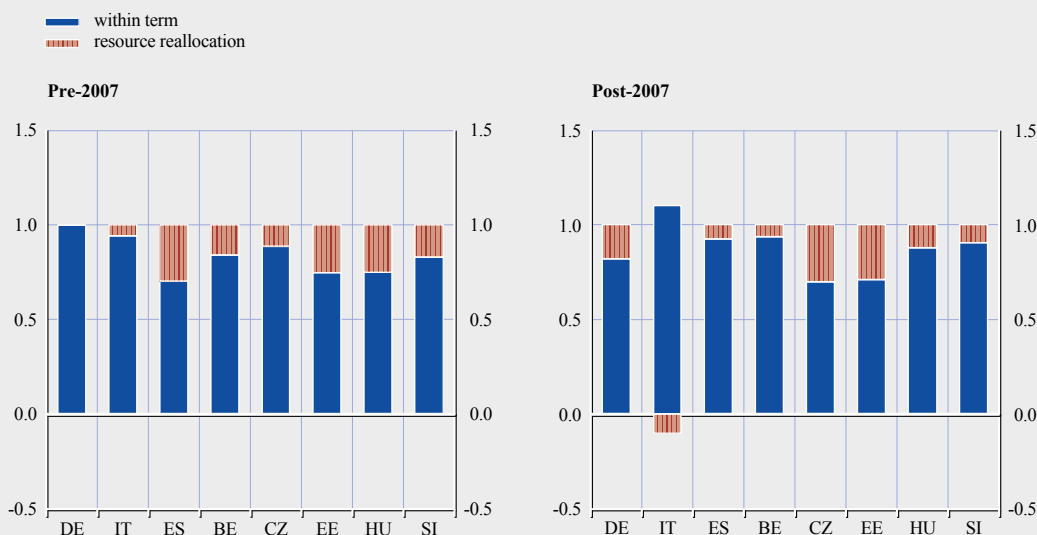
So, far from being normal – with many firms centred around the average performance level – the respective country distributions indicate that there are just a few firms whose productivity is high, and many whose productivity is low or very low. Critically, the main implication of this for policy is that analysis of country competitiveness can and must go deeper than merely analysing the simple averages of the relevant indicators. It must also consider their entire distribution.

This is illustrated by Chart 3, which depicts the evolution of labour productivity (continuous line) and average labour cost (dashed line) – the two components of unit labour costs – over the period 2002-2010 for Spanish and German firms located at the top (percentile 90 and above; P90 in the chart) and bottom (P10 and below) of the productivity distribution of the tradable sector (which mostly includes manufacturing industries).

Before the crisis, Spanish firms with low productivity experienced a large and continuous increase in average cost per employee, coupled with a flat productivity performance. However, like their German counterparts, highly productive Spanish firms (i.e. those that are active in international markets and account for the bulk of Spanish exports) were able to contain increases in costs, at least until 2008. Hence, as Antras et al. (2010) show, the so-called “Spanish paradox” (i.e. rising average unit labour costs associated with an improved export market share) is a matter of the composition bias of the aggregate figures. When analysis is focused on those firms that actually export and compete abroad, there is much less of a paradox. The chart shows that the dynamics of firms’ performance are very different along the different segments of the productivity distribution, thus calling for targeted policies, derived from empirical findings, based on how firms in different

Chart 4 Contribution of within, between and covariance terms to productivity growth

(percentage of labour productivity growth)



Source: CompNet dataset.
Note: Average 2005-2010.



quintiles of the distribution interact with specific determinants, such as labour costs or firm size (already available), and others (soon to be available), such as trade and financial constraints.

In addition to labour cost and productivity indicators, the CompNet micro-based database computes a whole range of measures of allocative efficiency within narrowly defined sectors. In general terms, allocative efficiency refers to a situation where available resources are put to their best use, i.e. the extent to which resources flow towards the most productive firms in the sector (Haltiwanger (2011)). A recent strand of literature shows that cross-country productivity differences can be partly accounted for by differences in allocative efficiency. This finding provides a potentially new channel for boosting aggregate productivity, namely through reallocation of resources away from poorly performing firms towards the ones that are the most productive. Chart 4 shows, on the one hand, the relative contribution to sector productivity growth of productivity gains *within* incumbent firms in the sector, and, on the other, the contribution of the reallocation of resources *across* incumbent firms. The periods 2005-2007 (i.e. before the debt crisis in the EU) and 2008-2010 are shown separately for countries with data in both periods in order to shed some light on the possible impact of the crisis on the measures.

The most interesting dynamics are in Germany, Italy and Spain, so they have been placed first. The other countries are then shown in alphabetical order. In Germany, the contribution of reallocation to productivity growth was approximately zero before the crisis, turning positive after 2007. In contrast, resource reallocation made a positive contribution to productivity growth in Spain and Italy before the crisis, although it dropped to zero, and below in Italy, during the crisis period. This phenomenon, i.e. the reduction in the contribution of the reallocation of resources to productivity growth during the crisis period, has actually taken place in five out of the eight countries shown and may be viewed as an indicator of structural rigidities in some countries.



Expansion of the database

The new version of the database will include much more information about each firm, including its exporting status and financial position

Currently the CompNet database is being expanded along several dimensions. First, country coverage will increase from 11 to as many as 21 countries. Second, the database will be extended up to 2012 for most countries. Third, the new database will add some new dimensions over which the indicators are aggregated, the most important being firm size. Fourth, the new version of the database will include much more information about the individual firm.

Apart from labour productivity, TFP and labour cost-related indicators, the dataset will contain information on the exporting and importing status of the firm. The computed indicators will improve our understanding of how exporters differ from non-exporters for a large sample of countries, sectors and years, considering potential heterogeneity among the population of exporters. In addition, CompNet is collecting a number of variables related to the financial position of these firms, including some indicators of firm-level credit constraints. The possibility of cross-checking this financial information with the productivity and trade data already available will shed light on some important policy/research questions. Lastly, employment transition matrices – indicating the percentage of firms able to change size class within a given period and sector – will be computed in a comparable fashion across countries, while mark-ups and collective bargaining power at the sector level will be estimated jointly, providing an approximation to the sector-specific product and labour market competition. Differences in employment growth across countries for a given sector could then be related to the sector-specific financial characteristics, prevalence rate of exporters or sector-specific degree of competition.

Conclusions

The new database built by CompNet represents a powerful tool to complement standard analysis on competitiveness drivers based on macro and detailed sectoral analysis. Ensuring cross-country comparability and the availability of indicators allows firm-level analysis to make a leap from detailed “one-off one-country” studies to a powerful tool for regular policy analysis at the EU level. The relevance that this can have for country surveillance, for instance in the evaluation of structural reforms, is obvious. The potential for development of the tool is only just starting to be tapped. It is hoped that, in order to allow such potential to be fully exploited, statistical offices and national authorities will consider releasing some of the constraints that exist in some countries regarding the use, and particularly the matching of different types, of firm-level data (for instance customs data vis-à-vis firms’ balance sheets and labour statistics). In our opinion, some of the applications mentioned in this article provide a strong case for this.

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DEALING WITH A LIQUIDITY TRAP WHEN GOVERNMENT DEBT MATTERS¹

By Sebastian Schmidt



Concerns about heightened government debt burdens have featured prominently in policy debates about the appropriate stance of macroeconomic stabilisation policy in the Great Recession. This article summarises recent research that studies the connection between government debt and the optimal monetary and fiscal policy response to a liquidity trap in the context of a New Keynesian macroeconomic model.

Confronted with the biggest global economic crisis for decades, policy-makers around the world engaged in a combination of monetary and fiscal stabilisation policies. Central banks reduced nominal interest rates to unprecedented low levels and many governments launched fiscal stimulus programmes to counteract the economic turmoil. At the same time, many major industrialised countries experienced enormous increases in government debt-to-GDP ratios.

In stark contrast to these observed changes in economic conditions, most characterisations of optimal monetary and fiscal policies in a liquidity trap based on standard New Keynesian models typically omit government debt from the analysis.² The standard approach assumes that government purchases are completely financed by lump-sum taxes, making the timing of deficits irrelevant. This article addresses the question of whether the conventional omission of government debt is innocuous or whether the normative prescriptions regarding optimal policy responses to a liquidity trap change when we account for the fact that lump-sum taxes generally do not adjust one-to-one with other fiscal variables.

The framework

The analysis is based on a stylised variant of the New Keynesian model, which has become the workhorse model in monetary research over the last decade. The model features nominal rigidities and monopolistic competition. Importantly, the model accounts for the fact that nominal interest rates cannot fall below an effective lower bound and it explicitly incorporates government debt. Economic uncertainty arises from the presence of a demand shock with a law of motion calibrated to the US economy at a quarterly frequency.

Both monetary policy and fiscal policy are set under discretion by a benevolent policy-maker who aims to maximise household welfare. The following policy instruments are considered in the analysis: the short-term policy interest rate, government spending and the supply of non-state-contingent, nominal government bonds. The policy-maker is unable to make credible promises about future policy actions. Instead, the policy stance is re-optimised in each period, so that the resulting policy decisions are time consistent.³

As a caveat, it should be stressed that the analytical framework excludes potential moral hazard problems related to the use of monetary policy for the stabilisation of government debt. Likewise, the analysis does not consider the possibility of debt repudiation.

Key results

Due to the demand shock, the zero nominal interest rate constraint can occasionally bind. In the presence of government debt, the optimal time-consistent policy is history dependent – i.e. the future path of the policy instruments depends on the contemporaneous level of government debt. As emphasised by Krugman (1998) and Eggertsson and Woodford (2003), during zero lower bound episodes, favourably influencing expectations about future policy can contribute to improving

¹ This article is based on a recent ECB working paper co-authored with M. Burgert (European Commission); see Burgert and Schmidt (2013).

² An early exception is provided by Eggertsson (2006).

³ Policy prescriptions and stabilisation outcomes can be very different if the policy-maker is able to make credible promises regarding future policy actions. See, for example, Eggertsson and Woodford (2006) and Schmidt (2013).

In the presence of government debt, the optimal discretionary policy mix is history dependent.

interest rates, the policy-maker is unable to completely offset the shock. Economic activity starts to contract, leading to a reduction in the tax base and upward pressure on real government debt. The response of government spending is first expansionary, but turns slightly contractionary before the zero bound episode ends in order to force government debt onto a stable path back to its long-run sustainable level. With debt above the target level, there is less room for expansionary fiscal policy in later periods, however, it fosters the implementation of an expansionary monetary policy stance. Once the shock recedes, the nominal interest rate remains transitorily below the level that would be warranted by the prevailing output and inflation conditions in order to contribute to reducing the government debt burden. As a consequence, the economy experiences a small boom, which is

contemporaneous stabilisation outcomes. This is illustrated in Chart 1, which displays the impulse responses of the endogenous model variables to a large negative demand shock. Owing to the zero lower bound on nominal



Chart 1 Impulse responses to a large negative demand shock (6 subplots)

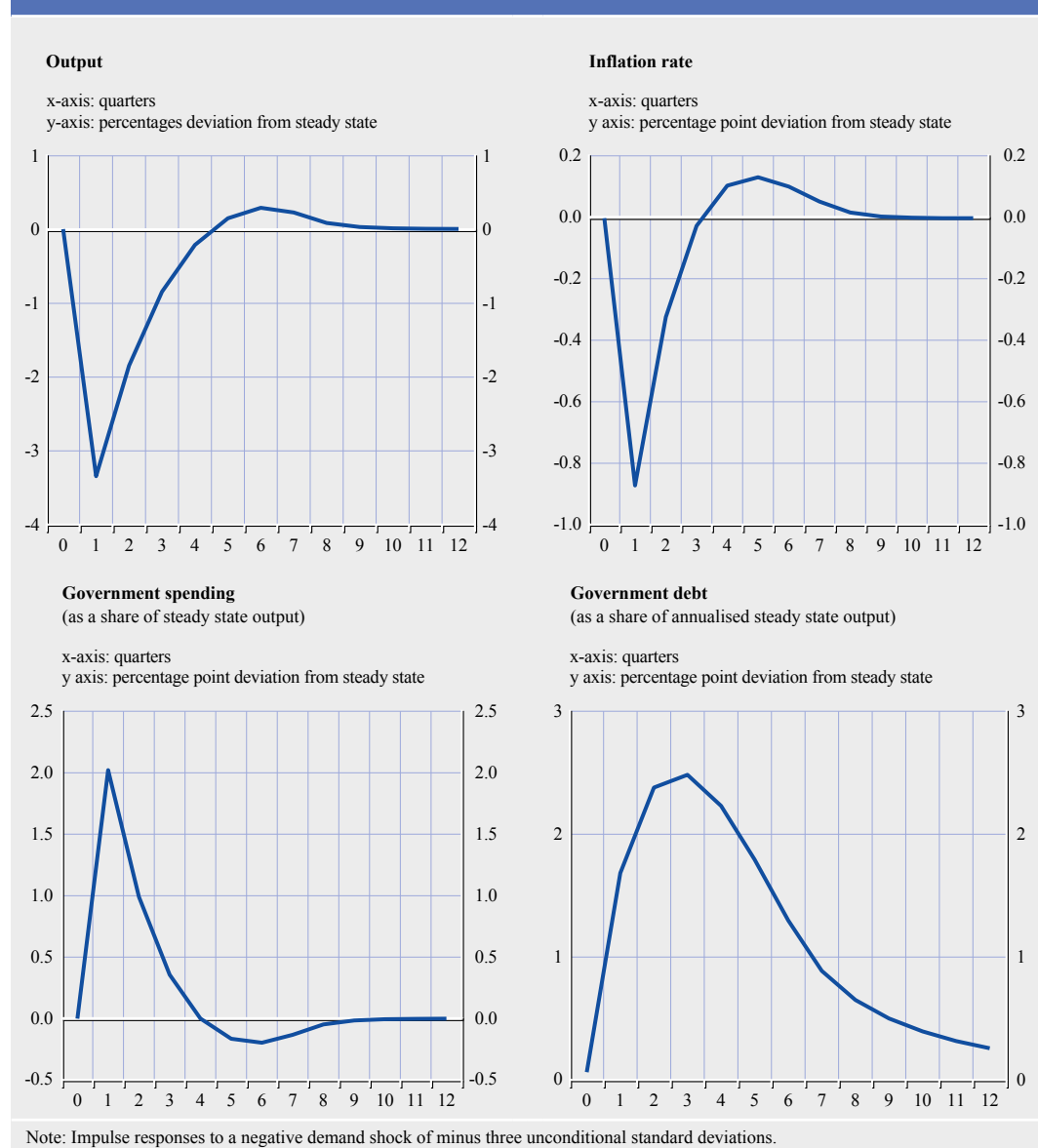
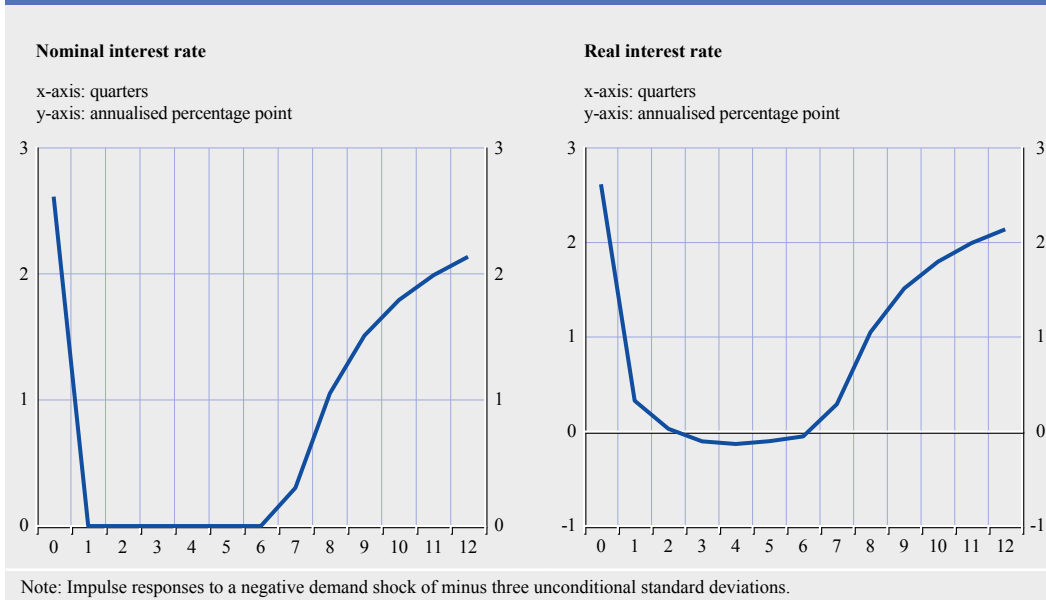




Chart 1 Impulse responses to a large negative demand shock (6 subplots) (cont'd)



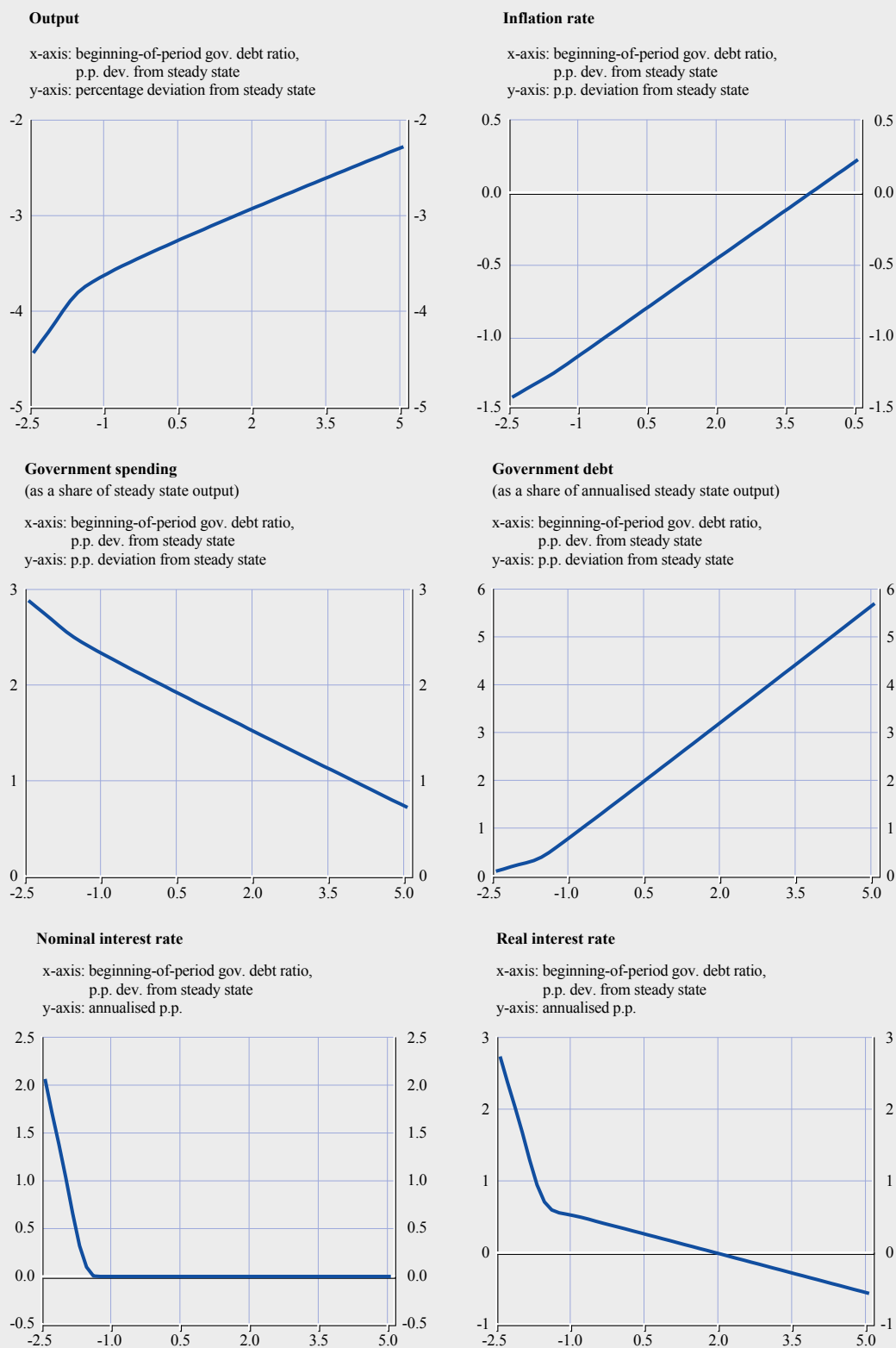
perfectly anticipated by private agents at the outset of the crisis. Both the expected boom in real economic activity and the rise in inflation expectations, which leads to a reduction in real interest rates, help to attenuate the decline in nominal output at the outset of the zero bound episode. These dynamics are in stark contrast to the standard model set-up that assumes lump-sum taxation, in which agents would never expect output and inflation to rise above the target level.

With interest rates at zero, a high government debt burden limits the room for expansionary fiscal policy, triggering further monetary accommodation in the future.

In Chart 1, it is assumed that government debt is at its long-run sustainable level before the demand shock occurs. Chart 2 shows how the on-impact responses of the endogenous model variables to the negative demand shock depend on the level of real government debt. At most debt levels, the demand shock forces the policy-maker to lower the nominal interest rate to zero. The optimal size of the fiscal stimulus decreases as the level of the public debt burden increases. At the same time, output and inflation both increase as the amount of public debt increases, reflecting the relationship between government debt and monetary policy. The higher the level of government debt incurred from the previous period, the lower the nominal interest rate as long as the zero lower bound is not binding. The real interest rate continues to decrease as the level of government debt increases, even if the zero bound is binding, since whenever the current nominal interest rate cannot be lowered any further future monetary policy acts to reduce government debt, thereby implicitly responding to the initial decline in nominal output.

To this end, under the optimal time-consistent policy mix, the muted fiscal stimulus in a liquidity trap associated with a high government debt burden is compensated by a more accommodative monetary policy stance in the future.

Chart 2 Impact responses to a large negative demand shock (6 subplots)



Note: On impact responses to a negative demand shock of minus three unconditional standard deviations depending on the beginning-of-period government debt ratio.





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HOUSE PRICES AND EXPECTATIONS

By Caterina Mendicino

Boom-bust cycles in asset prices and economic activity are a source of concern for policy-makers and the focus of studies by academics. The topic has resurfaced following the boom in US house prices in the mid-2000s and the recent bust in 2007. Survey evidence suggests that macroeconomic expectations and optimism about future house price appreciation have a significant effect on house price dynamics. This article summarises some of the research findings on the link between expectations and housing market fluctuations.



Several authors have documented the fact that expectations of future house price increases played an important role in periods of rising house prices. Piazzesi and Schneider (2009) find that beliefs that house prices will rise, as measured by the percentage of agents who believe that prices will rise further, increased in the United States during the last housing boom. In addition, they argue that expectations of future house price appreciation are related to optimism about economic conditions.

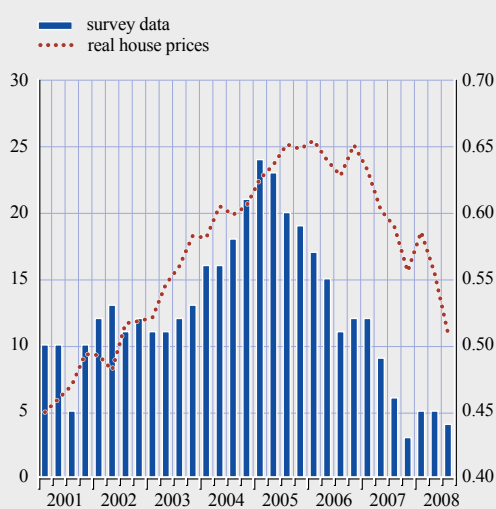
Chart 1 illustrates the relationship between the recent increase in house prices (represented by the solid line) and beliefs of future house price appreciation (the bars) as measured by the Michigan Survey of Consumers. The survey asks consumers whether it is a good or bad time to buy a house and why they hold a particular view. The proportion of households that expressed the view that it was a good time to buy a house owing to an expected future appreciation in house prices generally increased during the housing boom, rising above 20%. The relationship between expectations of future house price appreciation and rising house prices is also apparent in previous periods of housing booms.

We discuss the relationship between changes in expectations and in macroeconomic variables. First, we report the results of a vector autoregression (VAR) analysis that uses survey data to investigate the macroeconomic effects of shifts in expectations regarding future developments in economic activity. Second, we discuss the findings of a complementary analysis that investigates the importance of news shocks as drivers of business cycle fluctuations using a dynamic stochastic general equilibrium (DSGE) model of the housing market. Finally, we summarise the role that expectation-driven housing booms play in the interaction between macro-prudential policy and monetary policy.

Evidence from survey data

Lambertini, Mendicino and Punzi (2013a.) estimate a VAR model using US quarterly survey and macroeconomic data to investigate the importance of news and changes in households' beliefs about housing market dynamics. We consider two alternative measures of news and beliefs: house price expectations and news about recent changes in business conditions. To proxy house price expectations, we use the survey data reported in Chart 1, while news is proxied by the survey index that reports the proportion of respondents who have heard of favourable changes in business conditions. In addition, the VAR model includes six macroeconomic variables: real private consumption, the inflation rate, real house prices, real residential investment, real mortgage loans and the nominal interest rate. The timing of the survey is consistent with the use of a recursive (i.e. Cholesky) identification

House prices and expectations of rising house prices



Source: Gomes and Mendicino (2013).



scheme that orders the survey variable first.¹ We also introduce controls for oil shocks and fiscal shocks and for changes in the conduct of monetary policy over the sample period.

We find that shocks to forward-looking survey variables generate hump-shaped responses in house prices and other macroeconomic variables. For instance, favourable news about future business conditions leads to a hump-shaped response in private consumption and house prices, the latter peaking after about two years. Inflation also rises but peaks several quarters after the peak in house prices. Residential investment peaks several quarters before house prices and consumption. Monetary policy responds to the expectation-driven boom and the associated higher inflation by raising the short-term interest rate.

Expectations and house prices in a macroeconomic model

Gomes and Mendicino (2013) present a complementary analysis based on a DSGE model of the housing market. Unlike in the VAR analysis, we do not use survey variables, but instead focus on the macroeconomic effects of news shocks, i.e. expectations regarding future macroeconomic developments modelled as the anticipated component of structural shocks. News shocks can result from announcements of an increase or a decline in future productivity or credible central bank announcements about implementing interest rate paths that deviate from the usual pattern, as captured by the systematic part of a Taylor-type rule. Alternatively, they may result from the private sector's own beliefs about future unanticipated macroeconomic developments

Our findings are based on a medium scale model that features two types of household (patient and impatient), three sectors of production (consumption goods, investment goods and housing) and real, nominal and financial frictions. Housing is used as collateral for loans. The monetary authority sets the nominal interest rate according to a standard Taylor-type rule. To estimate the model, we use US data and likelihood-based Bayesian methods, as in Schmitt-Grohé and Uribe (2012).

News shocks made a significant contribution to driving up US house prices over the last three decades

Our model predicts that news shocks will account for a sizeable fraction of the variability in house prices and other macroeconomic variables over the business cycle. In the context of this model, news shocks lead to expectations of house price appreciation and, thus, fuel current housing demand and lift house prices immediately. The value of

housing as collateral increases and the rise in house prices is coupled with an expansion in household credit which, in turn, makes house prices rise further. News about a variety of shocks are plausible sources of optimism about future house price appreciation and generate macroeconomic booms characterised by hump-shaped co-movement between house prices, consumption, residential investment and mortgage loans. This is in line with the findings presented in the previous section. Empirically, we find that the impact of different types of news shock is greater in different periods. In particular, news about future cost-push shocks is found to be important factor driving up house prices and residential investment during the housing booms that occurred concurrently with the “Great Inflation” period of the 1970s. Investment-specific news shocks were the main contributor to residential investment growth during the “new economy” cycle of the late 1990s. Expectations regarding housing productivity shocks and investment shocks contributed, to some extent, to the increase in house prices during the latest boom.

Impact of macro-prudential tools

The Committee on the Global Financial System identified the loan-to-value (LTV) ratio as one of the macro-prudential tools that may act as an automatic stabiliser if adjusted in a counter-

¹ See also Barsky and Sims (2012) and Leduc and Sill (2013).

cyclical manner around a pre-established level. Using the DSGE model described in the previous section, Lambertini, Mendicino and Punzi (2013b) assess the effectiveness of alternative policies in mitigating booms (and busts) in house prices and credit driven by news shocks. We study whether counter-cyclical LTV ratio policies can be effective in providing a stable supply of financial intermediation (i.e. loans to the household sector) so as to avoid spillovers into the macroeconomy. An optimised LTV ratio rule that responds to credit growth is a Pareto-improving policy compared with the use of a constant LTV ratio.

A housing boom emerges when agents expect a future increase in house prices which, in turn, fuels current housing demand and lifts house prices and debt immediately; a bust follows if anticipated events do not materialise. A decrease in the LTV ratio during the boom phase of the cycle dampens this self-reinforcing dynamic. At the same time, an increase in the LTV ratio during a bust limits the decline in house prices and credit and reduces the cost of the down phase. Thus, a response to the LTV to credit growth reduces the amplitude of booms generated by news shock-driven cycles and avoids the occurrence of busts, resulting in a welfare improvement for both types of agent (i.e. patient and impatient households).

A dynamic LTV ratio that responds in a counter-cyclical manner to credit growth leads to a Pareto improvement

We also consider a combination of monetary and macro-prudential rules. We show that agents' heterogeneity prevents a uniform ranking of the alternative policy frameworks. Borrowers benefit from the more stable supply of credit and the higher level of consumption that result from the use of a counter-cyclical

LTV ratio response to the credit cycle. In contrast, savers are better off under a constant LTV ratio coupled with an interest rate rule that responds to credit growth. In the case of a social welfare function in which the planner equalises utility across agent types for a given constant consumption stream, a counter-cyclical LTV ratio coupled with an interest rate response to the credit growth is socially optimal.

Conclusions

News and changes in households' beliefs are an important driver of developments in house prices and other macroeconomic variables over the business cycle. They have also contributed to the increases in US house prices over the last three decades.

When examining the potential social welfare gains from monetary and macro-prudential policies that "lean against" house-price and credit cycles, we find that the use of macro-prudential policy dampens credit and housing cycles and improves welfare. However, a mix of macro-prudential policy and monetary policy is socially optimal. News shock-driven cycles account for most of the social welfare gains from a policy response to changes in financial variables.

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Box

EIGHTH INTERNATIONAL RESEARCH FORUM ON MONETARY POLICY

On 21-22 March 2014 the US Federal Reserve Board hosted the eighth International Research Forum conference, which was organised jointly by the European Central Bank (ECB), the Georgetown Center for Economic Research (GCER) at Georgetown University and the Center for Financial Studies (CFS) at Goethe University. This biennial conference has brought together top academic and central bank researchers to discuss policy-relevant academic research.

The first group of papers concentrated on how alternative policies could help to mitigate the effects of financial and fiscal distress. Emmanuel Farhi (Harvard University) found that macroprudential policies play a key role and characterised their optimality in a general framework with nominal rigidities and monetary policy being constrained by the zero lower bound for nominal interest rates. Oreste Tristani (ECB) built a case for credit subsidies and showed that they improved welfare in a framework with inefficient credit spreads. Gita Gopinath (Harvard University) presented a framework of a monetary union with decentralised fiscal policy and centralised monetary policy. She showed that the monetary authority's excessive commitment to inflation stabilisation limited its ability to credibly counteract non-fundamental debt roll-over crises. Marco Del Negro (Federal Reserve Bank of New York) argued that the present value of future seigniorage revenue made it unlikely that the Federal Reserve would require explicit fiscal recapitalisation with its current balance sheet size.

The second group of papers emphasised the role of banks in explaining key macroeconomic facts. Galo Nuño (ECB) presented a macro model with banks facing endogenous leverage constraints. He showed that shocks influencing the leverage played a key role in explaining business cycle facts and the current financial crisis. Javier Bianchi (University of Wisconsin) introduced a quantitative model for optimising banks engaged in precautionary reserve accumulation. He emphasised that substantial increases in banks' liquidity demand during the crisis pointed to serious funding uncertainties and problems in the interbank market. Frank Smets (ECB) argued that banking crises were generally preceded by credit booms and presented a model in line with this observation. In it, the banking system's absorption capacity is limited by moral hazard and adverse selection, and excess saving can endogenously lead to an interbank market freeze.

The third group of papers analysed key features of the Great Recession. John Haltiwanger (University of Maryland) presented evidence against the cleansing effect of worker reallocation in the Great Recession, in contrast to earlier recessions. Not only did he find that worker reallocation decreased, but the reallocation that took place did not enhance productivity. Federico Ravenna (HEC Montréal) argued that explicitly accounting for worker heterogeneity could help to explain the jobless recovery observed and the muted negative wage pressures during the recent persistent contraction. Egon Zakrajsek (Federal Reserve Board) showed that firms in financial distress actually increased their prices relative to the industry average at the height of the recent crisis. He argued that this could be explained by financially constrained firms preferring short-term revenues over investing in their future market share.

The conference also featured two keynote speeches by representatives of the Federal Reserve Board and the ECB, as well as a policy panel focusing on transitional and longer-term challenges for monetary policy. Jeremy Stein (Federal Reserve Board) contemplated incorporating financial stability considerations into the conduct of monetary policy. He found a clear theoretical case for tighter policy in an environment with an abnormally low risk premium, especially if it were believed that the increase in spreads can be more disruptive than their initial compression.





Jeremy Stein presented suggestive evidence about this. Vítor Constâncio (ECB) detailed how the establishment of the single supervisory and resolution mechanisms could improve confidence in the European banking system and contribute to its ability to raise funds and extend credit to the real economy. On the policy panel, Stephen Cecchetti (Brandeis University) argued that there was little empirical evidence to support the view that monetary policy has a negative effect on financial stability. Spencer Dale (Bank of England) presented the Bank of England's experience of forward guidance, taking the view that the main aim of forward guidance was improved communication, rather than commitment. Narayana Kocherlakota (Federal Reserve Bank of Minneapolis) argued that, although financial stability considerations should be contemplated, potential gains from doing so could in most cases be considered small. Lars Svensson (Stockholm University) argued that interest rate policy was not a suitable tool to influence financial stability.

The contributions to this conference can be downloaded from the Federal Reserve Board's website at: <http://www.federalreserve.gov/newsevents/conferences/irfmp-2014-conference-program.htm>.

RESEARCH BULLETIN 2 I

RECENT JOURNAL PUBLICATIONS BY ECB STAFF

Abbritti, M. and S. Fahr (2013), “Downward wage rigidities and business cycle asymmetries”, *Journal of Monetary Economics*, Vol. 60, Issue 7, October, pp. 871-886.

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