

# Does the impact of economic policy depend on what we know?

By [Paul Hubert](#) and Giovanni Ricco

Do the effects of monetary policy depend on the information available to consumers and business? In this note we analyze how the way in which the central bank surprises economic actors affects the impact of its policy and the extent to which the central bank's publication of its private information modifies the effects of its policy.

In an economy that had perfect information and where the expectations of private agents were rational, monetary policy announcements would have no real effect (on activity) unless they constitute "surprises", that is, unanticipated decisions. To the extent that private agents know the economic reasons behind monetary policy decisions, a surprise in monetary policy thus corresponds to a temporary change in the preferences of the central bankers.

However, in the presence of informational friction, and especially when the information sets of the central bank and of private agents differ, the private agents do not know the central bank's information and therefore do not know what the central bankers are responding to. When agents are surprised by a monetary policy decision, they cannot determine whether this surprise comes from a re-evaluation of the central bank's macroeconomic information or from a change in the central bankers' preferences. So for private agents, a monetary policy decision can reflect either their response to a preference shock or their response to macroeconomic information that has just been revealed to them. For example, an increase in the central bank's key rate may signal to private agents that an

inflationary shock will affect the economy in the future, pushing up private expectations of inflation. However, the same increase in the central bank's key rate could be interpreted as a preference shock indicating that the central bankers want to tighten up, which would reduce private expectations of inflation. More generally, whenever the central bank and private agents have different sets of information, a monetary policy decision could convey information from the central bank about future macroeconomic developments.[\[1\]](#)

The way private agents interpret monetary policy surprises is therefore crucial in determining the sign and the magnitude of the impact of monetary policy. Based on this intuition, a [recent work](#) by G. Ricco and S. Miranda-Agrippino proposes a new approach to studying the effects of monetary policy shocks that takes into account the problem that agents face in understanding central bank decisions. Despite years of research, there is still considerable uncertainty about the effects of monetary policy decisions. In particular, several works have shown that, counterintuitively, an increase in output or prices follows monetary tightening –a phenomenon that is also called the price puzzle.

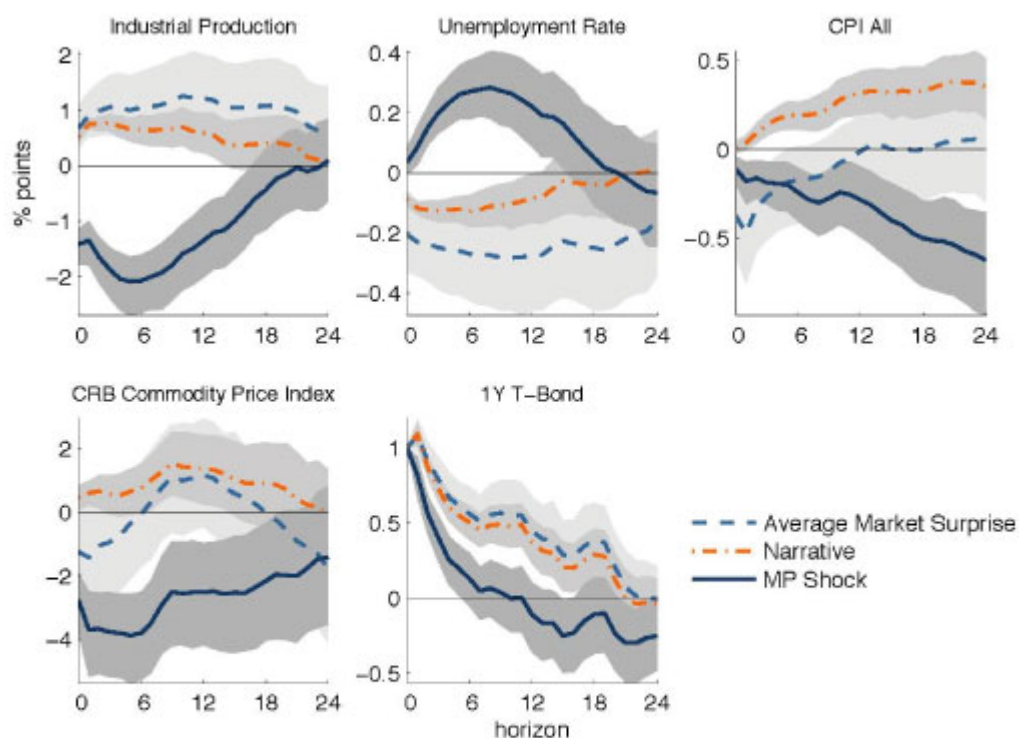
In this work the authors show that to a large extent the results in the existing literature lack robustness due to the implicit assumption that the central bank or private agents have perfect information about the state of the economy. It turns out that it is the central bank's transmission of information about economic conditions to private agents that could be generating the price puzzle highlighted in the literature.

In the United States, it is five years afterwards that the central bank discloses the forecasts by its economists (the Greenbook forecasts) which have been used to inform its monetary policy decisions. This allows us to separate ex post the reactions of the financial markets to the new information

on the state of the economy transmitted by the action of the central bank from reactions to monetary policy shocks. We use these responses to study the effects of monetary policy on the US economy in an econometric model that is flexible and robust to poor specifications.

In Figure 1, we compare our approach with methods that do not take into account the transmission of information between the central bank and private agents. While these methods generate the price puzzle, with our approach we find that a monetary tightening reduces both prices and output.

**Figure 1. Responses of different macroeconomic variables to a restrictive monetary shock**



Note: The graphic shows the change over 24 months of different variables following a restrictive monetary shock. The monetary shock is identified in three different ways: via the average surprise of market operators on the day of the announcement (blue dashes), via a narrative approach that consists of extracting the unexplained component by central bank forecasts of a variation in interest rates (orange dashes) and via the method of the text's authors that takes into account the transfer of information (blue line).

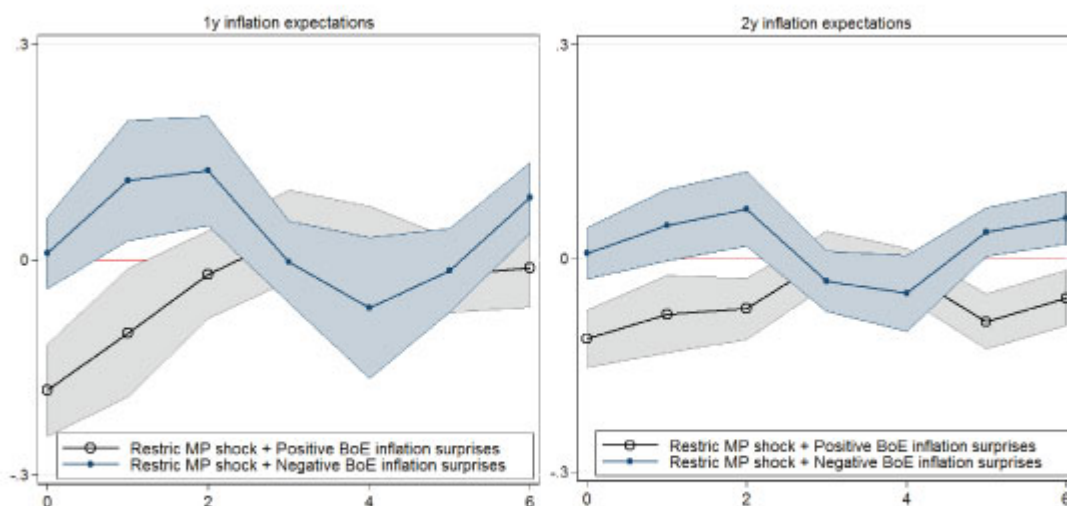
Source: Authors' calculations

On the basis of these results, and in order to study whether private agents' interpretation of monetary policy surprises depends on the information available to them, another [recent working paper](#) assesses whether the publication by the central bank of its macroeconomic forecasts could affect the way that

private agents understand monetary policy surprises and thus ultimately influence the impact of the monetary policy decision.

More specifically, this paper assesses whether and how the interest rate term structure of inflation expectations responds differently to Bank of England (BoE) decisions when they are accompanied or not by the publication of the BoE's macroeconomic forecasts (of inflation and growth) and when these are corroborated or contradicted by its forecasts.[\[2\]](#)

**Figure 2. Responses of inflation expectations at 1 and 2 years to a restrictive monetary shock**



Note: The graphic shows the change over 6 months of inflation expectations at 1 and 2 years following a restrictive monetary shock (a) when this is corroborated by a positive surprise on the central bank's inflation forecasts (blue line), (b) when this is contradicted by a negative surprise on inflation forecasts (black line).

Source: Authors' calculations.

It can be seen that, on average, private inflation expectations respond negatively to restrictive monetary shocks, as expected given the mechanisms for transmitting monetary policy. The main result of Figure 2, however, is that the central bank's inflation forecasts change the impact of monetary shocks. Monetary shocks (in the example here, restrictive) have a greater negative impact when they interact with a positive surprise on the central bank's inflation forecasts. On the other hand, a restrictive monetary shock that interacts with a negative surprise on inflation projections has no effect on private inflation expectations.

This observation suggests that, when monetary shocks and

forecast surprises corroborate one another, monetary shocks have a greater impact on private inflation expectations, possibly because private agents can deduce the preference shock of the central bankers and respond more strongly. On the other hand, when monetary shocks and forecast surprises contradict each other, monetary shocks have no (or less) impact, possibly because private agents receive opposing signals and are unable to determine the direction of monetary policy. They are thus also responding to the macroeconomic information disclosed.

These results show that the publication by central banks of their macroeconomic information helps private agents to process the signals that they receive and thus modifies their response to monetary policy decisions. This study thus suggests that providing guidance on future changes in inflation rather than on future interest rate developments (Forward Guidance policy) can make monetary policy more effective by enabling private agents to better distinguish the central bank's macroeconomic information from its preferences.

## Notes

[\[1\]](#) See Baeriswyl, Romain and Camille Cornand (2010), "The signalling role of policy actions", *Journal of Monetary Economics*, 57(6), 682-695; Tang, Jenny (2015), "Uncertainty and the signalling channel of monetary policy", *FRB Boston Working Paper*, no. 15-8; and Melosi, Leonardo (2017), "Signalling effects of monetary policy", *Review of Economic Studies*, 84(2), 853-884.

[\[2\]](#) This study focuses on the United Kingdom because the BoE's forecasts have a specific characteristic that makes it possible to econometrically identify their own effects. Indeed, the question asked demands that the central bank's forecasts do not depend on the current policy decision, so

that monetary surprises and forecast surprises can be identified separately. The BoE's projections are conditional on market interest rates and not on the key rate, meaning that the BoE's forecasts are independent of monetary policy decisions.

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# **Distributive justice, social norms and the diversity of demands for redistribution**

By Gilles Le Garrec

When considering the preference for redistribution at the individual level, the first thing we notice is that people with lower incomes are the ones who say they would like a greater redistribution of income. But the way people look at income in general also plays a crucial role. Indeed, if someone thinks that income reflects more luck than effort, then they will tend to support a higher redistribution. What empirical studies tell us is that demands for redistribution reflect both individuals' self-interest as well as their concern for distributive justice. It should nevertheless be pointed out that the intensity of this concern may vary greatly from one country to another. More precisely, the study by Corneo (2001) showed that people from countries with high income redistribution, such as former West Germany, are characterized by a greater concern for distributive justice than people in low redistribution countries such as the United States. Given this, understanding the role of the cultural environment in the development of individual preferences is

crucial to an understanding of demands for redistribution and, by extension, the diversity of redistributive policies in democracies, as illustrated in the table below. In this regard, the conclusion by Luttmer and Signal (2011) that immigrants from countries with a strong preference for redistribution continue to support a higher redistribution in their host country than do natives is decisive. It thus seems not only that the intensity of a person's concern for distributive justice depends on the environment in which they are raised, but also that this no longer varies after reaching adulthood[1].

In the light of these empirical results, I have proposed in a [working paper](#) a mechanism for the cultural transmission of this moral norm, i.e. the intensity of the concern for distributive justice. The paper argues that preferences are a characteristic of an oblique socialization process [2] and are structured in part by the observation, imitation [3] and internalization of cultural practices. More specifically, my mechanism stipulates that the observation during childhood of excessively unfair redistributive policies will result in a weakened concern for distributive justice. The moral cost of not supporting a fair distribution of income once a person reaches adulthood is lessened by the observation of the collective failure of the previous generation to have established institutions promoting distributive justice. In other words, the mechanism that I am proposing reflects the fact that having been exposed to too much injustice reduces a person's capacity to feel concerned about injustice.[4]

As a consequence of the intergenerational cultural transmission mechanism proposed, my model allows us to satisfactorily account for the fact that redistribution is greater in Europe than in the United States, even though income inequalities before taxes and transfers are lower (cf. Table 1). In doing this, I improve on the prediction of the canonical model of Meltzer and Richard (1981), who argue

instead that greater income inequality should result in greater redistribution. Moreover, these differences about redistribution persist over time because they become part of an individual's preferences via the intergenerational transmission of the intensity of concern for distributive justice. It is through this same mechanism of the intergenerational transmission of values that we can finally explain why immigrants from countries with strong redistribution continue to support a higher level of redistribution in their host country.

**Table 1. Redistribution and Income Inequality in 2013**

	Income inequality (before tax and transfers, Gini index)	Public social spending (% GDP)	Reduction made to income inequality (%)
Sweden	0,363	17,8	27,5
France	0,445	18,9	33,9
Germany	0,419	16,5	28,6
United States	0,478	12,5	18,0

Source: OECD (2017) and author's calculations.

## References

Boyd, R. and P.J. Richerson (1985), *Culture and the evolutionary process*, London, University of Chicago Press.

Corneo G. (2001), "Inequality and the State: Comparing US and German preferences", *Annals of Economics and Statistics*, 63/64, pp. 283-296.

Le Garrec, Gilles (2017), "Fairness, social norms and the cultural demand for redistribution", *Document de travail OFCE no 2017-20*, forthcoming in *Social Choice and Welfare*, DOI 10.1007/s00355-017-1080-6.

Luttmer, E. and M. Signal (2011), "Culture, context, and the taste for redistribution", *American Economic Journal: Economic Policy*, 3(1), pp. 157-179.



McCrae, R. and P. Costa (1994), "The stability of personality: observation and evaluations", *Current Directions in Psychological Science*, 3(6), pp. 173-175.

Meltzer, A. and S. Richard (1981), "A rational theory of the size of government", *Journal of Political Economy*, 89(5), pp 914-927.

Twenge J., R. Baumeister, N. DeWall, N. Ciarocco and M. Bartels (2007), "Social exclusion decreases prosocial behavior", *Journal of Personality and Social Psychology*, 92(1), pp. 56-66.

[\[1\]](#) In support of this interpretation, the psychologists McCrae and Costa (1994) showed that personality traits were frozen after the age of 30.

[\[2\]](#) We speak of oblique socialization or transmission when an individual learns from contact with people from the generation of his parents or from institutions. Transmission is called vertical when it occurs between parents and their children. It is called horizontal when an individual learns from their peers.

[\[3\]](#) In the evolutionary literature, learning from others by imitating them is an economical and efficient way of acquiring information that is locally relevant to adaptation. In this perspective, the propensities to learn and to imitate are components of a psychology that has evolved through natural selection (Boyd and Richerson, 1985).

[\[4\]](#) Twenge *et al.* (2007) explained that social exclusion causes strong negative feelings that undermine for an empathetic understanding of others and, consequently, diminishes pro-social behavior.

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# Growth and inequality in the European Union

By [Catherine Mathieu](#) and [Henri Sterdyniak](#)

“Growth and Inequality: Challenges for the Economies of the European Union” was the theme of the 14th EUROFRAME Symposium on Economic Policy Issues in the European Union held on 9 June 2017 in Berlin. [EUROFRAME](#) is a network of European economic institutes that includes DIW and IFW (Germany), WIFO (Austria), ETLA (Finland), OFCE (France), ESRI (Ireland), PROMETEIA (Italy), CPB (Netherlands), CASE (Poland) and NIESR (United Kingdom). Since 2004, EUROFRAME has organized a symposium on an important subject for the European economies every year.

This year, 27 contributions from researchers, selected by a scientific committee, were presented at the symposium, most of which are available on the conference [web page](#). This text provides a summary of the studies presented and discussed at the symposium.

As DIW President Marcel Fratzcher pointed out in his opening remarks, the rise in inequality over the last 30 years has meant that inequalities that were previously subjects of study reserved for researchers in social policy have now become subjects for numerous economists. Several questions were posed: why this rise in inequality? Is the increase in inequality in each country a necessary consequence of the reduction in inequality between countries, in Europe or at the global level? What are the macroeconomic consequences of this increase? What economic policies could avoid this?

**Income inequality: the facts.** Mark Dabrowski (CASE, Warsaw) –

“Is there a trade-off between global and national inequality?” – stresses that the growth of inequalities within each country (especially in the United States and China) goes hand in hand with the reduction of inequalities between countries, as both are fuelled by commercial and financial globalization. However, some advanced countries have succeeded in halting the growth in internal inequalities, which shows the continuing importance of national policy.

Oliver Denk (OECD) – “Who are the Top 1 Percent Earners in Europe?” – analyses the structure of the 1% of employees earning the highest incomes in the EU countries. They represent between 9% of total payroll in the United Kingdom to 3.8% in Finland (4.7% in France). Statistically, they are older than the mass of overall employees (this is less clear in the East European countries), more masculine (this is less clear in the Nordic countries), and more highly educated. They are more numerous in finance, communication and business services.

Tim Callan, Karina Doorley and Michael Savage (ESRI Dublin), analyse the growth in income inequality in the countries most affected by the crisis (“Inequality in EU crisis countries: Identifying the impacts of automatic stabilisers and discretionary policy”). In these five countries, Spain, Greece, Ireland, Portugal and Cyprus, primary income inequalities have increased due to the crisis, but thanks to automatic tax and social transfers, inequalities in disposable income have remained stable in Ireland and Portugal and (to a lesser degree) in Greece.

Carlos Vacas-Soriano and Enrique Fernández-Macías (Eurofound) – “Inequalities and employment patterns in Europe before and after the Great Recession” – show that income inequality decreased overall in the EU before 2008, as new entrants caught up with the older members. Since 2008, the Great Recession has deepened inequalities between countries and within many countries. The growth of internal inequality is

due mainly to rising unemployment; it is striking traditionally egalitarian countries (Germany, Sweden, Denmark); and it is mitigated by family solidarity and social protection, whose roles are nevertheless under question.

**Modelling the growth / inequality relationship.** Alberto Cardiac (University of Cattolica del Sacro Cuore, Milan) and Francesco Saraceno (OFCE, Paris) – “Inequality and Imbalances: An open-economy agent-based model” – present a two-country model. In one, the search for external surpluses leads to pressure on wages and a depression of domestic demand, which is offset by export earnings. In the other, the growth of inequality leads to a downward trend in consumption, which is offset by the expansion of credit. The result is an endogenous debt crisis when the household debt of the second country reaches a limit value.

Alain Desdoigts (IEDES, University of Paris 1 Panthéon-Sorbonne) and Fernando Jaramillo (Universidad del Rosario, Bogota) – “Learning by doing, inequality, and sustained growth: A middle-class perspective” – present a model where innovations can be applied in production only in sectors with a sufficient size, hence those that produce the goods purchased by the middle class (so neither in the luxury goods sector nor in the low-end goods sector). Growth is therefore stronger as the middle class expands. Redistribution is favourable to growth if it is made from the rich to the middle class, and unfavourable if it goes from the middle class to the poor.

**Inequality, financialisation, monetary policy.** The article by Dirk Bezemer and Anna Samarina (University of Groningen) – “Debt shift, financial development and income inequality in Europe” – distinguishes between two types of bank credit: credit for financial and real estate activities, and credit for non-financial enterprises and consumption. They explain the growth of inequality in the developed countries by the growing role of credit that finances finance to the detriment

of credit that finances production.

The article by Mathias Klein (DIW Berlin) and Roland Winkler (TU Dortmund University) – “Austerity, inequality, and private debt overhang” – argues that restrictive fiscal policies have little impact on activity and employment when private debt is low (because there is a full Barro effect); they have a restrictive effect on activity and increase income inequality when private debt is high. Therefore, fiscal restraint should be applied only once private debt has been reduced.

Davide Furceri, Prakash Loungani and Aleksandra Zdzienicka (IMF) – “The effect of monetary policy shocks on inequality” – point out that the impact of monetary policy on income inequality is ambiguous. An expansionary policy can reduce unemployment and lower interest rates (which reduces inequality); it can also lead to inflation and raise the price of assets (which increases inequality). Empirically, it appears that a restrictive policy increases income inequality unless it is caused by higher growth.

**Inequalities and social policy.** Alexei Kireyev and Jingyang Chen (IMF) – “Inclusive growth framework” – advocate for growth indicators that include trends in poverty and in inequality in income and consumption.

Dorothee Ihle (University of Muenster) – “Treatment effects of Riester participation along the wealth distribution: An instrumental quantile regression analysis” – analyses the impact of Riester pension plans on the wealth of German households. They significantly increase the wealth of the participating households at the bottom of the income distribution, but these are relatively few in number, while this mainly has wealth redistribution effects for middle-class households.

**Inequality, poverty and mobility.** Katharina Weddige-Haaf (Utrecht University) and Clemens Kool (CPB and Utrecht

University) – “The impact of fiscal policy and internal migration on regional growth and convergence in Germany” – analyse the factors for convergence of per capita income between the old and new German Länder. Convergence has been driven by internal migration, investment subsidies and structural funds, but fiscal transfers in general have had no effect. The 2008 crisis favoured convergence by hitting the richest regions in particular.

Elizabeth Jane Casabianca and Elena Giarda (Prometeia, Bologna) – “From rags to riches, from riches to rags: Intra-generational mobility in Europe before and after the Great Recession” – analyse the mobility of individual incomes in four European countries: Spain, France, Italy and the United Kingdom. Before the crisis, this was strong in Spain and weak in Italy. It declined markedly after the crisis, particularly in Spain; it remained stable in the United Kingdom.

Luigi Campiglio (Università Cattolica del S. Cuore di Milano) – “Absolute poverty, food and housing” – analyses absolute poverty in Italy using an indicator based on food consumption. He shows that poor families bear particularly high housing costs, which cuts into their food consumption and health care spending. Poor families with children are tenants and were hit especially hard by the crisis. Social policy should offer them better protection through targeted transfers in cash or in kind (health, education).

Georgia Kaplanoglou and Vassilis T. Rapanos (National and Kapodistrian University of Athens and Academy of Athens) – “Evolutions in consumption inequality and poverty in Greece: The impact of the crisis and austerity policies” – point out that the crisis and austerity policies have reduced GDP and household consumption by about 30% in Greece. This has been accompanied by an increase in inequality in consumption, which the paper documents in detail. It analyses in particular the effect of VAT hikes. Families with children were especially hard hit.

**Labour market.** Christian Hutter (IAB, German Federal Employment Agency) and Enzo Weber (IAB and Universität Regensburg) – “Labour market effects of wage inequality and skill-biased technical change in Germany” – use German data to estimate a structural vector model for analysing the link between wage inequalities, employment, neutral technical progress and technical progress favouring skilled labour. The latter raises labour productivity and wages, but also wage inequalities, and it reduces employment. Wage inequalities have a negative impact on employment and overall productivity.

Eckhard Hein and Achim Truger (Berlin School of Economics and Law, Institute for International Political Economy) – “Opportunities and limits of rebalancing the Eurozone via wage policies: Theoretical considerations and empirical illustrations for the case of Germany” – analyse the impact of wage increases in Germany on the rebalancing of current account balances in Europe. They show that these play a role not only through a competitiveness effect, but also through a demand effect by modifying the wage / profit distribution and by boosting consumption. They must therefore also be supported by an increase in public spending.

Camille Logeay and Heike Joebges (HTW Berlin) – “Could a wage formula prevent excessive current account imbalances in euro area countries? A study on wage costs and profit developments in peripheral countries” – show that the rule “wages must grow in line with labour productivity and the inflation target” should have had stabilizing effects in Europe both on the competitiveness of the member countries as well as on their domestic demand. This nevertheless assumes that companies do not take advantage of this to boost their profits and that no country seeks to increase its competitiveness.

Hassan Molana (University of Dundee), Catia Montagna (University of Aberdeen) and George E. Onwordi (University of Aberdeen) – “Reforming the Liberal Welfare State: International Shocks, unemployment and household income

shares” – construct a model to show that a free market country, such as the United Kingdom, could improve the functioning of its labour market by reducing flexibility to move towards a flexi-security model: higher unemployment benefits, restrictions on redundancies, greater spending on training, and support for hiring. By boosting labour productivity, this strategy would reduce the structural unemployment rate and increase the share of profits.

Guillaume Claveres (Centre d’Economie de la Sorbonne, Paris) and Marius Clemens (DIW, Berlin) – “Unemployment Insurance Union” – propose a model for European unemployment insurance that would cover part of the expenses of unemployment benefits. This could reduce fluctuations in consumption and unemployment resulting from specific shocks. This assumes, however, that it would apply only to cyclical unemployment, which is difficult to define.

Bruno Contini (Università di Torino and Collegio Carlo Alberto), José Ignacio Garcia Perez (Universidad Pablo de Olavide), Toralf Pusch (Hans-Boeckler Stiftung, Düsseldorf) and Roberto Quaranta (Collegio Carlo Alberto) – “New approaches to the study of long-term non-employment duration via survival analysis: Italy, Germany and Spain” – analyse involuntary non-activity (people who would like to work but have given up looking for a job and lost their rights to unemployment benefits) in Germany, Italy and Spain. This is particularly important and sustainable in Spain and Italy. They caution against measures to encourage redundancies, job insecurity and incentives for undeclared work.

**Taxation.** Markku Lehmus, (ETLA, Helsinki) – “Distributional and employment effects of labour tax changes: Finnish evidence over the period 1996-2008” – uses a general equilibrium model with heterogeneous agents to evaluate the impact of the reduction in the taxation of employment in Finland from 1996 to 2008. He shows that this explains only a small share of the rise in employment (1.4 points out of 16%) and of the rise in



income inequality.

Sarah Godar (Berlin School of Economics and Law) and Achim Truger (IMK and Berlin School of Economics and Law) – “Shifting priorities in EU tax policies: A stock-taking exercise over three decades” – analyse the evolution of taxation in the EU states: from 1980 to 2007, taxation became less progressive with lower marginal rates of income tax and corporation tax, and preferred treatment of capital income. The crisis of 2008 and the difficulties with the public finances temporarily slowed this trend; an increase in revenues was, however, often sought by raising VAT.

Alexander Krennek and Margit Schratzenstaller (WIFO) – “Sustainability-oriented future EU funding: A European net wealth tax” – argue for the introduction of a European household wealth tax, which could help finance the European budget.

**The macroeconomic consequences of inequalities.** Bjoern O. Meyer (University of Rome – Tor Vergata) – “Savings glut without saving: Retirement saving and the interest rate decline in the United States between 1984 and 2013” – explains 60% of the decline in the interest rate in the United States, despite the decline in the overall household saving rate, by demographic factors (the differential rise in life expectancy), the slowdown in labour productivity gains and the increase in income inequality.

Marius Clemens, Ferdinand Fichtner, Stefan Gebauer, Simon Junker and Konstantin A. Kholodilin (DIW Berlin) – “How does income inequality influence economic growth in Germany?” – present a macroeconomic model in which short-term income inequalities increase the productivity of each asset (incentive effect), but reduce overall consumption (savings effect); in the long term, they have a negative impact on the formation of the human capital of young people in the working classes. Hence an exogenous increase in income inequalities

first has a negative effect on GDP (demand effect), then positive (individual incentive effect) and then again negative in the long term (human capital effect). The effect is always negative on household consumption and positive on the external balance.