CompNet The Competitiveness Research Network

Dear CompNet members and conference participants,

Below you will find a summary of the main presentations and discussions during the conference "**Enhancing competitiveness and fostering sustainable growth: methodological issues and empirical results",** held at the European Central Bank on 25-26 June 2015. Slides of presentations of the selected papers, of their discussion, and the academic and policy panels, as well as an audio recording of the main interventions are all available on our website.

No doubt, this was one of the most successful events we have ever had, judging from the top level of academics who participated and papers that were presented. The format we adopted - including 4 academic panels and 2 policy round tables (see the agenda) – was also highly appreciated as it allowed ample space for discussing interaction between CompNet results and further research directions of high policy relevance.

With the presentation of its final report (can be found here) CompNet completed its official mandate. However, the feedback received during the conference – both from ECB top management (see below intervention of Mr. Praet) as well as from the academic and policy community – confirmed the high potential of the network going forward, both as a hub for data collection as well as a research forum in the broad areas of competitiveness and productivity drivers. Against this background, **CompNet will continue its operations as a self-managed network**. Even more than in the past, CompNet will be open to new collaborations also with institutions outside the EU system of central banks, including universities and research centres, as well as non-EU central banks and international institutions. The main goal of CompNet will continue to be **fostering state-of-the-art research on the broad themes of competitiveness and productivity enhancement**, with the specific aim of tackling novel and upcoming issues of high policy relevance (for more details on **CompNet way forward** please refer to chapter four of the latest CompNet Report of June 2015). The network will be managed by a small steering committee – tasked to guide future data collection and set broad research directions – and will hold one conference per annum, and possibly a number of specific workshops on selected topics.

Thursday, 25 June 2015

Welcoming address

Peter Praet - Member of the Executive Board, ECB

Mr. Praet welcomed the audience on behalf of the Governing Council of the ECB and praised the work of CompNet. Since his time as Executive Director at the National Bank of Belgium he had been a great supporter of firm-level data analysis, which he now increasingly uses at the ECB for its external communication. Since competitiveness issues are of primary importance for EU economies, reforms must at the same time be "comprehensive and focused". He therefore called for fully exploiting granularity of micro-data in order to design policies "in a surgical way". Against this background, Mr. Praet asked CompNet to build further on its achievements and getting even more detailed and concrete in its policy advice going forward.

Introductory remarks

Filippo di Mauro - Chairman of CompNet

Mr. di Mauro summarised motivation and objectives of CompNet, including its multi-dimensional approach, where macro, firm-level and cross-borders dimensions are complementing each other when assessing competitiveness. The final report "*Assessing European competitiveness: the contribution of CompNet research*" which has just been completed, contains a comprehensive collection of research results and related policy implications resulting from the interaction of the three CompNet workstreams. The Report is structured in three chapters: 1) trade and competitiveness; 2) shock transmission in a global context; and 3) productivity and reallocation.

He expressed deep gratitude for the work done by all CompNet members in the last three years, including having created a very interactive team of experts located at different NCBs, NCIs and academic institutions. The existence of such a strong team is a great base upon which to build the next phase of CompNet, which will turn now into a self-governed research Network.

Session 1. **Global Value Chains**

Chair: Carlo Altomonte, Bocconi University

Import Competition, Productivity and Multi-Product Firms

Emmanuel Dhyne, Banque Nationale de Belgique; Amil Petrin, University of Minnesota; Valerie Smeets, Aarhus University; Frederic Warzynski, Aarhus University

In the paper, using firm-product level quarterly data, the authors develop an estimation framework to measure productivity for multi-product (MP) firms to then link it with product-level import competition. The authors show that in MP firms productivity and the impact of an increase in import competition varies depending on the rank of products produced; in particular when import competition associated to the main product of a firm increases, the firm tends to increase its efficiency in producing that core product; but increased foreign competition has the opposite effect for non-core products of a firm. Consequently, firms tend to be more likely to drop products that are not core, for which they have lower productivity, and where import competition increased.

Discussion: The discussant, **Marcel Timmer,** pointed out that the assumptions of the model used - Diewert (1973) - are pretty demanding in terms of input substitutability and of marginal rates of return of outputs for inputs. For this reason he suggested further robustness checks. In addition, he pointed out what are the pros and cons of using high-frequency data.

The trade and demand nexus: Do global value chains matter?

Alexander Al-Haschimi, Frauke Skudelny* and Elena Vaccarino, European Central Bank; Julia Wörz, Oesterreichische Nationalbank

In a context of unexpectedly weak dynamics in global trade flows in the last years, the authors focus on the role of GVCs for the global trade-to-income ratio. They do so by combining trade data from UN Comtrade and national accounts data from the IMF's World Economic Outlook with information on global linkages from WIOD for a sample of emerging and advanced economies over the period from 1996-2011. Their measure of GVC participation is based on the decomposition of trade flows proposed in Koopman et al. (2014). The authors find higher demand elasticity for emerging economies and a reinforcing effect of GVC participation, both in advanced and emerging economies. Their recursive estimates show a decline in the demand elasticity already before the crisis suggesting that the process of GVC integration may have reached its peak.

Discussion: Robert C. Johnson pointed out the difficulties in interpreting income elasticity in a context of GVCs and proposed a more structural approach and some IO arithmetic. Moreover, among other recommendations, he suggested to use as dependent variable multilateral imports instead of bilateral trade.

Academic panel discussion

Richard Baldwin, The Graduate Institute, Geneva

In his presentation Baldwin showed that something radically changed around 1990s in the global economy because of the ICT revolution, which blurred the distinction between nations and GVCs. Moreover, the nature of trade changed around 1985-1995, as the two-way trade in similar products involving North-North was replaced by North-South with firms moving production to low wage countries. Globalisation has been affected by three cascading constraints: goods trade costs, communication costs and face to face cost. In the pre-globalisation word such costs were all very high and the production of goods was very much a local affair. The “first unbundling” came with the steam revolution, which enabled production to be separated from consumption and increased spatial concentration within countries. It was only with the ICT revolution - the “second unbundling” in international trade/ the GVCs revolution - that not only production could be separated from consumption but also that production could be broken-up. This changed the nature of trade because flows of info, training and knowledge could cross borders from North to South. Baldwin pointed out some of the implications of GVCs for central banking, focusing mainly on their impact on shock transmission (both demand transmission and price transmission). Indeed GVCs can affect the speed, the strength and the measurement of these shock transmissions. Among other things, he also pointed out that measures of REER based on gross trade are wrong, stressed the importance of the bullwhip effect, and the impact of uncertainty due to offshoring on wage formation.

Marcel Timmer, Rijksuniversiteit Groningen

The standard notion of production is still conceptualised in one phase and as based on domestic capital and labour. However, Timmer pointed out that this doesn’t reflect reality anymore and that we should use a multi-stage production function and start from the final product accounting for the contribution of both domestic and foreign inputs. He then focused on the distributional effects of globalisation and pointed out that when the factor content of offshored components is not observed, technology is found to be skill biased as a result of the offshoring of low skilled activities.
In fact, until now only one stage approaches have been used focusing only on the domestic industry. But how do we observe the factor content? Timmer stressed the importance of WIOD which allows to get a proxy of factor content and cost-shares. He then made clear that for identifying GVC economists should start by the last stage of production, i.e. by the final product and then assess which are the activities and production factors involved. In the final part of his presentation, he pointed out three main stylized facts which emerge out of the WIOD analysis. First, European GVCs are becoming truly global as the share of value added coming from outside EU is increasing fast. Second, low skilled labour in Europe is being substituted with foreign skilled labour (for example Chinese) but, at the same time, given there is some bias toward skilled labour in technological change (see Timmer at al. (2014)). Third, advanced countries are specializing in head-office tasks. In conclusion, he stressed the importance of complementing all of the above results with micro based case studies and surveys, since WIOD is admittedly still only a proxy.

Robert C. Johnson, Dartmouth College

Johnson called for more attention to be given to global supply chains in international macro analysis as this can improve the empirical answers to core questions relating to shock transmission across countries, external rebalancing or competitiveness. He criticised that canonical models ignore traded inputs and are therefore subject to mis-calibration and fail to cover shock transmission via inputs, and presented a model that accounts for input linkages. Further, Johnson presented the existing research frontier regarding input linkages in international macro models, the challenge of aggregating elasticities to the macro level, and estimating the role of input chains for shock transmission. He concluded that significant progress has been made in the field in recent years but more work is needed to understand the aggregation of micro phenomena to macro-outcomes.

Session 2. **Resource reallocation and growth**

Chair: Eric Bartelsman, Vrije Universiteit Amsterdam

Capital Allocation and Productivity in South Europe

Gita Gopinath, Harvard University; Sebnem Kalemli-Ozcan*, University of Maryland; Loukas Karabarbounis, University of Chicago; Carolina Villegas-Sanchez, Escuela Superior de Administración y Dirección de Empresas

The paper analyses the causes of misallocation of capital in the periphery of the euro area. Using data from Amadeus, the authors provided evidences of an increasing dispersion in capital returns, measured following the approach of Hsieh and Klenow (2009), as well as of the strong loss in total factor productivity since 1999. The authors also identify a decreasing correlation between productivity and capital over time. In order to explain this relationship, they build a model, which takes into account the role of financial frictions. The model suggests that a shock in the interest rate generates misallocation of resources and lower productivity particularly in the South of Europe.

Discussion: In order to further test the impact of interest rates on capital misallocation, Prof. **Van Reenen** suggested considering additional factors, related to some structural characteristics of Southern countries, which may be behind the productivity slowdown (e.g. labor regulations; weak product market competition; corruption; lending standards deterioration). Moreover, he suggested a more careful comparison with aggregated productivity data given some discrepancies in the relevant estimates.

Productivity, Misallocation and Trade

Antoine Berthou, and Charlotte Sandoz, Banque de France; Kalina Manova*, Stanford University

The paper studies the impact of international trade and factor market imperfections on aggregate productivity and resource misallocation, using the CompNet database for the productivity decomposition and the WIOD for the trade analysis. The empirical analysis show that growth in foreign export demand, import competition and imported-input supply significantly increase aggregate labour productivity. In addition, financial and labour market frictions pose significant obstacles to productivity growth, by deterring both productivity investment within firms and efficient resource allocation across firms.

Discussion: De Loecker, discussing this paper, expressed some doubts regarding the use of only labor productivity because it could potentially disregard meaningful effects due to the capital reallocation dynamics. Furthermore, in order to improve the productivity decomposition analysis, he suggested adopting marginal products as additional weights.

Academic panel discussion

Chad Syverson, The University of Chicago Booth School of Business

Two fundamental ingredients are needed for resource reallocation to work, i.e. flexibility in the product market and flexibility in the inputs market. Consumers need to be able to switch from one product to another, but if the usual metric for substitutability in "standard" markets is competition, one needs to define how to measure it in non-market sectors, such as healthcare. For input markets, measurement of flexibility is even more challenging as demonstrated, for instance, by the difficulties of measuring concepts such as "firms' access to capital". While there is a substantial amount of research showing that the productivity gains from reallocation can be large, Syverson pointed that there is still much to be learned about the mechanisms underlying the process of misallocation. This point is crucial to understand why the allocation of resources differs in different markets and sectors, and to formulate sensible policies.

Jan De Loecker, Princeton University

De Loecker observed that while most of the research on misallocation has focused on the measurement of firms' productivity, CompNet data can and should be used to identify the mechanisms underlying frictions and price determination of output and input markets. Natural candidates for such frictions are market power, technology adoption, the demand channel and firms' ownership. More in general, De Loecker pointed out the importance of incorporating dynamics and incomplete pass-through in models used to study resource reallocation. Finally, he insisted on the need to apply such models to the service sector.

John Van Reenen, London School of Economics

Van Reenen brought to the attention the importance of intangible capital when dealing with productivity and reallocation. In particular, drawing from his studies in "Boss-onomics", Van Reenen explained how management quality and TFP are closely related. In addition, he presented stylised facts on the dispersion in management quality not only at the cross country level, but even within countries and plants. These findings are very policy relevant and call for gaining a better understanding about the frictions preventing resources to be allocated to the best managed firms and, more fundamentally, on investigating why management practice are so heterogeneous.

Round Table: Towards Sustainable Growth

Chair: Peter Praet, Member of the Executive Board, European Central Bank

Panellists: Boris Vujčić, Governor of Hrvatska narodna banka; Giancarlo Corsetti; Gilbert Cette, Banque de France.

Mr. Praet chaired the round table "Towards Sustainable Growth", during which Giancarlo Corsetti, Boris Vujčić and Gilbert Cette expressed their views and suggestions.

Giancarlo Corsetti initially pointed out that the traditional tool to correct current account imbalances is currency depreciation. In line with empirical evidence, currency devaluations generate demand adjustments via composition effects in consumption basket. In addition, current account rebalancing also requires resource reallocation from non-tradable to tradable sectors and, with respect to this, academics explored further the role of firm dynamics, with the important following policy implications. First, large adjustments can be the outcome of small changes in prices, thus not requiring large devaluations. Second, factors related to non-price competitiveness (i.e. entry costs) and the associated issues of financing are pivotal in this context. Third, resource reallocation requires resources per se, and this is crucial during the current crisis. From a finance perspective, much of the work done so far in this field focused on trade credit and on how to finance entry. Corsetti pointed out that also the structure of international financial markets substantially affects equilibrium prices. Importantly, risk sharing provides a mechanism through which productivity permeates into demand, without going through the inefficiencies related to loss of competitiveness and excessive borrowing. Contrary, when financing flows take place only through the banking system, wealth is encapsulated in each individual country, implying a stronger tendency towards consumption smoothing and a higher domestic demand, leading to a loss of competitiveness and larger imbalances.

Boris Vujčić adds on the last point of Corsetti by addressing the misconception about the changes in structural trends which have been brought about by the creation of the Euro. Analysing trends in labour productivity, it is evident that the divergence of the South from the North started around 1992-1993. Hence, the introduction of the Euro did not affect these already existing divergent trends, while it amplified the effects of flows of capital and FDIs directed to Eastern Europe instead of to the South. Overall, this enabled Eastern European countries to converge and at the same time worsened the divergence of the Southern European ones from the North. This evidence suggests that the misallocation of resources could have substantial effects, and that can be the outcome of one of the following. First, misallocation could derive from frictions due to barriers to trade and investments, product market regulations and labour market inefficiencies. Second, misallocations could be generated as the outcome of decisions of private sectors and lack of actions on the side of regulators and governments. Third, a direct misallocation derives from the public investment decisions. Another crucial aspect is to look at the differences in productivity between Europe and the U.S., where the former has been lagging behind for more than 25 years. Moreover, U.S. companies are faster-growing and faster-dying and specialize in R&D-intensive sectors. Hence, Europe should focus on these aspects in the future, also considering the role of Eastern Europe as potential “game changer”.

Gilbert Cette presented empirical evidence on the long-run trends in GDP per capita and productivity growth for most advance countries and in particular for Euro area countries. Trends in the growth rate of GDP per capita and of labour productivity per hour over the period 1890-2012 highlight two productivity waves; a big one following the second industrial revolution and a small one following the ICT revolution. The first big wave was staggered across countries, hitting the U.S. first in the interwar years and the rest of the world after World War II. When considering the trends in the level of GDP per capita of euro area countries relative to the U.S., it is clear that the convergence process has been erratic, halted by inappropriate institutions, technology shocks, and financial crises. But above all is has been affected by wars, which led to major productivity level leaps, downwards for countries experiencing war on their soil, upwards for other countries. As an additional point, the downward trend break observed as early as the mid-2000s for the U.S. leads one to question the future contribution of the ICT revolution to productivity enhancement. In particular, when comparing the trends in ICT diffusion in the United States, the Eurozone, and the United Kingdom from 1960 to 2013, two main results can be drawn: i) after a long period of sustained growth, ICT diffusion, as measured by the share of ICT capital stock to GDP expressed in current prices, has stabilized since 2000; ii) this stabilization happened at different levels, significantly higher in the United States than elsewhere.

Friday, 26 June 2015

Session 3. **Trade and Competitiveness**

Chair: Carlo Altomonte, Bocconi University

Prof. Altomonte began by highlighting how extensively M. Draghi had dwelled with the importance of understanding firm heterogeneity at Sintra last May.

It takes (more than) a moment: Revisiting the link between firm productivity and aggregate exports

Giorgio Barba Navaretti*, Università degli Studi di Milano; Matteo Bugamellli, Banca d'Italia; Emanuele Forlani, Università degli Studi di Pavia; Gianmarco I.P. Ottaviano, London School of Economics

Barba-Navaretti presented a work that investigates which features of productivity distributions are related to aggregate exports. He stressed that average productivity remains an important determinant, although the distribution of firms' characteristics is found to matter for aggregate outcomes. The authors define the null hypothesis that exports depend on mean productivity and the number of firms and not on higher moments of the productivity distribution. They proceed to testing this hypothesis empirically using CompNet data and complementary sources and reject the null: aggregate exports are highly correlated to the first moment of the productivity but also to measures of dispersion and asymmetry. He concluded that transition to higher productivity percentiles should be a central policy objective besides aiming at the average productivity of the productive sector.

Discussion: Melitz highlighted the value of the paper's findings and added some further interpretation. He suggested further investigating which assumptions generate the statistical violation in order to shed light on the question of the relevance of departing from the mean assumption. He stated that micro data or micro-aggregated data such as CompNet can be valuable for answering these questions.

Unravelling Firms: Demand, Productivity and Mark-ups Heterogeneity

Emanuele Forlani, University of Pavia; Ralf Martin, Imperial College London; Giordano Mion*, University of Surrey; Mirabelle Muûls, Imperial College London

The paper's aim is to provide a framework for structural estimation of productivity for a single-product firm. By applying this framework, the authors are able to unravel standard measures of revenue productivity into physical productivity, consumers' appreciation for a firm's products, and mark-ups. The novelty of the approach is that it allows for heterogeneity in these three components while leaving the correlation among them unrestricted. They used firm-level production data for Belgian manufacturing firms from Prodcom, a monthly survey of industrial production, and data of inputs from the National Bank of Belgium. They find that productivity shocks are very strongly and negatively correlated with demand shocks while mark-ups do not seem to be strongly correlated with demand or productivity shocks. They also confirmed stylized facts from other studies: exporters are, on average, more productive than non-exporters and larger firms are more productive.

Discussion: Bernard stressed the high relevance of the paper. He valued the structural approach to addressing firm productivity and heterogeneity but pointed out that multi-product firms are also central in both the firm size and exporting literatures. Additional issues that would be worth exploring are the determinants of the firm size distribution and the relation between productivity, mark-ups and exporting.

Academic panel discussion

Gianmarco Ottaviano, London School of Economics

Ottaviano highlighted the rise of the study of quantitative trade due to easier access to firm-level data for ex-post analysis and more macro simulation for ex-ante analysis of implications of counterfactual scenarios. He labelled these macro models as “new quantitative trade models”, stressing that details of micro reallocations only matter if they change our understanding of the aggregate gains from trade. These models feature micro-foundations and a careful estimation of structural parameters. Ottaviano reviewed various versions of such models and highlighted their common procedure of calibration, validation and simulation to allow counterfactual analysis. He criticised the restrictions imposed on the underlying assumptions. He argued that micro data can be used to improve the structure of macro models and aid in validation of the models, with CompNet having unique potential in this respect.

Marc Melitz, Harvard University

Melitz analysed productivity changes that result from reallocation induced by trade and are independent of technology. He remarked the difficulties of measuring the reallocation effects across firms at country/industry level because shocks that affect trade are likely to affect the distribution of market shares across firms. New theoretical models of multi-product firms have been developed to explain how trade induces a similar pattern of reallocation within and across firms. According to these models, better performing firms export to more destinations while worse performing firms are more likely to exit, and better performing products are sold in more destinations whereas worse performing products are most likely to be dropped. These patterns of reallocation are also observed as a result of changes in destination markets over time. When comparing the aggregate gains from trade due to productivity changes generated by reallocation using both a heterogeneous and homogeneous firm models, Prof. Melitz showed that welfare is strictly higher in the latter for all trade cost, signalling the presence of endogenous productivity effects.

Andrew Bernard, Tuck School of Business

Bernard drew attention to components of firm behaviour that are not usually included in the research agenda and that distort the understanding of trade and competitiveness. First of all, he remarked the traditional focus on production in the analysis of exporting activities. Following this view, firms make, price and ship their goods. Alternatively, he proposed considering the interaction among buyers and suppliers where either side might have market power and where the interactions are likely to be repeated or quickly ended. In addition, he presented some extensions to the analysis of importing activities. Finally, he suggested possible further analysis related to modelling the importers’ purchasing decision, the firms supplying the final good and the evolution of produced and sourced exports.

Session 4. **Firm Heterogeneity and the Business Cycle**

Chair: Eric Bartelsman, Vrije Universiteit Amsterdam

Exchange rate movements, firm-level exports and heterogeneity

Antoine Berthou*, Banque de France; Calin-Vlad Demian, Central European University; Emmanuel Dhyne, Banque Nationale de Belgique

Berthou et al. investigate the underlying factors driving the heterogeneous response of European exporters to exchange rate fluctuations, using information available in the trade module of the CompNet database. In their empirical specification, they relate firm-level export performance to changes in the real effective exchange rate (REER), while allowing the elasticity to vary across different categories of firm. After controlling for other macroeconomic determinants (foreign demand) and sector or firm-level characteristics (such as productivity or size) with a direct impact on export growth, estimation results show that large (and more productive) firms react less than the average firm to changes in exchange rates.

The heterogeneity in the responses of exporters facing the same exchange rate shock has a substantial influence on aggregate outcomes, which helps to understand why the trade elasticities computed at the aggregate level are fairly low. In fact, as most trade flows are concentrated in the largest and most productive firms, the low trade elasticities found at the macro level may be explained by the low elasticities estimated on the far right of the size and productivity distributions.

This result has important policy implications. First, the external rebalancing process in the euro area may require large relative price adjustments, both in surplus and in deficit countries. Second, the greater elasticity estimated for small exporters suggest that an exchange rate decline can compensate for their lower productivity. While entry of young exporters has a limited impact on aggregate export growth in the short run (owing to their small size), the decline in relative prices could have a larger impact in the medium or long term as these firms expand their activity in foreign markets. On the policy side, this extensive margin channel would be reinforced by the implementation of adequate structural policies sustaining the reallocation of resources towards more productive firms within each country and sector.

Discussion: Ghironi questioned the possible difference in the responses of exports to relative prices when considering also the goods produced abroad. Further comments included (i) the possibility that elasticites are heterogeneous over time, (ii) the endogeneity of the variables and (iii) the exogeneity of RER to export.

Demand learning and firm dynamics: evidence from exporters

Nicolas Berman, the Graduate Institute, Geneva; Vincent Rebeyrol, Toulouse School of Economics; Vincent Vicard*, Banque de France

Entry of new firms plays a key role for the aggregate dynamics. Conditional on surviving the first years, young firms are characterized by high growth rates and, when considering French firms, they account for more than half of French exports after a decade. The authors investigate the determinants of firm dynamics and in particular they provide direct evidence that demand learning is an important driver of post-entry firm dynamics.
Berman et al. derive the core prediction from a standard trade model with Bayesian demand learning in which young firms update their belief following new demand signals. Using firm-level data on French firms, their empirical methodology allows to identify separately the firms' belief and demand shocks, thus allowing to test the impact of demand learning on firm dynamics conditional on entry.
Their results support the predictions of the learning model by providing evidence that updating is strong in the first years, while declining over time. Also, economic environments characterized by greater uncertainty are associated with a weaker learning process. Lastly, conditional on size, the model generates the decline in growth rates with age, which is observed in the data.

Discussion: In order to provide a more comprehensive analysis, Tybout suggested taking into consideration further learning process, such as market-specific learning by doing, learning from rivals, consumer learning, “active learning” and “selection effects”.

Academic panel discussion

James Tybout, Pennsylvania State University

Tybout discussed the topic of International Buyer-Seller Relationships focusing initially on the main firm-level trade friction and drivers of selection into foreign markets and post-entry growth.
He showed some stylized facts on export trends according to firms' age, including the finding that the probability of survival of new firms entering the market increases with the amount of sales sold to initial buyers. He also presented a single-agent model with three main features: a costly buyer search, learning by doing decrease in costs and a reputation/network effect. This model perfectly explained a large volume of small scale exporters which he previously showed as a stylized fact (large volume of inexperienced firms).
He then addressed two further questions:

1. How does a network re-form if a major new player (e.g., China) appears?
2. How does the equilibrium depend on the efficiency of the matching mechanisms?

The main results shown by the model were: (i) slow selection effect between most and least efficient firms entering the market, and (ii) lock-in effect – i.e. very high dependency on your first market results with firm's buyers. However, since learning is mainly relevant for new marginal players, it probably does not affect short-run aggregate export dynamics. This last result helps explaining why export booms emerge. In an economy with low domestic demand, no pre-existing firms and large sunk cost, one needs a big push to get started. As soon as they start, entrepreneurs tend to move together in relatively homogeneous groups.

Fabio Ghironi, University of Washington

Ghironi discussed the macroeconomic and policy implications of structural reforms focusing mainly on the interaction between such reforms and the monetary policymaking environment. He argued that, from a methodological standpoint, it is crucial for macro-models to incorporate micro-level market dynamics to avoid potentially misleading results. He highlighted that the widely used New Keynesian model with sticky prices and wages overlooks some crucial aspects of reform dynamics. In turn, he proposed a new theoretical framework developed with Matteo Cacciatore and Giuseppe Fiori that, in line with Ghironi and Melitz (2005) and Bilbiie, Ghironi and Melitz (2012), incorporates market dynamics of both product and labor market reforms. The main features are: endogenous producer entry subject to sunk costs; labor markets are characterized by search-by-matching frictions; prices and wages are sticky, which implies a role for monetary policy. Ongoing research using CompNet data is being used to calibrate that framework with promising results.

His main focus was on the identification of the optimal monetary policy given the economic environment. In a market with high regulation, the optimal policy implies departure from price stability in the long-run (a positive inflation target) and over the business cycle (deviations of inflation from target in response to business cycle shocks). Instead, the optimal policy in response to reforms would be expansionary during the transaction dynamics generated by the reforms, and this allows front-loading the beneficial effect of reforms. Finally in a post-reform environment (low regulated market) there is less need for monetary activism because the costs of a narrow focus on price stability are lower once the long-run effects of reforms have materialized and job creation is close to the efficient level.

Round Table: Restoring growth after the Great Recession

Chair: Athanasios Orphanides, Massachusetts Institute of Technology Sloan School of Management

Panellists: Paolo Pesenti, Federal Reserve Bank of New York; Debora Revoltella, European Investment Bank; Dirk Pilat, Organization for Economic Co-operation and Development.

Orphanides introduced the session by showing figures highlighting the strong impact of the crisis in Europe in terms of GDP pc, although there is a lot of dispersion between MS. He also presented the falling share of the EU in world GDP, as the EU was overtaken in output by emerging Asia during the crisis. He closed with a citation of an ECB statement on the need for product and labour market reforms.

Pesenti categorised two opposing views on the issue of the complementarity of structural reforms and monetary policy. The first view holds that the short-run is all that matters, monetary policy is ineffective or counterproductive, and stimulus is problematic because it delays reform. The opposing view holds that structural policies are only for the very long-term while current output matters, and monetary policy should be used. Pesenti holds a mixed view and argues that reforms sustain growth in the long-run. He stresses it is important to boost confidence but not to muddle through. He further argues that structural and cyclical tools are complementary and should be used together. Pesenti suggests bringing heterogeneity to the centre stage to explain long-run developments.

Pilat focused on productivity dispersion. He pointed out that knowledge does not always diffuse efficiently within a country as resource reallocation towards more innovative firms does not always take place. In addition, he showed that young firms are the major engine for job growth, making a distinction between SMEs and young firms, as only the second ones widely contribute to gross job creation. Therefore, Pilat argues, the general policy perspective should change and target at diminishing entry and exit barriers and at facilitating employment growth for start-ups. The bottom line is that relevant policies should not only focus on reallocation across incumbents but also operate on the extensive margin. Lastly, he pointed out that investment in intangibles is growing significantly while the focus remains on investment in tangibles. As knowledge-based capital nowadays accounts for over half of all business investment, economic researchers should expand the empirical work done so far, which is still insufficient. In particular, too few studies take into consideration the importance and impact of digital technologies.

Revoltella pointed out that the low estimate of potential EU growth is one of the main economic concerns and that this results from a number of factors. One is the shortfall of yearly investments in Europe. Constraints to investments are various, ranging from structural impediments to lack of confidence and impaired access to finance, and they are mainly operating in stressed countries. In particular, banks’ capital constraints are heterogeneously present across European countries. The Juncker plan tackles these issues by creating an environment conducive to investments. In particular, it provides public support, via EIB activity, for investing in specific activities able to stimulate European competitiveness. She stated that CompNet is useful for studying how to improve competitiveness via investments and called for collaboration among the network and the EIB.

CompNet way forward

Filippo di Mauro

CompNet will be organised as a **self-managed Network** of research open to new collaborations also with institutions outside the EU system of central banks, including universities and research centres, as well as non-EU central banks and international institutions.

The Network will be led by a **Steering Committee**, composed by a small numbers of senior representatives (6-7) of active institutions who will rotate on a regular basis, and chaired by a member of ECB staff.

Overall, the main goal of CompNet will continue to be **fostering state-of-the-art research** on the broad themes of competitiveness and productivity enhancement, with the specific aim of tackling novel and upcoming issues of high policy relevance.

While keeping its typical multi-dimensional approach aiming at conducing cross-country analysis, members will be left entirely independent in their choice on the specific topics of their research projects. This notwithstanding, and for the near future, the Network has identified **two meta-research streams**, which appear to be central to the current policy debates on secular stagnation and structural reforms: (i) “Resource allocation and growth” as well as (ii) “International trade and Global Value Chains (GVCs)”.

In parallel with research, **maintaining and regularly updating** the **databases** created by CompNet is considered essential – given its relevance for research and policy **-** and is supported by the ECB.