

ZEW NEWS

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2015 SEEK Conference Special Edition



Innovation and Start-ups Are Essential in Europe's Fight Against the Debt Crisis

Successful entrepreneurship and innovation are absolutely key in the battle to overcome the sovereign debt crisis in Europe. The annual conference of the ZEW research programme “Strengthening Efficiency and Competitiveness in the European Knowledge Economies” (SEEK), which took place on 8 and 9 October 2015 at ZEW, therefore focused on this topic area.

“Stable macroeconomic conditions and reliable economic policy are fundamental to successful innovation”, said ZEW President Professor Clemens Fuest at the opening of the conference.

The 2015 SEEK Conference, the fifth annual conference within the research programme, dealt with the topic “Overcoming the Crisis: How to Foster Innovation and Entrepreneurship in a Diverging European Economy?”. The conference, as the SEEK research programme does in its entirety, thus facilitates regular exchange between researchers, policy-makers and business representatives, Fuest said. Evidence-based decisions are essential in times of crisis, making such a dialogue all the more important, he added. Fuest was therefore delighted that the 2015 conference once again attracted a great deal of attention.

Strengthening Efficiency and Competitiveness in the European Knowledge Economies (SEEK)

The SEEK research programme at ZEW supports international collaboration between researchers from all economic disciplines. Financed by the State of Baden-Württemberg, the programme fosters top-level economic research in Europe. SEEK promotes research projects focusing on efficiency and competitiveness in knowledge-based economies in the EU. Against



the backdrop of the European economic and financial crisis, demand for economic expertise and independent, scientifically grounded policy advice is greater

than ever. Since 2014 SEEK projects have therefore been focused on efforts to overcome the crisis.

Since the SEEK research programme was begun in the second half of 2010, ZEW has initiated numerous research projects. Thus far, a total of 41 projects, conducted by ZEW researchers in close cooperation with internationally renowned researchers, have been approved in five funding rounds. Thanks to the overall positive outcomes from SEEK, the State of Baden-Württemberg continues to finance the research project for a further three years (2016–2018).

More information can be found at: <http://seek.zew.eu>

ECB Chief Economist Peter Praet: “Our Pessimism Is Holding Europe Back”

Chief Economist of the European Central Bank (ECB) Peter Praet delivered a lecture on the first day of the SEEK Conference. He focused on the reasons why Europe has been standing in its own way in the last few years thanks to a pessimistic attitude and disappointed expectations of the Monetary Union. The economist also explained the monetary policy adopted by the ECB during the financial crisis and described which reforms must be implemented to ensure that the eurozone finally becomes a success.

Although slow economic recovery is apparent in the eurozone, Praet explained that many EU Member States are facing rather disappointing growth prospects. Economic growth has continued to decrease throughout the eurozone since 2001. “A pessimistic view of the long-term growth prospects has become prevalent in the whole economic sphere”, concluded the Chief Economist of the ECB.

This pessimism is preventing faster recovery of the eurozone, as uncertainty inhibits investment. It is, he said, somewhat surprising that despite high rates of unemployment in numerous countries in the eurozone, many firms consider themselves to be operating at full capacity. For Praet, this contradiction is a clear indication that firms are investing too little. Businesses have already adjusted their expectations to a lower level of growth, Praet explained, meaning that they are no longer exploiting their full potentials. Europe’s pessimistic outlook therefore becomes a self-fulfilling prophecy, he concluded.

But why exactly are Europeans so pessimistic? According to Praet, this pessimism is first and foremost a result of the high expectations for the Monetary Union, which for many EU Member States have not been fulfilled since the eurozone was established in 1999. Theoretically, he went on, member countries

should make a more intensive use of structural reforms as an instrument of economy policy, thanks to the centrally controlled monetary policies. Praet explained that expectations were that such reforms, and the integration of markets, would result in more growth and would increase wealth in all member states of the eurozone.

Quick integration of markets has not been achieved

Reforms which were hoped for, and the quick integration of markets in Europe, have not, however, been achieved. In fact, according to Praet, only a small proportion of eurozone member states benefited from the favourable financing conditions in the years immediately following the establishment of the eurozone, and made progress through the means of reforms. “The weakening of fiscal conditions due to a lack of market discipline was not compensated for by a relevant strengthening in spending and budgeting controls on a European level”, explained Praet. The disparity between the quality of institutions in the various countries of the eurozone has become even greater in that period.

A further problem is the lack of a European banking market, Praet added. Whilst the interbank market functions on a continental level, the banking sector for private customers remains fragmented across national borders. This explains why the banking market collapsed with the onset of the financial crisis, according to Praet. It is in particular in the economically weak countries, where reforms have not been implemented, that this situation has led to a vicious circle. According to the Chief Economist of the ECB, “the banking sector did not serve to stabilise, but rather to exacerbate the situation during the financial shock.”



Peter Praet, Chief Economist of the ECB, called for a strengthened fiscal framework in the eurozone and a European Banking Union to be prepared for future crises.

National governments and the ECB, he went on, had to respond to this development by stabilising demand and by implementing long-overdue structural reforms. The acute fragmentation of the banking market meant that monetary authorities were forced to make use of unconventional policies in order to ensure that interventions had any effect whatsoever. These measures “included an easy-money policy at the lowest limit possible and the large-scale purchase of bonds under the European Central Bank’s OMT Programme”, explained Praet. In terms of structural reforms, a huge leap forward has been achieved since 2010; Greece, Portugal and Spain are only some of the eurozone countries which have been able to improve their competitiveness, said Praet.

The eurozone’s fiscal framework has been strengthened

In addition, a strengthened fiscal framework has also been implemented in the eurozone. This is expected to foster the implementation of stricter budgeting measures by national governments, whilst also leaving enough room for short-term adjustments to be made in the case of financial crises. Praet also called for a European Banking Union, overseen by a single European body, which must be established in the short term. This is the only way to ensure that the banking sector is stabilised, he said.

A further challenge is how to increase productivity in Europe. In comparison to the United States, Europe has many more small- and medium-sized firms. Although they make a significant contribution to Europe’s added value, Praet explained, they invest to a much lesser extent than large firms in new technologies. This is a particular disadvantage of Europe as a location for the digital economy.

The market entry of new firms and the exit of unproductive firms must be made easier

In order to maintain competitiveness, an environment of more dynamic growth must be established within Europe, said Praet. Therefore, regulations which currently incentivise firms not to expand beyond a certain size must be abolished. In addition, Praet argued that “the market entry of new firms, and the exit of unproductive firms must be made easier.” Financial markets must be made more efficient to enable redistribution of capital from shrinking to growing firms. A European Banking Union is absolutely essential to achieve this goal, he added. At the end of his lecture, Praet called for intensified efforts to establish a single market in Europe, which is key to providing new impulses for growth. “Only then will it finally be possible for the Monetary Union to fulfil the member states’ high expectations”, concluded Peter Praet.

Andreas von Bechtolsheim: “Local Business No Longer Exists”

On the first day of the conference Andreas von Bechtolsheim, founder of Sun Microsystems and one of the first investors in Google, gave a presentation via conference call, in which he drew a comparison between business start-ups in the US and Europe. According to von Bechtolsheim, a larger market and better access to capital makes it much easier to set up a new business in the US than in Europe. The location in which a new business is set up, however, only plays an important role in the founding phase, as businesses aim to operate on a global level as soon as possible.

In his lecture at the SEEK Conference Andreas von Bechtolsheim urged European entrepreneurs to “go to the markets, go where you have the highest chance of achieving growth, make the most of your size advantages, accept global competition, and take the weakness of the euro as an opportunity.” The successful investor explained that even in the initial start-up phase, every new business must have a global growth strategy. The aim of any young business must be to increase its value to over 100 million US dollars. This is the only way in which a start-up can hope to gain enough importance in markets in order to create jobs and wealth. To ensure continued growth, a business must also find a way in which to acquire cheap capital.

The next aim is for the company to increase its value to beyond a billion US dollars, he said. According to von Bechtolsheim, “the best businesses increase their value from 100 million US dollars to over a billion US dollars within only four years. The next best companies take six years and the third best companies take between seven and twelve years to achieve this.” Very few companies which fail to achieve this value in-

crease within the first twelve years of their existence ever manage to make the jump up to a billion US dollars, he explained.

But which young businesses are successful, and why? Von Bechtolsheim provided the recipe for success in a simple formula, “a successful start-up needs the right product at the right time in order to position it, with the right team and sufficient initial capital, in the suitable market.”

This is the main reason why more successful businesses are set up in Silicon Valley than in Europe. Even if politicians like to refer to Europe as a single market, von Bechtolsheim said, the reality is somewhat different. Each European country, he criticised, has its own rules and regulations, and thus poses different challenges to entrepreneurs. It is therefore much easier for a start-up to achieve growth in the US than it is in Europe. An important driver of growth is access to venture capital, explained the investor. This is also much easier in the US than in Europe. The amount of venture capital made available per year in Silicon Valley alone is eight times greater than the amount supplied in the whole of Germany, he explained.

It is not only Americans, however, who are setting up businesses in the US. “Around 33 per cent of all stock market launches between 2006 and 2012 were new business start-ups of which at least one of the founders was not a US citizen,” explained von Bechtolsheim. If Germany is to make it possible for start-ups to achieve success in Germany, the entrepreneur argued that the advantages which Germany has to offer, for example a significant well-trained workforce, must be combined with the advantages available in the US, such as the large market and better access to venture capital.

Europe Must Become More Attractive for Entrepreneurs and Promote Innovation

Many European countries make a concerted effort to increase numbers of business start-ups. Yet Europe currently seems to lack some of the major factors essential to ensuring successful and innovative entrepreneurship. The panel discussion held on the first day of the SEEK Conference therefore considered how this situation might be improved.

How can Europe improve conditions to stimulate successful business foundations? To ensure that this question is considered from a range of different perspectives, experts from various fields participated in the panel discussion at the SEEK

Conference. The panel included Dr. Gitte Neubauer, Director of Cellzome GmbH and winner of the EU Innovation Prize for Women in 2011; Frédérique Sachwald, PhD, Head of the Directive for Research and Development at the French Ministry for Higher Education and Research; Franz Fehrenbach, Chairman of the Supervisory Board of Robert Bosch GmbH; as well as Dr. Georg Licht, Head of the ZEW Research Department “Industrial Economics and International Management”. The debate was moderated by ZEW President Professor Clemens Fuest.

“With a few exceptions, the number of new businesses being established in Germany is decreasing in almost all sectors”,

noted Georg Licht. One reason for this is the bureaucracy which has continued to increase over the course of the last few years. According to Licht, “it was easier to establish a start-up in 2000 than it is today.” Licht considered demographic change to be a further reason for this negative development. The age group of persons between 30 and 40 is the group of the most frequent business founders. It is exactly this age group, Licht said, which is becoming ever smaller in Germany. According to industrial economist Licht, the second most frequent age group in which entrepreneurs are to be found, 40 – 50, is also set to further decrease in size in Germany. The third reason for this downward trend in the number of start-ups, he added, is the shortage of skilled professionals. “The ever increasing number of well-paid jobs available is leading to an increase in the opportunity costs of establishing a new business”, explained the research unit head. Whilst the improved financing conditions for young firms provide a glimmer of hope, the amount of venture capital available in Germany remains relatively small in comparison to the country’s gross domestic product.

Innovation strategies and the personality of the entrepreneur play a decisive role for start-ups

The German technology corporation Bosch is already active in the venture capital market with its subsidiary, Robert Bosch Venture Capital, explained Franz Fehrenbach. The company currently disposes of approximately 270 million euros and is investing in promising start-ups. Approximately 150 million euros more will be made available before the end of 2016. When it comes to the question as to whether investment in a young business is worth it, it is not only the growth prospects of the start-up, but in particular the innovation strategy and the personality of the entrepreneur which are decisive, argued Fehrenbach.

Gitte Neubauer drew on her own example to illustrate that the successful expansion of a business depends on the entrepreneurs themselves taking some plucky decisions. Before Cellzome GmbH could be established as a spin-off from the European Molecular Biology Laboratory in Heidelberg, a change in thinking and perspective were necessary, she said. The researcher explained that during the early establishment phase, it was

essential to communicate with other founders and to benefit from the support of experienced entrepreneurs.

In France, the government tries to support new business start-ups early on, in the critical establishment phase. Promoting the growth of start-ups is not, however, the primary aim of economic policy. As Frédérique Sachwald illustrated, this could lead to the disproportionate financial promotion of young businesses. The fact that a business is liable to pay more tax and social contributions when it employs above a certain number of employees means that the desire to grow is not particularly strong amongst all businesses. Sachwald, however, considers Europe to be on the way to becoming an attractive location for new business start-ups, “the average production of knowledge is already higher in Europe than in the US.”

Clemens Fuest asked whether a cultural difference is the reason for the lesser tendency to establish new businesses in Europe than in the US, despite the availability of the necessary know-how. Franz Fehrenbach expressed the view that the fear of failure plays a particular role here. In Germany, for example, there is a different attitude toward failure than in the US. “If someone fails in the US, it is not a problem. But if someone fails in Germany, they will be branded a failure”, noted the Chairman of the Supervisory Board of Robert Bosch. Changing this attitude to failure is a considerable undertaking, he added.

First and foremost, argued Georg Licht, it must be ensured that enough money is made available to entrepreneurs with good ideas. The economist said that it is the wealthy strata of the population which must primarily be addressed when it comes to ensuring that this is the case. It must be made attractive for these groups to invest in young firms. Gitte Neubauer called for an integrated strategy, encompassing science policy and the promotion of entrepreneurship. “Only if decision-makers in the spheres of politics and research collaborate will successful new businesses emerge”, summarised the researcher.

Concluding the discussion, Franz Fehrenbach warned that Europe should not invest all its hopes in young business, thereby forgetting the importance of large, established corporations. Political decisions must also ensure that these businesses remain competitive. Fehrenbach proposed tax reliefs for businesses engaged in research as a suitable measure.

Lively discussion about innovative entrepreneurship in Europe between (left to right): Dr. Georg Licht, Dr. Gitte Neubauer, Frédérique Sachwald, PhD, Franz Fehrenbach and moderator Professor Clemens Fuest.



Mario Monti Calls for Reforms in European Economic Policy

The eurozone crisis made the limits of economic policy within the European Union (EU) all too obvious. It was necessary for many decisions to be made under enormous pressure, new economic policy instruments were implemented and the competencies of existing institutions such as the European Central Bank (ECB) were extended. Italy's former Prime Minister, Professor Mario Monti, believes that precisely this experience has proven that further reforms in European economic policy are necessary. "The political framework conditions in Europe are by no means absolutely terrible. We don't need a revolution, but some adjustments," concluded Monti in his speech at the SEEK Conference.

Monti emphasised that reforms in European economic policy should not result in relaxation of the rules which apply in the EU. According to the former EU Commissioner for Internal Market, Financial Services and Taxation, and for Competition, "we should make use of the benefits of the eurozone – only those countries which comply with the rules however." Overall, a few marginal adjustments need to be made to these rules. But it is also necessary for many politicians to start thinking in a more "European" way.

Monti insisted that politicians in the European Parliament need to think not only about their own re-election and the good of their home country when making decisions, but also about the benefit for Europe as a whole. "The EU Parliament is not lacking in ideas for policies, it is lacking in ideas for European policies", said the former Prime Minister of Italy. This also includes negotiating future-orientated budgetary policies for individual EU member states.

A balance must be struck between the austerity measures promoted by Germany and the relaxed attitude to debt observed in many Southern European countries, according to Monti. Governments should have access to credit in order to foster invest-

ments during periods when money is cheap. Monti added that the aim of balancing the domestic budget should nevertheless not be forgotten. "Essentially, we should always plan for the long-term", said Monti. In order to ensure compliance, Monti explained, adjustment and tightening of the fiscal rules for countries in the eurozone is necessary.

The mandate of the ECB is adequate

According to Mario Monti, the mandate of the ECB, which includes control of monetary policy in the EU, is coherent. Alongside fiscal policy, monetary policy is a central instrument which serves to lessen the consequences of financial crises and to stabilise markets. The former EU Commissioner strictly rejects the calls made by numerous EU member states for changes to the mandate of the European Central Bank, and for greater focus to be placed on growth in the periphery. Monti: "The ECB is able to ensure stability and growth within its current mandate. This was made obvious in the latest crisis." Adjusting the mandate would only mean that where desired economic growth cannot be achieved, politicians would attempt to shift the blame onto the ECB. Monti considers politicians themselves to be responsible, "growth in Europe is the responsibility of individual countries when it comes to structural reforms, and in the hands of the EU in terms of fiscal and investment policy."

Although some reforms and adjustments are necessary, economist Monti considers the EU and the euro to be successful projects. Greece is the best example of this, explained Monti, "a country which for many years was badly governed by left and right governments, but in which 80 per cent of the population nevertheless support sticking with the euro." That Germany has left its mark on the euro cannot be denied. But, as Monti concluded, Germany can be extremely proud of its top export product.



Italy's former Prime Minister, Professor Mario Monti, considers the European Union and the euro to be successful projects. Nevertheless reforms in European economic policy should not result in relaxation of the rules in the euro area.

Ufuk Akcigit: “Innovation Is an Important Factor for Social Mobility”

Innovation can have a considerable impact on economic growth and on societies in general. Enabling social mobility, innovation within markets may release an “elevator effect”. Considering the development of patent applications in the US, we can see that upon entering a new market, small businesses are more innovative than larger, established competitors. Provided that economic policy helps new entrants to the market and plays a positive role, realisation of the American dream, “from rags to riches”, seems to be within reach. It was in favour of such policy that Ufuk Akcigit, assistant professor at the University of Chicago, spoke in his lecture on the second day of the SEEK Conference.

There is quite naturally tension between long-established firms and new arrivals in the market, Akcigit said. In addition to normal levels of competition, however, productivity and economic growth could also be reduced by strategic moves made by larger, more dominant firms. This in turn reduces the possibility of upward social mobility. “The positive effects of innovation arising from new market entries are dampened by the lobbying activities of established firms”, explained Akcigit, who gave his presentation at the SEEK conference via conference call.

A series of current studies conducted by Akcigit and his colleagues concerning the acquisition of patents in the US market clearly indicate that public funding of research and development (R&D) undertaken by established firms does not stimulate growth. Akcigit, who also carries out research for the National Bureau of Economic Research (NBER) in the US, explained that, by contrast, subsidising new competitors in the market results in – albeit moderate – increase in growth.

New market innovations foster social mobility

In addition, evidence has shown that the taxation of established firms indeed promotes growth. This results in redistributions which benefit new entrants in the market, explained Akcigit, which leaves more room for innovation activities. “The reallocation of entrepreneurial ideas increases the growth of productivity from 1.8 to two per cent”, concluded Akcigit. Such ideas are indeed fundamental for the realisation of market innovations. According to the economist, “a well-functioning market for ideas and innovations would give economic growth an immediate boost.”

It seems, however, that economic growth in the US market for innovation is inhibited by the lobbying activities of established firms. According to the study, the introduction of innovations by new market entrants has a positive correlation with social mobility. This is only the case, however, in those US states in which lobbying activities are less prevalent. “Innovation is an important factor for social mobility”, explained Akcigit. Innova-

tions are primarily realised by firms which are new in the market. Highly innovative, new entrants, said Akcigit, therefore also ensure higher levels of social mobility. In order to support new entrants in this role, economic policy must promote “creative destruction”. This would ensure that outdated production stand-



ards are replaced by new processes and goods. On balance, concluded Akcigit, this would result in higher levels of competition.

In view of the patenting market in the United States, Akcigit argues that policy-makers must strengthen the rights of new market participants compared to those of established competitors. “Innovators invariably react to policy measures”, emphasised Akcigit, calling for innovation-friendly regulation. Even more so, he concluded, as studies have shown that innovativeness is also responsible for a large proportion of top incomes in North America, and therefore plays a significant role for income inequalities.

Comparing the US and Europe, Akcigit identified the major difference between the two business locations to be the restricted access of young European entrepreneurs to capital and technologies.

Europe lacks investment in academic training

A further disadvantage is that the European education system is not yet fully competitive, “Europe lacks investment in academic training”, reasoned Akcigit. A strongly networked university system, like the US system, facilitates spill-over of research findings to markets. The likeliness of successful spill-overs, he concluded, is also correlated to the volume of R&D expenditures.

Tommaso Valletti on the Expansion of Broadband in Europe: “Speed Matters”

There are large-scale government plans, both in North America and Europe, to ensure that every household has broadband Internet access. A popular debate amongst policy-makers considers what is known as the digital divide – a socio-economic issue concerning the question: Who does, and who does not have the possibility of accessing and using Information and Communication Technologies (ICT) such as the Internet? In his lecture delivered on the second day of the SEEK Conference, Professor Tommaso Valletti from the Imperial College Business School in London, UK, discussed whether this divide can be overcome, and to what extent the Internet must thus be recognised as having a political dimension.

According to Valletti, the “National Broadband Plan” is for the US, what the European Commission’s Digital Agenda is for the EU. Valletti explained the aims of both initiatives, stating that “governments on both continents hope to achieve economic sustainability by providing faster broadband connections.”



On the second day of the SEEK Conference, Tommaso Valletti explained how to overcome the digital divide in Europa and North America.

Many evaluation programmes already initiated by state bodies have focused exclusively on this aim, Valletti said, yet they have been implemented without a plausible strategy to ensure that the expected cause and effect relationship – fast Internet, economic sustainability – could be brought to fruition. Research carried out thus far suggests that political plans to expand

broadband access should be supported, he said. Broadband Internet and ICT go hand in hand in improving production processes, in particular where specialised personnel and knowledge-intensive service providers are concerned. Valletti’s own current research, which he presented during the SEEK Conference, primarily focuses on local loop unbundling (LLU) in Europe. In the majority of EU member states, the expansion of broadband and LLU is controlled exclusively by market forces. Valletti illustrated that “the role played by governments is limited to ensuring competition and implementing regulations.”

Using Great Britain as an example, Valletti showed that LLU, whilst it does not necessarily result in an increase in the number of broadband connections, has led to significant improvements in the quality of the Internet network. In other words, it’s a question of the rate of data transfer: “Speed matters”, emphasised Valletti. This can be measured by the fact that the improvement of the network speed correlates with an increase in property prices. Data from the United Kingdom shows that upgrading a property’s Internet connection from narrow band Internet access, via a dial-up modem for example, to a DSL connection with a maximum speed of 24 megabits per second (Mbit/s) increases the house price by up to four per cent. “The rate of return on the property, however, is smaller”, added Valletti.

The EU’s digital agenda sets ambitious aims

While the cost-benefit ratio between faster Internet and increased house prices is positive in urban areas, rural or peripheral regions would be likely to lose out, Professor Valletti said. The aims set out by the EU in its Digital Agenda would hardly have any positive impact in rural areas. According to the stipulations made by the EU Commission, every household in the EU should have access to a broadband Internet connection with a speed of at least 30 Mbit/s by 2020. Half of all households should even be able to surf the net with a connection speed of 100 Mbit/s by 2020. Valletti pointed out, however, that in view of the divide between urban and rural areas, these aims are somewhat ambitious. Digitalisation may also deepen educational divides.

Studies analysing British local elections indicate that the Internet also has an effect on elections. Valletti showed that “the election turnout is altogether lower.” In keeping with the theory that the poor are becoming poorer, voters with lower levels of education seem to use the Internet exclusively for recreational activities. They therefore show a lesser tendency to vote in elections. As a result, he said, politicians orientate their political agendas towards more highly educated sections of the electorate. The final conclusion to be drawn here is that the Internet influences politics, “in that it results in reduced taxes and reduced public spending”, said Valletti.



Conference Dinner on Windeck Castle

The first day of the SEEK Conference was concluded with a dinner on Windeck Castle in Weinheim. Enjoying the medieval atmosphere of the castle tavern, the conference participants had the opportunity to discuss the issues addressed during the lectures and network with colleagues. Heiner Bernhard, the mayor of Weinheim, welcomed the guests and gave a brief introduction into the history of the castle and the town of Weinheim.

Windeck Castle is located around 200 metres above Weinheim, at the edge of the Odenwald forest. It was built in the twelfth century to protect the nearby Lorsch Abbey. The unique

view on the Rhine Valley provided a very special setting for the dinner. Mayor Bernhard also addressed Weinheim's favourable location in the midst of the Rhine-Neckar Metropolitan Region. He described his town as an ambitious middle-sized centre with a picturesque historic district, making it well-suited for small and medium-sized enterprises as well as globally operating corporations. Given the precarious economic situation in various European regions, Bernhard stressed the importance of making Weinheim as well as the whole Rhine-Neckar Metropolitan Region fit for the future. This way, he connected his speech to the fifth SEEK Conference's main topic.





Dr. Mila Köhler



Dr. Philipp Böing

PARALLEL SESSIONS I

Innovation, Subsidies and Spillovers

Dirk Czarnitzki (KU Leuven, Belgium; ZEW), Paul Hünermund (KU Leuven, Belgium; ZEW): Estimating the Local Average Treatment Effect of R&D Subsidies in a Virtual Common Pot

Hanna Hottenrott (Düsseldorf Institute for Competition Economics, Germany; KU Leuven, Belgium; ZEW), Cindy Lopes-Bento (KU Leuven, Belgium; ZEW; University of Zurich, Switzerland), Reinhilde Veugelers (KU Leuven, Belgium): Direct and Cross-Scheme Effects in a Research and Development Subsidy Program

Mila Köhler (ZEW; KU Leuven, Belgium), Bettina Peters (ZEW): Subsidized and Non-Subsidized R&D Projects: Do they Differ?

ICT, Innovation and Economic Downturns

Timothy De Stefano (University of Nottingham, UK), Richard Kneller (University of Nottingham, UK), Jonathan Timmis (University of Nottingham, UK): The Productivity Effects of Information Communication Technology: Evidence for UK Firms

Daniela Silvestri (IMT School for Advanced Studies, Italy), Massimo Riccaboni (IMT School for Advanced Studies, Italy), Antonio Della Malva (KU Leuven, Belgium), Andrea Morescalchi (European Commission, Joint Research Centre, Italy): Innovation Strategies During Economic Downturns

Michael Kummer (Georgia Institute of Technology, US; ZEW), Olga Slivko (ZEW), Michael Zhang (Hong Kong University of Science and Technology, China): Unemployment and Volunteering. Does Unemployment Affect Content Generation on Wikipedia?

Current Topics in Innovation

Christian Helmers (Santa Clara University, US): Choose the Neighbor Before the House: Agglomeration Externalities in UK Science Parks

Bettina Peters (ZEW; University of Zurich, Switzerland), Rebecca Riley (National Institute for Economic and Social Research; Centre for Learning and Life Changes in Knowledge Economies and Societies, UK); Iulia Siedschlag (Economic and Social Research Institute; Trinity College, Ireland), Priit Vahter (University of Tartu, Estonia), John McQuinn (Cambridge Econometrics, UK): Innovation and Productivity in Services: Evidence from Germany, Ireland and the United Kingdom

Philipp Böing (ZEW; Frankfurt School of Finance and Management, Germany), Elisabeth Müller (German Graduate School; Swinburne University of Technology, Australia; ZEW): Taking Measure: the Quality of Chinese Patents in International Comparison



Professor Richard Kneller



Vivek Ghosal, Ph.D.



Martin Hud

PARALLEL SESSIONS II

Innovation, Entrepreneurship and Economic Downturns

Martin Hud (ZEW; Maastricht University, Netherlands), Christian Rammer (ZEW): Innovation Budgeting, the Business Cycle and Innovation Performance

Dunli Li (Queen's University Belfast, Ireland), Jose M. Plehn-Dujowich (University of California, US): The Impact of Entrepreneurship on Schumpeterian Endogenous Growth: Theory and Evidence

Carlos Carreira (University of Coimbra, Portugal), Paulino Teixeira (University of Coimbra, Portugal): Cleansing in Severe Recessions: What Can Be Learned from the 2008 – 2013 Portuguese Crisis?

The Interplay of ICT and Innovation

Katharina Candel-Haug (Ifo Institute for Economic Research, Germany): Who Benefits Most from Interconnectivity? A View on Productivity Effects of Innovative IT Systems

Marina Rybalka (Statistics Norway): The Innovative Input Mix: Assessing the Importance of R&D and ICT Investments for Firm Performance in Manufacturing and Services

Ursula Fritsch (Kiel Institute for the World Economy and University of Kiel, Germany): Information Technology and Innovation in Chinese Firms

Competition and Regulation in High-Tech Industries

Vivek Ghosal (Georgia Institute of Technology, US): Competition and Innovation in Automobile Markets

Nicolo Barbieri (University of Bologna, Italy): Environmental Policy and Invention Crowding Out. Unlocking the Automotive Industry from Fossil Fuel Path Dependence

Wolfgang Briglauer (ZEW): How EU Sector-Specific Regulations and Competition Affect Migration from Old to New Communications Infrastructure: Recent Evidence from EU27 Member States



Katharina Candel-Haug



James Bessen



Professor Ingo Vogelsang

INVITED SESSIONS

Innovation

James Bessen (Boston University School of Law, US): Technology and Stagnant Wages

Georg von Graevenitz (University of London, UK): Technology Entry in the Presence of Patent Thickets

Digital Economy

Tobias Kretschmer (University of Munich, Institute for Strategy, Technology and Organization, Germany): Inside the Digital Economy: Digitization and Firm Organization

Axel Pols (Bitkom Research): Boosting Digital Transformation in Europe: Propositions by the EU's Strategic Policy Forum on Digital Entrepreneurship

Competition and Regulation

Ingo Vogelsang (Boston University, US): The Role of Competition and Regulation in Stimulating Innovation

Michael Pollitt (University of Cambridge, UK): How to Support Innovation in Network Industries: The Role of Governments, Regulators and Competition and the Case of Electricity

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