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# ZEWnews

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Research Results · Conferences · Publications

## VC Investors Increase Growth, Productivity, as Well as Investment and Innovation Performance

VC investors in Europe positively affect firms' growth, productivity, investment, and innovations. They also helped their portfolio firms to outperform during the financial crisis. These findings come from the VICO project carried out on behalf of the EU by ZEW and nine further European universities and research institutes.



Young companies benefit in many ways from venture capital financing.

The VICO project devoted considerable attention to disentangling the "selection" and "treatment" effects of VC investors on the investee firm.

#### **Treatment and Selection Effect**

The treatment effect refers to the improvement in the performance of the portfolio firm caused by the VC investment, while selection refers to the VC investors being able to choose high quality firms with superior future prospects.

The findings generally support the view that VC investors had a considerable positive treatment effect on firms' growth, productivity, as well as investment and

innovation performance. VC investors helped their portfolio firms to outperform firms not backed by venture capital even during the financial crisis in 2008–2009. However, the extent of the treatment effect was contingent on the characteristics of the investor and to some extent also of investee firms.

#### Role of the VC Investors' Characteristics

The project demonstrated that experienced VC investors have disproportionally positive effects on employment generation and asset accumulation within the economy. Furthermore, the project showed that independent VC firms exert-

ed an unequivocally positive impact, greater than that documented in previous studies, on the productivity and sales growth of European high-tech entrepreneurial ventures. This effect was largely attributable to the treatment effect.

With regard to the impacts of the (direct) investments by governmental VCs, when we distinguished between firms backed in the early stages of their life (firms aged five years or less) and relatively more mature firms (aged more than five years), governmental VCs appeared to have a positive impact on the growth of the early stage firms, while the impact was negligible for the more mature ones. Both independent and governmental VCs were helpful in alleviating the financial constraints of the portfolio firms. VCs tended to select firms which were active in patenting and in turn VC-backed com-

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panies outperformed otherwise similar non-VC-backed companies in terms of innovation output.

Most interestingly, syndicates led by independent VCs including also governmental VCs exhibit the greatest positive impact on firms' innovation.

#### **Several Policy Recommendations**

The VICO project suggests several policy recommendations, first, emphasising a systemic view and targeting framework conditions for the emergence of the VC industry. Furthermore, it notes that a failure to recognise the need for coordinated policies is an important determinant of the modest success of previous policy initiatives. At the macro level, the project recommends shaping the educational system and European culture in favour of an entrepreneurial risk-taking and innovation prone attitude or the creation of a

The VICO project, funded from the EU Seventh Framework Programme, studied the impact of VC financing on the innovation rate, employment creation, growth, and competitiveness of high-tech entrepreneurial ventures in Europe and the role VC investors play in helping entrepreneurial firms bridge their resource and competence gaps. The project created a unique, large-scale longitudinal dataset on European high-tech companies and VC investments. This dataset provided the backbone for several studies within the project.

The project also drew on survey, interview and documentary data. One of the major objectives of the project was to investigate the impact of the heterogeneity of VC investors on the performance of the portfolio firms. This heterogeneity is an important peculiarity of the VC landscape in Europe.

VC-friendly tax and regulatory environment (e.g., elimination of double taxation and registration problems). There were also several micro-level measures recommended, such as provision of selected subsidies on a competitive basis to entrepreneurial firms to improve the pool of entrepreneurial ventures with high-level human capital and high aspirations; promotion of support services (like business incubator services) by experienced actors; or measures favouring the entry of VC firms managed by experienced managers through public funds.

Additional information on the VICO project can be found in the Internet at www.vicoproject.org.

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### Family Businesses Create a Lot of New Jobs

Family businesses play a major role in the job market growth. A recent ZEW study shows that from 2006 until 2010 leading German family businesses created around 300,000 new jobs in Germany alone.

The ZEW study conducted in cooperation with the ifm of the University of Mannheim compares the most important 500 family enterprises with the largest number of employees and the 30 DAX companies (without the family enterprises Beiersdorf, Henkel, Metro, and Merck listed in the DAX). The results show that domestic employment in the Top 500 family businesses increased from 3.3 to 3.6 million between 2006 and 2010.

In the same period of time, the DAX companies reduced employment from 1.5 to 1.4 million. On a global level, the TOP 500 family enterprises even registered an increase in employment of eleven per cent. This equals 500,000 new jobs.

During the same period, global growth in employment in the DAX firms only increased by two per cent; this corresponds to 60,000 jobs. Furthermore, the study shows that during the financial and economic crisis, family enterprises registered higher turnover losses but dismissed fewer employees than the DAX firms.

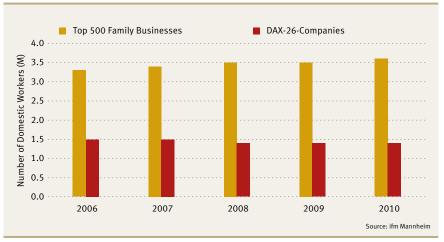
In the crisis year of 2009, the TOP 500 family businesses suffered a sales collapse of nearly ten per cent compared to

the previous year. Meanwhile the situation in the DAX firms was more positive. They could still register a plus of nearly three per cent.

But just one year later in 2010, both family enterprises and DAX companies grew with increases in turnover of eleven and 13 per cent respectively.

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#### Development of National Employment in Family and the DAX Companies 2006-2010



## Climate Change: On the Relationship Between Knowledge, Risk Perception, and Insurance

A new ZEW study shows that individuals who are comparably better informed about climate change estimate its impacts as less dangerous than those who are less well informed. Gender and personal experience also affect one's perception of the risks of climate change.

Drought, damage from flooding, and extreme storms are directly experienced by relatively few people in Europe. Climate change is thus a rather abstract notion for many, the effects of which are difficult to assess. Against this backdrop, a ZEW study (Discussion Paper No. 11-060) investigates the interrelationships of knowledge about climate change, climate science, as well as individual perceptions of climate-related dangers within the population. Furthermore, the study analyses if there is a connection between risk perception and precautionary measures to minimize the impacts of climate change to the individual person, such as insurance protection.

#### **Two Different Surveys Conducted**

In order to find answers to these questions, two independent surveys were conducted. The first, undertaken by the Faculty for Actuarial Science at the Karlsruhe Institute for Technology, was conducted online, and had 510 participants from all socio-economic groups and regions of Germany. The second survey, undertaken by researchers of the ZEW Research Department "Environmental and Resource Economics, Environmental Management", had 157 participants. The participants were first asked to provide an assessment of their own state of knowledge about climate change. This selfassessment was then compared against each participant's performance on a test about climate change.

#### **Effects of Climate Change Overrated**

The results showed that many participants overestimated the effects of climate change in various areas, that include the expected rise in sea levels and global temperatures. Furthermore, the survey results showed that participants who were better informed about climate change viewed the effects of climate change as less dangerous than their more poorly informed counterparts.

#### Central Meaning of Knowledge

Actual knowledge and self-declared knowledge were inversely related in their effects. This means that participants with a self-declared high level of knowledge

perception of risk); and actual knowledge about climate change (more knowledge led to a lower risk perception). Surprisingly, when participants were provided with scientific information about the expected effects of climate change, this had no significant effect on risk perception.

#### **Doubt in Information Campaigns**

This finding may be of some interest to governments or organisations who invest a great deal of money in informing the public about climate change. As information about the effects of climate change do not lead immidiately to the perception of increased risk, there is reason to doubt the effectiveness of largescale public information campaigns that have already been launched.



Floods are among the most noticeable consequences of climate change.

about climate change perceived a higher degree of risk in comparison to those participants who had a self-declared low level of knowledge. Specific factors were identified independently in both surveys that influenced individual perception of the risks of climate change. These were: gender (female participants perceived greater risks); experience with extreme weather events (which led to a greater

Finally, the study showed that there is a positive relationship between risk perception and the willingness of participants to purchase insurance. Perhaps not surprisingly, the probability that a participant was insured or planned to obtain insurance against extreme weather events was higher if he or she had previous experience with weather-related damage.

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#### RESEARCH FINDINGS

## Taking the Lead in Innovation – Successful Internationalisation of German ICT Companies

Innovation, skilled employees, and customised products and services are the factors that make German companies from the information and communication technology (ICT) sector successful in accessing foreign markets. This shows a recent ZEW study on behalf of the Federal Ministry of Economics and Technology (BMWi).

The study analyses the key intentions, success factors, and problems regarding the internationalisation of German companies from the ICT sector. It includes a representative survey of around 600 ICT companies. Furthermore, it is representing the preparatory work for the 6th National IT Summit which was held on December 6, 2011 in Munich.

#### Key for Success: Lead in Innovation

The key condition for a company's successful internationalisation is the lead in innovation of its products and services. With 21 per cent, the export quota (share of export turnover in total turnover) of innovative ICT companies is significantly higher than the export quota of non-innovative ICT companies, which stands at only 5 per cent. In addition to that, large and innovative companies have more branches abroad than non-innovative ICT companies. Other critical factors for success abroad include highly skilled employees and a customisation of products and services to linguistic demands of the target market.

#### Costs Reduction Plays a Minor Role

Through this internationalisation, German ICT companies mainly aim towards expanding into new markets, keeping up with competing businesses, and supporting domestic clients' activities abroad. The reduction of costs only plays a minor role. The high costs of expanding into new markets and a lack of demand for their products and services represent the most significant obstacles for ICT companies entering international business or wishing to intensify their international activi-

ties. Companies already operating abroad regard product piracy and a lack of protection of intellectual property as the most significant barriers. To support the internationalisation of ICT companies, economic and innovation policy can initiate various activities:

Innovation activities in the ICT sector can be promoted by government sup-

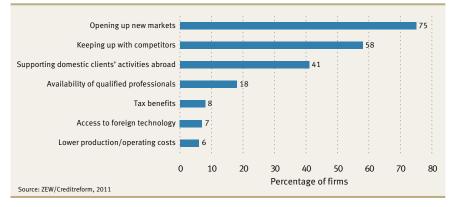
- port of research and development. This can be a crucial factor for initiating foreign operations.
- Facilitated access to financing and credits can help companies bear high entry costs in foreign markets.
- Improvements of the legal framework, such as effective legal protection abroad, enhance legal certainty.
- Government consulting services should especially offer support for very small ICT companies, as this group faces internationalisation barriers more frequently than other firms.

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#### **Success Factors for Foreign Activities**



#### Intensions for Internationalisation



Q&A: Rating Agency Reform Is Needed Urgently

## EU Recommendations for the Regulation of Rating Agencies Will Help Solve Key Problems

Rating agencies are considered to be partially responsible for the financial crisis, as they awarded positive ratings to highly speculative securities for too long. The EU Commission recently presented its recommendations for the reform of rating agency regulation. Prof. Dr. Michael Schröder evaluates the proposed regulatory changes.



As rating agencies awarded positive ratings to highly speculative securities for far too long, they are partially responsible for the financial crisis. Now a reform of rating agency regulation is needed.

#### Has the European Commission succeeded in devising a plan to curtail the power of the rating agencies?

The recommendations are a big step toward implementing effective regulations for rating agencies. So reducing the role of external ratings for banks and other institutional investors is important. Hopefully, this recommendation will be incorporated into regulatory frameworks, thus making investors more responsible for assessing credit risks.

The recommendation that the transparency of sovereign bond ratings be enhanced is also useful. As far as the proposal to increase the liability of agencies for improper ratings is concerned, there is reason to doubt whether such a measure would actually be enforced.

#### Which reforms do you consider to be particularly important?

The Commission should do everything possible to facilitate the adoption of standardised assessment criteria. The EU envisions that the European Securities and Markets Authority (ESMA) will develop a standardised scale to serve as a basis for all credit ratings, thus improving the comparability of ratings.

But it is also important to consider the need to subsequently review the quality of the issued ratings.

#### Which recommendations are too weak in your view?

The proposed reforms do not directly address one well-known problem: rating agencies have a false incentive to provide financial products with excessively positive ratings in order to secure future business from their customers, who are the issuers of such securities.

The EU has recommended that companies that issue debt should be required to change rating agencies regulary every three years. This rule change would likely break the oligopoly of the three largest rating agencies of nowadays while also bringing smaller agencies into play.

Yet doubts remain whether this change would actually reduce the false incentives that are built into the existing system.

Initially there was much talk of temporarily suspending the credit ratings of countries in crisis. This recommendation has now been dropped. What do you think?

Fortunately, the recommendation to temporarily ban the publication of sovereign debt ratings was not pursued further. Such a ban would have considerably worsened the quality of the information available to investors and limited the ability of capital markets to discipline highly indebted countries.

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Prof. Dr. Michael Schröder is the head of ZEW's International Finance and Financial Management department. His research interests include the empirical analysis of capital markets, expectation formation in financial markets, sustainable capital investments, and foundation asset management. He completed his habilitation at the University of Stuttgart and received his venia legendi in business administration in 2009. Schröder teaches at the Frankfurt School of Finance & Management in the department of asset management.

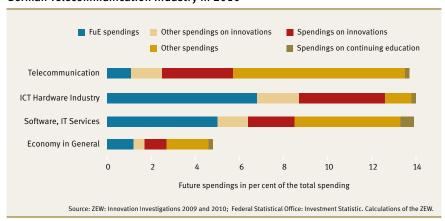


#### POLITICO-ECONOMIC ANALYSIS

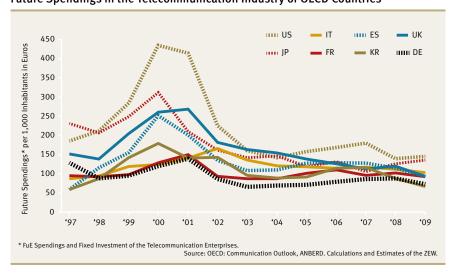
## Innovation in the German Telecommunication **Industry Still Lags Behind the Others**

Advanced telecommunication infrastructure and telecommunication service providers are a backbone of modern industrialised society. Although the "future-oriented" expenditures of the German telecommunications industry are high compared to other sectors, the German telecommunications industry lags behind many other countries.

Future Oriented Expenditures as Part of the Sales Volume in German Telecommunication Industry in 2010



#### **Future Spendings in the Telecommunication Industry of OECD Countries**



The telecommunication industry is an important supplier of technologies to end users. With "future-oriented" expenditures totalling approx. nine billion euros in 2010, the telecommunication industry is one of the most innovative sectors in the German economy. Currently, the telecommunication industry spends even 14 per cent of its revenues in investments aimed at generating future innovation and productivity increases, a figure much higher than the German average. Across

all German industries (excluding retail, public and consumer services), this socalled "future-oriented expenditure ratio" is 4.5 per cent.

#### **Few Large Network Providers**

The scale of investment in the development of new telecommunication services and in the modernisation of telecommunication infrastructure is determined basically by a few large network providers. However, the innovative activities of numerous small service providers are crucial for the development of innovations and their widespread adoption.

The percentage of German telecommunication firms who facilitated the diffusion of innovations by introducing new products or processes was 72 per cent in 2008. This "innovator ratio" is not only high in comparison to most other economic sectors; it is also the highest amongst all of Europe's national telecommunication industries. This high rate of involvement in innovation and R&D activities means that the firms in the German telecommunication sector are innovationready and capable to innovate.

At firm level, the prerequisites for the rapid conversion of new technologies into market-ready products and services are present. Higher investments in advanced telecommunication infrastructure should therefore fall on fertile ground.

#### Different Key Drivers are Imaginable

In many user industries, novel telecommunication applications trigger the development of new technologies or facilitate new innovation trends. At present, mobile internet, cloud computing, and so-called "smart grids" are key drivers of innovations that are based on telecommunication technology.

The use of mobile internet by firms increased rapidly in 2010 and will continue to rise. At the end of 2010, over one-third of innovative companies in Germany used

#### POLITICO-ECONOMIC ANALYSIS

mobile internet to offer their products and services or to communicate with their customers. As of mid-2011, approx. 25 per cent of employees in innovative companies had already been issued mobile internet-capable devices.

#### The Importance of Cloud Computing

Cloud computing is another important field of application for advanced telecommunication networks.

So it is not surprising that in 2010 already more than one-third of innovative German companies make use of it. Approx. eight per cent of firms would even make increased investments in cloud computing if they had access to greater bandwidth. A particularly promising field

#### **Future-Oriented Expenditures**

The term "future-oriented expenditures" encompasses all expenditures made by a firm that serve as the basis for future innovation and productivity increases, including R&D; the development, design, and launch of new products; the introduction of new processes; the expansion or replacement of fixed assets; as well as employee training. The "future-oriented expenditure ratio" designates futureoriented investments as a percentage of revenues.

of innovation is the use of new telecommunication technologies to establish socalled "smart grids". In such networks, individual production as well as service processes are integrated which use new IT systems in order to achieve improvements in overall output efficiency and quality. Telecommunication network investments are comparatively low in Germany. The successful development and adoption of innovations in the German telecommunications industry stands in sharp contrast to the relatively low levels of investment in the construction of new network infrastructure in Germany. In terms of per capita R&D and capital investments as well as future-oriented investments as a percentage of revenues in the German telecommunication industry, Germany ranks last internationally.

The "future-oriented expenditure ratio" of the telecommunications industry in Germany averaged 10.4 per cent in 2004-09; no other mid-sized to large industrialised nation had a lower investment ratio during these years.

On a per capita basis, the future-oriented investments of the German telecommunication industry are also lower than that of other large industrialised nations. This has been true since 1999.

#### INSIDE ZEW

#### **Dissertations at ZEW**

The qualification of its staff is very important to ZEW. This can also be seen from various dissertations completed at ZEW last year. We would like to thank all supervisors, especially the first advisors.

Astrid Dannenberg, "On the Provision of Global Public Goods - Experimental Evidence on Climate Change Mitigation Issues", Prof. Joachim Weimann, Otto-von-Guericke University Magdeburg.

Waldemar Rotfuß, "Über hochfrequente Preisreaktionen europäischer Emissionsberechtigungen auf Nachrichten", Prof. Jürgen Kähler, Friedrich-Alexander-Universität Erlangen-Nürnberg.

Victoria Alexeeva-Talebi, "Sektorale Inzidenz und Effizienz der Klimapolitik: Eine quantitative ökonomische Analyse", Prof. Christoph Böhringer, Carl von Ossietzky University Oldenburg.

Jörg Ohnemus, "Empirical Analysis of Information Technology and Business Process Outsourcing", Prof. Alexandra Spitz-Oener, Humboldt-Universität Berlin.

Thomas Walter, "Evaluating Key Characteristics of Germany's 2005 Welfare Reform with a Focus on Immigrants", Prof. Olaf Hübler, Leibniz Universität Hannover. Karsten Reuß, "Age-dependent Human Capital Investments and Socio-Economic Outcomes", Prof. Wolfgang Franz, University of Mannheim.

Steffen Osterloh, "Fiscal Policy Decision-Making: New Evidence on its Determinants and Effects on Public Opinion", Prof. Eckhard Janeba, University of Mannheim.

Christof Ernst, "Steuerliche Anreize für Forschung und Entwicklung", Prof. Christoph Spengel, University of Mannheim.

Kathrin Müller, "Humankapital in neu gegründeten Unternehmen - Vier empirische Untersuchungen", Prof. Martin Biewen, University of Tübingen.

Anja Schmiele, "Internationalisierung der FuE-Tätigkeit von Unternehmen", Prof. Jürgen Weigand, Wissenschaftliche Hochschule für Unternehmensführung (WHU) Otto Beisheim School of Management.

Gordon Jochem Klein, "Essays in Competition and Innovation - An Empirical and Theoretical Analysis", Prof. Justus Haucap, Heinrich Heine University Düsseldorf.

Mariela Borell, "Private Equity in Europe: Investment Selection, Resource Allocation and Financial Distress", Prof. Michael Grote, Goethe University Frankfurt.

Dries De Smet, "Essays on the Economics of Media Platforms", Prof. Patrick van Cayseele, K.U.Leuven.

#### Low German Telecommunication

Telecommunication firms in Germany would be well advised to considerably increase their level of investment in new technologies, networks, and applications. It appears that such an increase would be possible, as in previous years only 28 per cent of net profits were devoted to R&D and capital expenditures in Germany; this figure was over 50 per cent in Sweden, Finland, and the U.K.

At the same time, political decision makers should improve the regulatory environment for the construction of new networks and adoption of new telecommunication technologies, providing stronger incentives for firms and users to invest in new technologies and innovation.

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#### CONFERENCES

## Successful Third ICTNET Workshop at ZEW

On October 23, -24, 2011, the Centre for European Economic Research (ZEW) hosted the third ICTNET workshop in Mannheim. The workshop, which was organised in cooperation with the OECD, primarily addressed issues related to ICT-driven innovation, productivity, and growth.

The workshop started with a presentation by Lucilla Sioli, head of unit at the EU Directorate-General for Information Society and Media. Sioli presented the goals of the "digital agenda" and undertook an assessment of the progress made in attaining them. Justin Bayard of Industry Canada, Avi Goldfarb of the University of Toronto, and Marshall van Alstyne of Boston University then considered the guestions: Can investments in high-speed networks and associated mobile applications such as cloud computing facilitate growth? Which conditions are essential to realise a digital single market?

In the further course of the workshop, fifteen researchers presented the results of their studies. Avi Goldfarb showed that the internet has only led to an increase in wages in regions with a high population density, high education levels, and high ICT penetration. Marshall van Alstyne addressed the innovation potential that depends on the possibility to access and recombine information.

Additional papers dealt with the contribution of broadband technology to macroeconomic growth, the role of schools as users of broadband technology and the internet as a job platform. Johannes van Biesebroeck of K.U. Leuven then examined the automotive industry and showed how increasing internationalisation has considerably strengthened the productivity and competitiveness of ICT-intensive user industries.

Additional information about ICTNET can be found at: www.ict-net.eu.

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## **ZEW/Bruegel Workshop in Brussels**

On November 22, 2011, the Centre for European Economic Research (ZEW) and the Brussels-based think tank Bruegel organised a workshop on "Europe's Way to a Low-Carbon Economy" in the representation of the state of Baden-Württemberg in Brussels.



Jos Delbeke (Director-General for Climate Action, EU Commission) explains as one of the speakers the roadmap to a low-carbon economy in Europe.

Jos Delbeke, Ph.D., Director-General of the Directorate-General for Climate Action at the EU Commission, Prof. Jean Pisani-Ferry, Director at Bruegel, Prof. Dr. h.c. mult. Wolfganz Franz, President of ZEW and Chairman of the German Council of Economic Experts, Dr. Georg Zachmann, researcher at Bruegel, and Prof. Dr. Andreas Löschel, head of the Research Department "Environmental and Resource Economics, Environmental Management" at ZEW, were the speakers. At the event representatives of the EU Commission, of public institutions, of the industrial and the financial sector as well as researchers attended the workshop.

Delbeke outlined the EU's approach to reducing its carbon dioxide emissions by approximately 80 per cent until 2050 compared to 1990. Besides the shaping of the future emissions trading scheme, he also addressed emissions standards for private cars, improvements in energy efficiency, the competitiveness of EU firms, and "carbon leakage". Löschel backed up Delbeke's presentation by means of macroeconomic and sectoral results of ZEW simulations. The results illustrated the benefits of global climate policy in combination with an international emissions trading scheme for the EU. Zachmann explained the challenges of the energy transition, while Franz presented policy recommendations with respect to the transition of the German energy system taken from the Annual Report of the German Council of Economic Experts 2011/12. A lively discussion on appropriate measures to promote low carbon technologies concluded the workshop.

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#### INSIDE ZEW

#### First ZEW Researcher Completes the Two-Year Training Programme and Earns Baden-Württemberg Certificate in University Didactics

Dr. Grit Mühler, researcher at the ZEW Research Department "Labour Markets, Human Resources and Social Policy", has earned the Baden-Württemberg Certificate in University Didactics (Baden-Württemberg-Zertifikat für Hochschuldidaktik). She is the first ZEW researcher who completed the twoyear training programme organised by the Centre for University Didactics of the Universities of Baden-Württemberg (Hochschuldidaktikzentrum der Universitäten des Landes Baden-Württemberg – HDZ).

The certificates were awarded on November 11, 2011, during a ceremony at Stuttgart's House of the Economy (Haus der Wirtschaft). They were presented by Steffen Walter, Head



Dr. Grit Mühler

of Ministry Division, on behalf of Science Minister Theresia Bauer. The didactics training programme aims at improving the quality of university teaching throughout Baden-Württemberg. This year, 159 researchers from Baden-Württemberg's universities and research institutes were awarded the certificate.

#### 2nd SEEK Conference: The Green Growth Challenge

Due to the remarkably high level of interest in the first SEEK Conference in 2011, the Centre for European Economic Research (ZEW) is hosting the second conference of its



research programme "Strengthening Efficiency and Competitiveness in the European Knowledge Economies" (SEEK) from 9 to 10, March 2012. The prime goal of the conference is to elucidate the challenges to pursuing a smart and sustainable growth path in the economies of Europe. Since this issue has been receiving increasing attention in the worlds

of politics and academia, a second aim is to bring together policy makers and scientists to discuss the hurdles to developing green innovations within innovation ecosystems. For more information visit: www.seek.zew.eu

#### **ZEW Researcher Receives Constantin-von-Dieze Award**



Dr. Thomas Schäuble, Dr. Susanne Steffes, Prof. Dr. Dr. h.c. Hans-Jochen Schiewer (from left).

Dr. Susanne Steffes received the Constantin-von-Dietze Award from the University of Freiburg for her doctoral thesis "Employment Dynamics and Heterogeneous Labor Markets: An Analysis with Linked Employer-Employee and Company Data" which was completed in 2010. At the solemn opening of the academic year on October 26, 2011, principal Prof. Dr. Dr. h.c. Hans-Jochen Schiewer and the donor of the award, Dr. Thomas Schäuble, CEO of the state-run brewery Rothaus AG, presented the award. In her work, Susanne Steffes investigated on the basis of new data, how flexible the German labour mar-

ket had been between 1996 and 2005. Susanne Steffes is a researcher at the ZEW Research Department "Labour Markets, Human Resources and Social Policy".

#### ZEW DISCUSSION PAPERS

No 12-003, Christoph Spengel, Sebastian Lazar, Lisa Evers, Benedikt Zinn: Romania's Development to a Low-Tax Country: Effective Corporate Tax Burden in Romania from 1992 to 2010 and Romania's Current Ranking Among the Eastern European Member States.

No 12-002, Paul Beaudry, Franck Portier: A Gains from Trade Perspective on Macroeconomic Fluctuations.

No 12-001, Fabian Kosse, Friedhelm Pfeiffer: Impatience Among Preschool Children and Their Mothers.

No 11-084, Franz Hackl, Michael Kummer, Rudolf Winter-Ebmer und Christine Zulehner: Market Structure, Market Performance in E-Commerce.

No 11-083, Thomas Niebel, Marianne Saam: Productivity of ICT and Non-ICT Capital - The Role of Rates of Return and Capital Prices.

No 11-082, Christian Peukert: External Technology Supply and Client-Side Innovation.

No 11-081, Diana Heger, Miriam Rinawi, Tobias Veith: The Effect of Broadband Infrastructure on Entrepreneurial Activities: The Case of Germany.

No 11-080, Bas van Aarle, Marcus Kappler: Fiscal Adjustment in Greece: In Search for Sustainable Public Finances.

No 11-079, Stefan Boeters, Luc Savard: The Labour Market in CGE Models.

No 11-078, Benjamin Engelstätter, Miruna Sarbu: The Adoption of Social Enterprise Software.

No 11-077, Ralf Hohenstatt, Bertram Steininger: The Rat Race of Capital Structure Research for REITs and REOCs: Two Spotlights on Leverage.

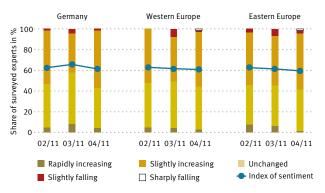
No 11-076, Tereza Tykvova, Mariela Borell: Do Private Equity Owners Increase Risk of Financial Distress and Bankruptcy? No 11-075, Lars Feld, Jost Henrich Heckemeyer, Michael Overesch: Capital Structure Choice and Company Taxation: A Meta-Study.

No 11-074, Melanie Arntz, Terry Gregory, Florian Lehmer: Unequal Pay or Unequal Employment? What Drives the Skill-Composition of Labour Flows in Germany?

No 11-073, Ronald Klingebiel, Christian Rammer: Resource Allocation Flexibility for Innovation Performance: The Effects of Breadth, Uncertainty, and Selectiveness.

#### FACTS AND FIGURES

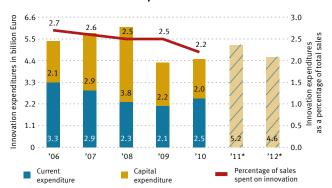
#### **CEP-Volume Expectations Stay Relatively Constant**



The prospects of the expected volumes trends in the courier, express and parcel (CEP) markets are comparably good, checked against the expectations for other transport and logistics markets. Approx. 40 per cent of the experts of the TransportMarket-Barometer of ProgTrans/ZEW expect a weak increase of up to five per cent of the CEP amount in the coming half year. The majority of experts expect a stagnation. Nearly none of the experts expects a decrease of the CEP volume. No significant differences can be observed between the different transport relations.

Dr. Claudia Hermeling, hermeling@zew.de

#### Metal Industry Plans Strong Rise in **Innovation Expenditures in 2011**



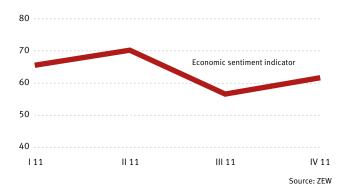
\* Target figures from spring/summer 2010

Source: ZEW, Mannheim Innovation Panel

Innovation expenditures of the German metal industry (production of raw metals and metal products) remained rather low in 2010. Compared to 2009 innovation expenditure increased by only five per cent to 4.46 billion Euro. For 2011 a more marked growth was planned. Innovation budgets will rise by 17 per cent to 5.2 billion Euro. In 2012, uncertain economic outlook is likely to result in a fresh reduction of innovation spending down to 4.6 billion Euro. The metal industry's share of innovation expenditure in sales is declining since 2006.

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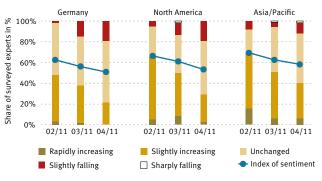
#### Information Industry in Germany - Turnaround of **Economic Sentiment in the ICT Sector**



In the fourth quarter of 2011, the information industry in Germany has recovered slightly from the weak economic sentiment during the third quarter. The ZEW Economic Sentiment Indicator for the information industry increases by five points to 61.6. This improvement is mainly due to the developments in the ICT sector, which has recovered considerably after a strong decline in the previous quarter. In contrast to the ICT sector and the media sector, the economic sentiment indicator for knowledgeintensive service providers continues to decline.

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#### Maritime Traffic is Feeling the Pressure from Overcapacity and Weakening Demand

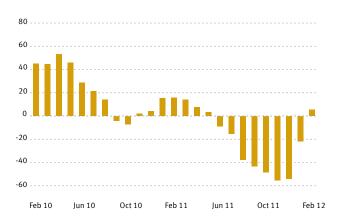


Source: ZEW

The prospects of the maritime shipping volumes as well as the ocean freight rates in the next six months will be much more cautious than in previous quarters. The charts above show the forecasts of the experts of the ZEW Transport Market Barometer for shipping volume. Depending on the submarket, about 48-60 per cent of experts expect stagnation. Furthermore, nearly 20 per cent expect a slight decline for the European routes and the North Atlantic routes. Such muted forecasts have not existed since the third quarter of 2009.

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#### ZEW Financial Market Test February 2012



Balance of positive and negative assessments concerning economic development in Ger-

#### **Germany: Optimism Rises Considerably**

The ZEW Indicator of Economic Sentiment for Germany has increased by 27.0 points to a level of 5.4 points in February 2012. Consequently, the indicator reaches positive territory for the first time since May 2011. A higher value was last seen in April 2011. The further increase of economic sentiment indicates that the recent slowdown in economic growth isn't likely to last in the view of the surveyed financial market experts. Positive economic data from the United States nourish hope for a more stable global business climate. Moreover, the progress in the negotiations of the Greek government with its creditors may have re $duced\ economic\ uncertainty\ in\ the\ Eurozone.\ The\ assessment\ of$ the current economic situation for Germany has improved by 11.9 points to the 40.3 points-mark.

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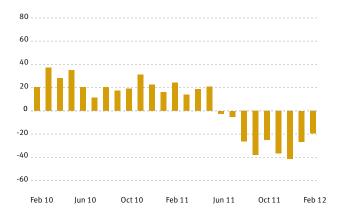


Balance of positive and negative assessments concerning economic development in Switzer-

#### Switzerland: Expectations Brighten up

Economic expectations for Switzerland have increased markedly for the second consecutive month. The ZEW-CS Indicator has gained 28.9 points and reached the minus 21.2 mark in February 2012. The ZEW-CS Indicator is calculated monthly by the Centre for European Economic Research (ZEW) in cooperation with Credit Suisse (CS). The indicator reflects the expectations of the surveyed financial market experts regarding the economic development in Switzerland on a six-month time horizon. Nevertheless, financial market experts' opinion on the current economic situation in Switzerland is virtually unchanged in February. The respective indicator remains at a level of minus 15.5 points. Among the participants only 5.7 per cent consider the state of the Swiss economy to be "good".

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Balance of positive and negative assessments concerning economic development in the CEE region. Source: ZEW

#### **CEE Region: Sentiment Continues to Improve**

The ZEW-Erste Group Bank Economic Sentiment Indicator for Central and Eastern Europe including Turkey (CEE) has increased by 7.1 points in February 2012 to a level of minus 19.5 points. Economic Expectations for the Eurozone have also slightly increased by 1.3 points to a level of minus 31.4 points. The economic sentiment indicator for the CEE region and further financial market data have been surveyed monthly by the Centre for European Economic Research (ZEW), Mannheim, with the support of Erste Group Bank, Vienna, since 2007. The assessment of the current economic situation for the CEE region has displayed a double digit improvement by 15.3 points to a level of 0.1 points. This is the first increase of the indicator after a series of four consecutive drops since September 2011.

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#### OPINION



### **Mortal Sins**

It is much more popular to decry the sins of the embattled countries on the eurozone's periphery than to praise their efforts to return to the narrow path of fiscal virtue. Yet these efforts have been considerable, as shown by calculations released in the most re-

cent Annual Report of the German Council of Economic Experts.

These calculations look at the fiscal balance of each country, adjusted for business cycle fluctuations. Interest payments on public debt are then subtracted from this balance, for higher interest payments undermine efforts to achieve fiscal consolidation in the same way as an unfavourable business cycle. In the German Council of Economic Experts report, this "cyclically adjusted primary balance" is then placed in relation to each country's economic strength - namely, to its production potential. According to this method of calculation, the GIIPS countries - Greece, Ireland, Italy, Portugal, and Spain - as well as the U.S. are all highly indebted.

This is a peculiar finding, for, on average, the GIIPS countries reduced their primary balances from -9.3 per cent in 2009 to -1.7per cent in 2011. In the case of Greece, these figures are -13.1 per cent and -0.4 per cent. The trend in Italy is perhaps most surprising. Italy not only sets itself apart from the other GIIPS countries due to its positive (!) primary balance. Between 2009 and 2011, it even increased its balance from 0.9 per cent to 1.9 per cent. Yet these efforts have done little to impress financial markets. Quite to the contrary: the financial markets have continued to punish the GIIPS countries with higher interest payments.

We find a completely different situation in the U.S. – a country whose politicians do not grow weary of doling out advice to eurozone nations. The primary balance of the U.S. remained practically unchanged between 2009 and 2011, falling slightly from -4.9 per cent to -4.8 per cent. Yet it would have been a massive miscalculation to expect that the financial markets would punish these deficits with higher bond rates. In fact, the opposite has occurred: financial markets have rewarded the U.S. with low interest rates. Are financial markets simply irrational?

While confidence in the rationality of markets may have suffered a serious blow in recent years, the fact that the GIIPS countries have yet to convince the markets of their stability is more readily attributable to the considerable structural problems that they face, including high public debt ratios, unit labour cost increases that have weakened their international competitiveness, as well as political turbulences in the form of government crises. Yet all of this confirms the key importance of confidence-building efforts to achieve fiscal consolidation and improve international competitiveness.

It is crucial that all parties who seek assistance from the European Central Bank be aware of the overarching importance of stable fiscal policies – and, by extension, of fiscal consolidation in the embattled countries of the eurozone. Some advocate ECB assistance as an alternative to fiscal consolidation. In concrete terms, this would mean the ECB should purchase Italian bonds until Rome finds interest rates to be acceptable. The importance of avoiding this form of central bank intervention cannot be emphasised enough. Historical experience - and not just in Germany - instructs us that the monetisation of public debt is a mortal sin of a central bank. This remains true even in the face of counter-arguments that central bank assistance would only be temporary and that in difficult times, one simply has to forget traditional institutional policy wisdom. For clearly, Italy can and must help itself - it has a solid economic basis for doing so. Were Italy to undertake persuasive consolidation efforts that are monitored by the IMF, and gradually reduce its public debt to 120 per cent of GDP, then there is a realistic chance of calming the markets, without the ECB needing to step in as lender of last resort.





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