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ZEWnews

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Research Results · Conferences · Publications

with M&A Report

Structural Change and International Trade Have Positive Effects on the Environment

An often-expressed concern is that "dirty" – that is, emissions-intensive – economic sectors will migrate abroad as emissions become more strictly regulated in industrialised nations. A recent ZEW study examines this question based on a new database.

Photo: © Bernd Leitner/digitalstock

A new ZEW study estimates the influence of economic growth, changes in trade volume, and structural change on a nation's sulphur dioxide emissions.

Environmentalists and anti-globalisation activists maintain that the combination of structural change and free trade can harm the environment. The source of this quite big fear is the potential competitive advantage for countries with less strict environmental regulation. The effects of increased trade activities on the environment have been discussed for some time in the economics literature.

A paper by ZEW economists (ZEW Discussion Paper No. 13-005) examines this issue using a new database. For their analysis, the authors employed data from the World Input Output Database (WIOD), which was created through the European Union's (EU) 7th Research Framework Programme and has been available to the public since May 2012. The WIOD database was developed by eleven European universities and research institutes, among them ZEW.

World Input Output Database (WIOD)

The database encompasses 40 nations, including the 27 EU states as well as other large countries such as China, altogether accounting for about 85 percent of global gross domestic product (GDP) in 2006. The WIOD provides data for the years from 1995 through 2009 from 36 sectors from agriculture, industry and services. Of particular interest is the fact that in addition to a set of socio-economic data, such as levels of production, employment, and capital investment, the WIOD database also contains compatible environmental satellite accounts, such as air emissions and energy use. A further very important advantage of the WIOD database is that this database provides compatible bilateral trade data between all 40 nations.

Use of Other Established Data

For the study, ZEW researchers also used data from other already established databases, such as the Penn World Tables for real per capita GDP, population size, and the openness of a national economy, as defined by the sum of imports and exports in relation to GDP. Drawing on previous research, the study empirically estimates the effects of economic growth, of technological changes in pollution intensity driven by environmental regulation, and of structural change and asso-

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RESEARCH FINDINGS

ciated changes in trade volume on a country's sulphur dioxide emissions. The authors decided to focus on sulphur dioxide, since it has been shown to be a favourable indicator of environmental pollution. Sulphur dioxide occurs as a waste product in the manufacture of industrial goods, it has major local effects, prevention strategies are well known, and governments regulate sulphur dioxide emissions. Moreover, sulphur dioxide is emitted through production in energy-intensive branches – branches that are also particularly capital-intensive. Following the existing economic literature, the study's estimation model assumes that international trade and structural change are connected and that international trade is endogenous. If trade were an exogenous factor, this would mean that more pollutants would be emitted in countries that conduct more trade, but it would be more realistic to assume that other factors are responsible for the increased emission of pollutants. The ZEW study also models per capita income as an endogenous factor: in prosperous countries, pollutant emissions do not increase as a direct result of prosperity, but rather because production is more capital-intensive in these countries than in poorer nations. Overall, the findings of the ZEW study show that international trade has a positive effect on the environment; that is, it leads to lower sulphur dioxide emissions. So the ZEW study has confirmed previous findings in this area with new and substantially more detailed data. Thus, according to the model, an increase in trade by one percentage point results in a 0.36 percent decrease in per capita emissions of sulphur dioxide. Trade has a positive effect on prosperity, which could lead to increased demand for environmental quality, and thus might be associated with the development and use of more environmentally friendly production technologies.

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Firms Encourage Creativity of Their Employees

A representative survey of some 1,000 firms in the information economy shows that many firms actively promote ideas and suggestions for improvement from their employees. Alongside established methods such as brainstorming, companies are also using innovative programmes, such as employee free time for personal projects.

International competition is placing increasing demands on companies to innovate to remain successful. But innovation requires creative ideas and suggestions for improvement.

As part of ZEW's Business Survey in the Information Economy, some 1,000 firms in Germany were surveyed concerning the personnel measures they generally employed, and whether measures were used specifically to encourage ideas and suggestions.

The findings show that about three-quarters of the firms provide continuing education for their employees both internally and externally, and give them regular feedback about their work performance. About half of the companies indicated that for at least a portion of their employees, they have implemented target agreements and performance-related compensation as well as "trust-based" flexible working hours, and the option for working from a home office. Incentive measures such as awards, tangible prizes for good performance and structured career planning are used less often.

Terms of Personnel Policies to Promote Creativity

About 55 per cent of firms in the information technology industry regularly use brainstorming to actively encourage ideas and suggestions for improvement among their employees. Multiple answers were possible. Source: Business Survey in the Information Economy, 4th quarter 2011

Promoting Ideas and Suggestions

More than half of the companies regularly used brainstorming as a way of generating new ideas and improvements for products and processes. A similar proportion of the firms implements cross-departmental problem solving. This involves including other departments in decision-making to obtain a broader base of expertise. Of the companies surveyed, 31 percent rewarded good ideas with financial incentives. It is worth noting that about a fifth of the companies pursued innovative approaches to human resource management, such as guaranteed free working time for individual projects.

You can find additional information in German at: www.zew.de/konjunktur

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RESEARCH FINDINGS

Overqualification of University Graduates on the Job Varies Significantly by Field of Study

A recent ZEW study examines how often university graduates pursue jobs that do not require a university degree. Overqualification is relatively rare among graduates majoring in what are known as the STEM subjects. Economics graduates, by contrast, are quite frequently overqualified.

In Germany, government investment in education represents the majority of expenditures for university education. Given the shortage of skilled workers in certain fields, and at the same time, the fact that university graduates often end up working in jobs requiring low educational qualifications, one might well question whether these investments are truly optimal from an economic perspective. A ZEW study (Discussion Paper No. 12-075) examines the adequacy of university education for subsequent employment. It is based on a 2006 survey conducted by the Higher Education Information System (HIS). In the survey, graduates were asked five to six years after completion of their studies about whether their diplomas were required for their current jobs. If this was not the case, then these graduates were rated as being overqualified.

By a wide margin, the academic fields of medicine and education showed the lowest rate of overqualified graduates (see Table). Of course, these areas of study are differentiated from others because they mostly prepare students for professions where access is legally restricted by examination requirements. This does not automatically imply that all graduates will find appropriate jobs. During the observation period, however, virtually all of the graduates from these programmes of study appear to have found jobs matching their qualifications.

Low Overqualification in STEM Subjects

Current public debate has emphasized the need to boost the number of graduates in what are known as the STEM subjects (science, technology, engineering, mathematics). With rates between 10 and 16 percent, the degree of overqualification in these fields is actually comparatively low. Nevertheless, for women engineers and those with technical college degrees, the proportion of overqualified graduates was nearly twenty percent. Compared to the field of medicine and education, there is still room for filling open job postings through improved integration of graduates in highly qualified jobs. However, the numbers suggest a large demand for graduates with STEM-related degrees. The proportion of overqualified graduates is found to be considerably higher in other fields of study. In humanities, social sciences and economics more than 25 percent of the graduates are overqualified. What may be surprising is the large number of overqualified economics graduates, since this specialty field is often thought to be in great demand. Thirty percent of female graduates in economics and almost forty percent of those with a technical college degree in this area report that they are overqualified for their jobs. Women are also more frequently overqualified then men in other specialties, with the exception of legal studies. These figures do not support the notion that overqualified employment among female university graduates is primarily the result of their choice of a particular field of study.

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Proportion of Overqualified University Graduates

		Gender		University Types	
	All Graduates	Male	Female	University	Technical College
Medicine	1.0	0.0	1.5	1.0	DNA *
Teaching	2.4	1.8	2.6	2.4	DNA *
The Law	9.5	10.2	8.8	9.5	DNA *
Mathematics, Natural Sciences, Computer Science	9.6	8.1	11.2	7.8	18.2
Engineering	16.2	13.3	19.6	11.3	18.8
Social Sciences, Education, Psychology	26.4	24.6	26.9	29.5	21.6
Humanities, Art	27.6	20.0	31.5	26.3	39.4
Economics	28.0	25.8	30.5	19.8	39.3
Other fields	24.7	22.0	25.6	21.3	32.3
Total	**16.4**	**14.1**	**18.1**	**13.1**	**22.9**

Reading aid: One percent of all surveyed graduates in the field of medicine have a job that usually does not require a university degree. 13.3 percent of all surveyed male engineering graduates are overqualified for their jobs. * DNA = Data Not Available

Source: HIS Graduate Survey, 2006

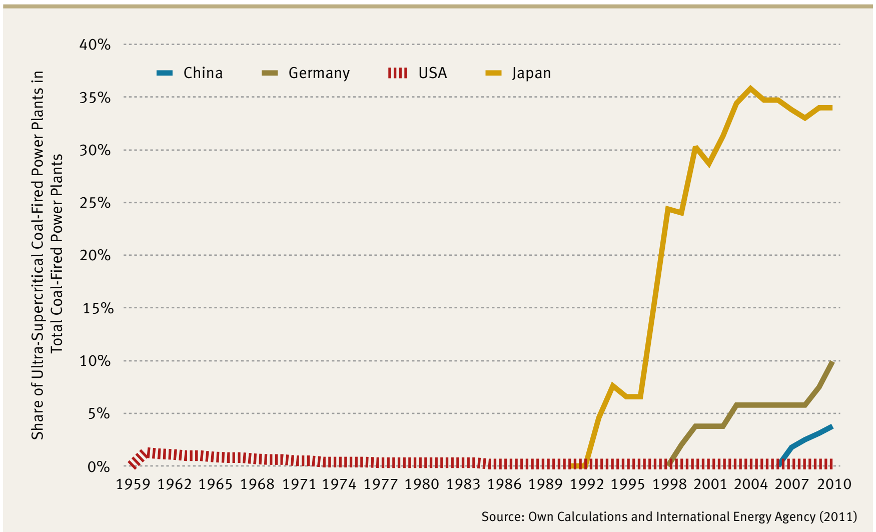
RESEARCH FINDINGS

Energy-Efficient Coal-Fired Power Plants – Germany Struggles to Keep its Innovative Edge

Japan and Germany have a clear edge with respect to innovative coal technologies. However, it is questionable whether Germany can maintain this advantage in light of the falling domestic importance of coal.

Despite high CO_2-intensity, fossil fuels, and especially coal, will continue to play an important role in upcoming decades all around the world. Germany is in the process of replacing nuclear power, and in nations such as China and India, their large and still growing demand for energy will require the use of coal in addition to renewable energy.

Propagation of Ultra-Supercritical Coal-Fired Power Plants in Selected Countries



Source: Own Calculations and International Energy Agency (2011)

The present article analyses how various nations are positioned in the world market for energy-efficient coal technologies. To determine this, researchers identified "lead markets" as the markets where a particular innovation is first implemented before being disseminated in other nations. The literature on this subject has developed certain criteria, known as "lead market factors". They include the relative price advantages, demand, a good reputation as an environmental technology innovator, export conditions, and the characteristics of the market structure. The technological innovation that is examined in the article is the conventional pulverised coal power plant, since it currently dominates the world market with an approximately 90 percent market share.

The study only considered innovative technologies that are already in widespread use in the market. Thus, the relevant innovations included supercritical (SC) and ultra-supercritical (USC) coal-fired power plants, which have been undergoing continuous further development for several decades. Dissemination of these technologies was compared between China, Germany, Japan, and the United States. In the future, carbon capture storage (CCS) technologies may come to play a similarly important role, as they allow for the capture and geological storage of CO_2. However, at this time, they are not yet markets ready and their continued development still depends on the evolution of CO_2 prices as well as societal acceptance. Although the framework conditions in Germany were favourable for coal technologies at the end of the last century, such technologies have lost acceptance over the past ten years as a paradigm shift has occurred in favour of renewable energy. This paradigm shift could certainly favour the development of especially efficient coal technologies, but coal has lost the majority of its financial support in favour of green energy.

China Has Coal-Friendly Conditions

By contrast, the dominant framework conditions in China are coal-friendly, firstly due to China's large and still-growing energy demand, and, secondly, because of its extensive coal reserves. About 50 new coal-fired power plants are being constructed annually in China. In the late 1950s, the United States was the first to establish a lead market for USC technologies. Due to the lack of pressure for energy efficiency in combination with technical problems, scarcely any dissemination of this technology occurred. Since that time, Japan has clearly overtaken the United States, and Germany has also become one of the leading nations for USC.

In the last few years, China has also begun to catch up in this area of technology. As shown by the analysis of various data – primarily from the International Energy Agency, the World Bank, and the United Nations – Japan has a particular lead in the area of supply factors, such as research and development. By contrast, China is catching up in terms of price, demand, and regulatory advantages. China practices what is known as a "leap-frogging" strategy, which means that it uses its advantages in labour costs and skips over single stages of technological advancement. In this way, China has already risen to become the market leader in the low to medium-quality boiler segment. The analysis presented here is based on a study on behalf of the German Federal Ministry of Education and Research (BMBF), and has been published as ZEW Discusssion Paper 12-063.

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POLITICO-ECONOMIC ANALYSIS

Q&A: On the Giant U.S. Airline Merger

How a Marriage in the Skies Will Effect Competition in the Air Transportation Sector

When American Airlines ties the knot with US Airways, it will become the largest passenger air carrier in the world. Assistant Professor Kai Hüschelrath, a competition economist at ZEW in Mannheim, explains the possible consequences of this mega merger.

The merger of American Airlines and US Airways will create the world's largest air carrier by passenger volume. What will this mean for competition on the air transportation market?

Horizontal mergers like this may have contrary effects on competition. On the one hand, they inevitably increase market concentration, and for this reason are suspected of reducing competition and increasing prices. On the other hand, they can bring about efficiency gains that counteract incentives for increasing prices.

What effects can we expect from the airline merger?

It is difficult to predict and quantify potential efficiency gains. What we can do is estimate the influence on competition. For instance, competition regulators can identify the routes on which the parties compete directly and the consequences likely to result if competition is weakened or eliminated by the merger. If it turns out that American Airlines and US Airways are the only carriers on numerous markets, the likelihood that their merger will increase prices is higher.

How will the merger effect international competition?

Analysis of competitive effects is sure to focus on the U.S. domestic market, but the merger will doubtless have international ramifications as well. Both carriers offer a large number of flights to destinations outside the U.S. and both are members of an international airline alliance. US Airways has been part of the Star Alliance since 2004. American is a founding member of Oneworld. While American is the only U.S. airline in Oneworld, Star Alliance is bigger and has United Airlines, the second-largest US carrier. As it is doubtful whether any airline alliance can survive in the long run without a major partner in the US, it would be better if the company that is produced by the merger between US Airways and American joined Oneworld. This move would preserve competition on transatlantic routes and on the international market.

What does this mean specifically for the German market?

If the merger plays out this way, then Air Berlin, member of Oneworld, can be expected to benefit, as the number of route connections and flight options will increase. Conversely, Lufthansa, member of Star Alliance, will lose connections in the short term with the exit of US Airways. But as United Airlines still remains in the Star Alliance, the effects are likely to be small and, at any rate, only temporary.

How will the merger impact the large connecting points –"hubs" – in the U.S.?

The efficiency gains aimed at can only be achieved by reorganizing the route networks. But reorganisation will change passenger volumes at the carrier hubs. American now has hubs in Dallas, Chicago, Miami, and New York (JFK); US Airways has hubs in Charlotte, Philadelphia, and Phoenix. The hubs in Philadelphia and New York are geographically close, combining these could be an option. And if one hub is eliminated, significant economic consequences can be expected for the airport it services.

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Photo: ZEW

ZEW DISCUSSION PAPERS

No 13-033 Dominik Schober: Static vs. Dynamic Impacts of Unbundling – Electricity Markets in South America.

No 13-032 Franz Westermaier, Brandt Morefield, Andrea M. Mühlenweg: Impacts of Parental Health Shocks on Children's Non-Cognitive Skills.

No 13-031 Michael Hübler, Alexander Glas: The Energy-Bias of North-South Technology Spillovers – A Global, Bilateral, Bisectoral Trade Analysis.

No 13-030 Patrice Bougette, Kai Hüschelrath, Kathrin Müller: Do Horizontal Mergers Induce Entry? Evidence from the U.S. Airline Industry.

No 13-029 Kai Hüschelrath, Sebastian Peyer: Public and Private Enforcement of Competition Law – A Differentiated Approach.

POLITICO-ECONOMIC ANALYSIS

Patent Protection in the Indian Market

This article examines the background for the Indian Supreme Court's rejection of patent protection for the cancer drug Glivec, manufactured by the pharmaceutical company Novartis. It provides some arguments that this verdict might not be seen as a signal how the Indian patent system will treat pharmaceutical inventions of global companies in the future.

Photo: © brytta/iStockphoto

India's pharmaceutical industry is specialized on the low-budget reproduction of medicaments.

A few weeks ago, a patent dispute between the Swiss pharmaceutical manufacturer Novartis and the Indian cartel authority became the subject of headlines around the world. Novartis had appealed the rejection of its patent for the drug Glivec, used to combat certain types of leukaemia and gastrointestinal malignancies, to the Indian Supreme Court, and ultimately lost the case.

Hindrance of Medical Progress

Novartis had argued that rejection of its patent for Glivec in India would hinder medical progress, since patent expirations would undermine the incentives for investments in the development of effective medications. By contrast, NGOs such as Doctors without Borders welcomed the verdict. They claimed it would assure that affordable generics could continue to be marketed in India. A monthly dose of Glivec costs about 2,000 euros, whereas the generic equivalent is currently available for only about 130 euros.

Observers have attributed an important signalling effect to this verdict for the development of the pharmaceutical industry, and not only in India. It affects globally active pharmaceutical corporations at a time when their markets in developed economies, due among other things to cost control measures in the health care industry, are only growing at a slow pace, whereas in the BRIC nations (Brazil, Russia, India, China, and South Africa), the pharma sector is reporting double-digit growth rates. The recent decision regarding Glivec reminds us that patent protection for other medications has been similarly restricted to a large extent in recent years.

This occurred in 2012, for example, to the German Bayer Group and its successful drug Nexavar, which is used to treat cancers of the liver and kidneys. The Indian courts compelled Bayer to license its blockbuster drug to the Indian generic manufacturer NATCO. According to the court decision, by way of compensation, Bayer was to be given six percent of NATCO's corresponding sales profits in India. It is anticipated that the sale price for a monthly dose of Bayer's original drug will fall significantly – from its current price of 4,000 euros to about 400 euros. This is the equivalent of the price of the generic copy currently marketed to a limited extent in India. However, Bayer has filed an appeal against this decision.

Is the recent decision regarding Glivec a test case that is an exemplary reflection of India's current strategy with patent protection for pharmaceutical inventions? To answer this question, several unique features and background issues related to this case need to be considered in more detail. When India enacted its patent law in 1970, patent protection in India for chemical compounds (including pharmaceutical active substances) was limited to a seven-year term and patent protection is restricted to process patents only.

Specialisation in Copying as a Result

As a consequence, India developed a robust pharmaceutical industry that specialised in copying known medications to produce generics at the lowest possible cost. As a result, competition in India in the pharmaceutical market was characterised by pure price competition. India became the world's "pharmacy for the poor", with a global market share of 20 percent of generics, and the world's third largest exporter of pharmaceuticals.

India's accession to the World Trade Organization (WTO) in 1995 made it necessary to adapt Indian patent law. WTO Membership comes with a requirement to implement the "Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS)". In the case of India, full implementation of TRIPS was required by the year 2005. Thus, as part of the third revision of India's patent law in 2005, patents for pharmaceutical products with a term of 20 years were introduced. Since then, it has been possible to apply for product patent protection in India for any invention with a priority year of 1995 or later. (The term "priority year" refers to the year of the first patent filing anywhere in the world for an invention; the option also exists to extent national patent applications in other countries within one year after priority filing.)

POLITICO-ECONOMIC ANALYSIS

As a result of the changes in the patent law, multinational pharmaceutical firms were able to gain a growing market share in India. Cooperation agreements between Indian drug manufacturers and firms in the United States, Europe, and Japan, launches of new pharmaceutical companies, and (partial) take-overs have all altered the current market in India.

Definition of Novelty is Important

Of critical importance in the context of the Glivec verdict is the definition of novelty for pharmaceutical products in India. The Indian patent law stipulates that patents may only be granted for new chemical compounds or variants of known active substances whose additional efficacy has been proven. This strict definition was intended to prevent the often-discussed practice of “evergreening”, or introducing trivial variants of patent-protected drugs simply for the purpose of extending the term of patent protection. With this regulation, the Indian patent law sets a high bar for the patentability of further developments of known active substances. At the same time, Indian and other manufacturers of generics benefit from the strict provisions of the law.

Further Development of Substance

Thus, Novartis’s appeal was directed both against the non-granting of a patent for Glivec and against this provision of the Indian patent law. According to the arguments made by Novartis, Glivec represented a significant further development of the active substance imatinib mesylate. As Novartis saw it, the further developed active substance, imatinib mesylate in ß-crystalline form, had shown significantly improved properties with respect to solubility and absorption capacity, which for the first time made oral administration possible. However, the Indian Patent Office contested the claim for the existence of additional benefits and ruled that Novartis’s statements in this regard were unproven.

The Supreme Court of India has now concurred with this opinion. In addition, by rejecting Novartis’s appeal, the Supreme Court of India made it clear that it sees no violation of the TRIPS Agreement in the terms of the Indian patent law regarding the required level of the inventive step for pharmaceutical products, namely the gain in efficacy described above.

The rejection of Novartis’s appeal is also based upon one additional argument, which makes necessary a review of the patent history of the active substance. Novartis first applied for a US patent for the active substance imatinib mesylate in 1993, and in 1996, the United States Patent Office issued the patent.

A patent application to the European Patent Office followed and a patent was ultimately issued in Europe as well. In India, a patent application was filed for a modified version of Glivec in 2006, which did not refer to the 1993 patent for “imatinib mesylate”, but rather, to a 1997 application to the Swiss Patent Office. However, the Indian Patent Office argued that Glivec is a polymorph of “imatinib mesylate”, and that since its initial patent application dates from 1993, no patent could be issued in India.

Court Decision in Different Light

In addition, one needs to take into account that in a patent infringement case brought in England, Novartis argued that the drug VEENAT, made by the Indian manufacturer NATCO, had violated patent protection for Glivec and referred back in its arguments to the 1993 patent application. Given this history, the Indian Supreme Court’s Glivec decision now appears in a different light. For one thing, the 2006 patent application in India relates to an invention that originated in 1993, a time when India still did not issue patents for pharmaceutical products. For another, it remains in doubt whether the application is to protect an invention whose improved efficacy has been proven. Recognition of the patent for the medication Tasigna, which is intended to replace Glivec at the time that world-wide patent protection for Glivec expires in 2015, has proceeded without any problem in India.

Therefore, the Glivec decision cannot be interpreted as further evidence of discrimination against Western pharmaceutical firms. The signalling character of the verdict has more to do with the fact that the Indian Patent Office places value in the strict fulfilment of the novelty criterion for patent applications. It would seem clear that “creative” descriptions of innovative character in patent applications have no prospect for success in India in the absence of persuasive evidence of additional therapeutic benefits. However, the debate about novelty and inventiveness level and the strategic use of patents in competition is not limited to India. This is demonstrated by the global discussions about difference between patent systems and their application.

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Patent applications in India for pharmaceutical products have little prospects for success unless there is persuasive evidence of additional therapeutic benefits.

CONFERENCES

The First Annual MaCCI Conference Set Different Perspectives on Competition and Innovation

On 15 and 16 February 2013, the Mannheim Centre for Competition and Innovation (MaCCI), a joint initiative of the University of Mannheim and ZEW, presented its first annual conference on the subject of Competition and Innovation at ZEW in Mannheim.

Roman Inderst from the University of Frankfurt was one of the keynote speakers of the conference.

Some 100 participants from the academic and business communities were welcomed to the first annual MACCI conference at ZEW in Mannheim. The focus of the first conference day was on "vertical restraints to competition", a topic that was intensively discussed from both economic and legal perspectives in the course of several keynote speeches and two panel discussions.

First, Thibaud Vergé (Autorité de la Concurrence) and Giorgio Monti (European University Institute) presented guest lectures on the subject. Next, the two guest speakers were joined by Jorge Padilla (Compass Lexecon) for the first panel discussion on "The Law and Economics of Selective Distribution Systems".

Conference Divided Into Two Parts

The keynote speakers for the second part of the programme were Roman Inderst (University of Frankfurt) and Alison Jones (King's College), who spoke about resale price maintenance, examining both economic and legal aspects of this issue. The two keynote speakers were joined by Pierre Larouche (Tilburg University), Laura Phaff (Office of Fair Trading) and Patrick Rey (University of Toulouse) for the second panel discussion.

30 Presentations on Research Findings

During the second day of the conference, 30 speakers presented their latest research findings on general economic and legal issues related to competition policy during a series of twelve sessions. These sessions were supplemented by two lectures that were given by Volker Nocke, who spoke about horizontal merger policy, and Luis Cabral, who presented case examples to illustrate the importance of exclusive contracts as barriers to market entry. The conference concluded with a speech by William Kovacic (George Washington University), who is regarded as one of the world's leading experts in the field of competition law. He spoke about the importance of multifunctional competition authorities.

Additional information can be found at: www.macci-mannheim.eu

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MaCCI is short for the **"Mannheim Centre for Competition and Innovation"**, a research association with joint financial support from the State of Baden-Württemberg and the Leibniz Association. MaCCI aims to further academic exchange between jurists and economists, thereby creating new momentum for research on competition, regulation and innovation policies. MaCCI is a joint project of ZEW and the School of Law and Economics of the University of Mannheim. In addition to vertical restrictions on competition, other core subjects researched at MaCCI include the abuse of market power, merger control, the private and public enforcement of antitrust laws, regulation of the telecommunications and energy sectors, and competition in the health care industry.

UPCOMING MACCI EVENTS

June 24-25, 2013
Mannheim Energy Conference

October 17-19, 2013
MaCCI Workshop "Procurement and Contracts"

November 15-16, 2013
MaCCI Conference on the Law and Economics of State Aid

November 21, 2013
MaCCI Workshop "1. MPI-ZEW Law & Economics Workshop"

December 5-6, 2013
MaCCI Competition and Regulation Day

INSIDE ZEW

ZEW Workshop in Brussels: The Role of Corporate Taxation in a Future Fiscal Union

The participants of the workshop in Brussels listened carefully to Clemens Fuest opening remarks.

With participants from business, European institutions and academia a workshop organised by the Centre for European Economic Research (ZEW), Mannheim, shed light on the potential role of taxation and tax harmonization within the evolution process of a European fiscal union.The workshop took place on April 18, 2013 at the representative offices of the State of Baden-Württemberg in Brussels. In his introductory remarks on the issue of taxation in a fiscal union, Clemens Fuest, ZEW's new president, stressed that against the backdrop of the current economic and fiscal challenges in the European Union, removing tax-induced obstacles in the Internal Market is of great importance to advance economic growth. Christoph Spengel, Professor for Business Taxation at the University of Mannheim and Research Associate at ZEW, and Dr. Erik Röder, Senior Research Fellow at the Max Planck Institute for Tax Law and Public Finance in Munich, then discussed the European Commission's proposal for a Common Consolidated Corporate Tax Base (CCCTB).

They pointed out that a triple-CTB, involving consolidation and formula apportionment in addition to a common tax base, still features several unresolved issues, whereas a double-CTB would already entail significant benefits for companies. So there are many hidden problems. Referring to the study "Common Corporate Tax Base (CC(C)TB) and Determination of Taxable Income" recently published by ZEW and the University of Mannheim in collaboration with Ernst & Young, Spengel and Röder pointed out that the differences between profit determination rules in the proposal and currently existing national rules in member states are limited from both a qualitative as well as quantitative perspective.

In addition to the speakers, participants in the following discussion, which was moderated by Christoph Spengel, included Dr. Martina Baumgärtel, Director of Group Regulatory Policy at Allianz SE, and Philip Kermode, Director of the EU Commission's Directorate-General for Taxation and Customs Union.

Philip Kermode provided insights into the current state of the debate regarding the CCCTB Directive at the EU level as well as the subsequent timetable.

Martina Baumgärtel emphasized the importance of the CCCTB for the European competitiveness, especially toward the USA and Asia. The participants next discussed the CCCTB model in the context of tax competition and the efforts on the part of the OECD and the EU to combat aggressive tax planning.

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INSIDE ZEW

ZEW Researcher Honoured with Best Paper Award

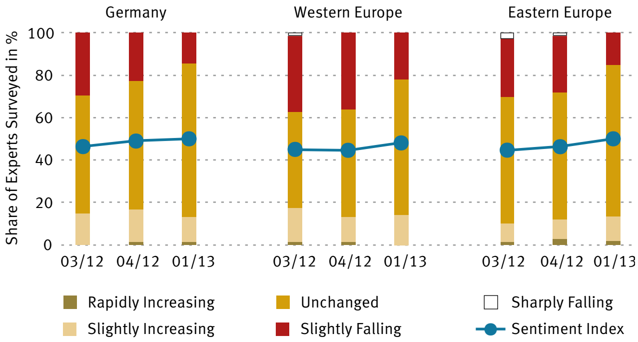
Paula Schliessler, researcher in the ZEW Research Department "Industrial Economics and International Management", was honoured with the Bent Dalum PhD Award 2013 at the DRUID Academy Conference in Aalborg, Denmark, in February 2013. The awarded paper entitled "The Effect of Patent Litigation on Firm Performance – Evidence for Germany" addresses the mechanisms of the German patent litigation system and the impacts of several litigation outcomes on the parties involved. Download the paper at http://www.zew.de/publication6919 as ZEW Discussion Paper No. 13-015.

Mannheim Corporate Tax Day 2013

The University of Mannheim and ZEW are organising the seventh Mannheim Corporate Tax Day this year. On June 20, 2013, renowned speakers from the areas of science, business, and administration will shed light on current trends of national and international company taxation. This year's focus will be on aspects of tax planning in international companies resulting from current legal developments in Germany as well as at OECD and EU levels. The combination of presentations and workshops will allow participants to examine the topic in depth. All presentations will be held in German. Further information and registration: www.unternehmenssteuertag.de

FACTS AND FIGURES

After a Difficult Year 2012 Prospects for Rail Freight Improve Slightly



Source: ZEW

2012 was difficult for rail freight traffic: freight volumes declined again by almost three percent. The vast majority of the experts participating in the ProgTrans/ZEW Transportmarktbarometer (Transport Market Barometer) do not expect any changes in the coming months. Some 20 percent even expect slightly reduced freight volumes for road and rail transport in Western Europe. The weakness of the Western European economy can be seen as a major reason. However, the general sentiment has slightly improved compared to the previous quarters.

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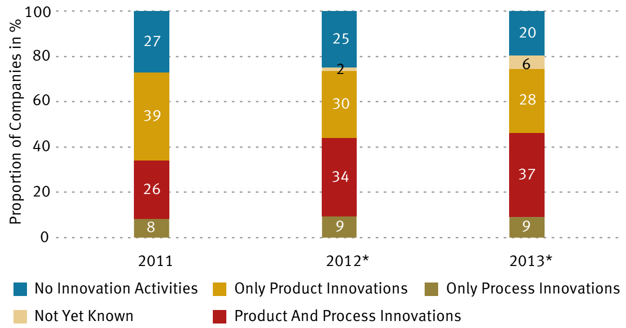
Process Innovations are Becoming Important for German Machine Manufacturers



* Target Figures from Spring/Summer 2012

Source: ZEW, Mannheim Innovation Panel

The German engineering expanded its activities to introduce new procedures in 2012. The proportion of firms with process innovations in 2012 increased to 43 percent, after 34 percent in 2011. For the year 2013, a further increase is planned at 46 percent. So many engineering companies respond to increased competition by cooling down investment activity. Process innovations are used firstly to reduce costs, but they also allow quality improvements in products.In this way they are supporting the competitiveness of enterprises.

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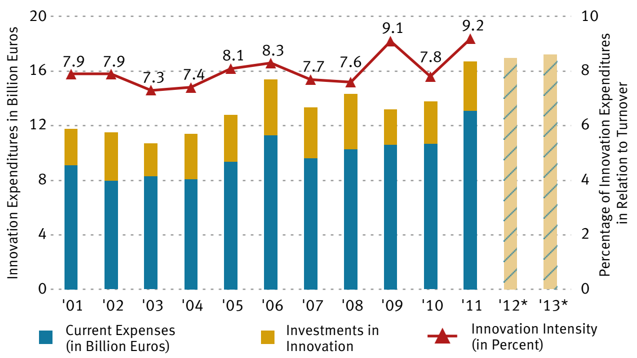
Innovation Intensity of Electrical Industry Reaches New Peak



* Target figures from spring/summer 2012

Source: ZEW, Mannheim Innovation Panel

In 2011, the German electrical industry increased its innovation expenditures to 16.7 billion euros (20.6 percent more than in 2010). The expenditures on new products and processes accounted for 9.2 percent measured against the turnover. The increase of innovation intensity is the result of innovation efforts in the context of the transition to renewable energy sources. The industry is planning to keep expenses on this high level in the two subsequent years. Innovation budgets in both 2012 and 2013 will amount to approximately 17.0 billion euros.

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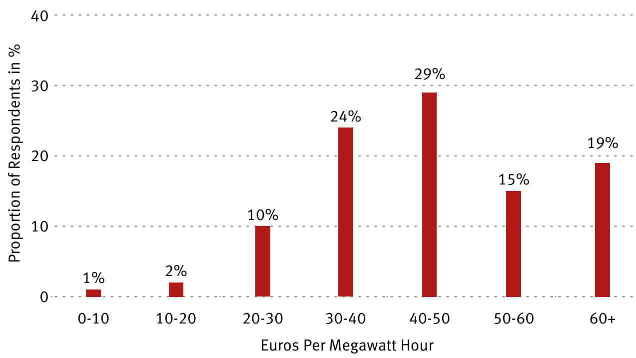
Break-Even Price of Unconventional Gas in the Whole European Union



Source: ZEW

The median estimate for the break-even price of unconventional gas in the EU is between 40 and 50 euro per megawatt hour (euro/MWh). Even 19 percent of the respondents expect a break-even price above 60 euro/MWh. These break-even price expectations are substantially above current wholesale market prices in the United Kingdom, the Netherlands and Germany, which are about 27euro/MWh. These are the results of the ZEW Energy Market Barometer, a survey conducted by ZEW every six months. The current survey was conducted in November 2012.

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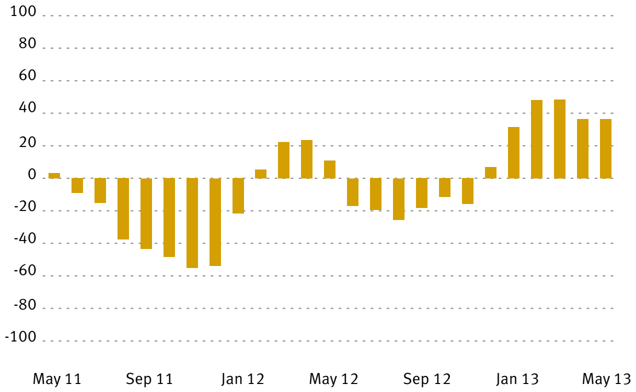
FACTS AND FIGURES

ZEW Financial Market Test May 2013



Balance of positive and negative assessments concerning economic development in Germany. Source: ZEW

Germany: ZEW Indicator Remains Unchanged

After a sharp decline in April 2013, the ZEW Indicator of Economic Sentiment for Germany moved sideways in May 2013. The indicator has gained 0.1 points compared to the previous month and is now hovering at the 36.4-points mark. The assessment of the current economic situation for Germany declined only marginally in May 2013. The respective indicator has fallen by 0.3 points and now stands at the 8.9-points mark.
Additionally, economic expectations for the eurozone slightly increased in May. The respective indicator improved from 24.9 points by 2.7 points to 27.6 points. Furthermore the indicator for the current economic situation in the eurozone remains almost unchanged at the minus 76.8 -points mark. In comparison to April 2013 it went down 0.8 points.

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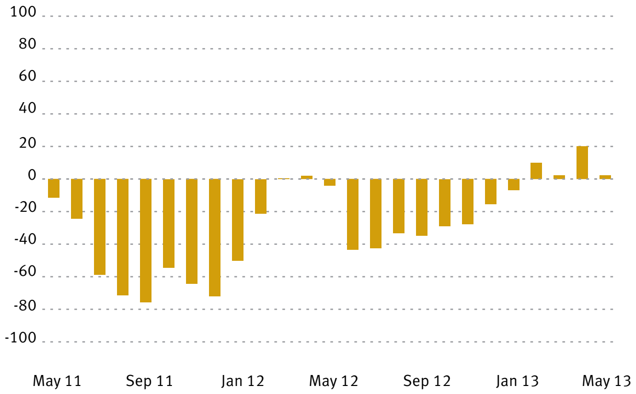

Balance of positive and negative assessments concerning economic development in Switzerland. Source: ZEW, Credit Suisse

Switzerland: Back on the Level of March 2013

In May 2013 the ZEW-CS Indicator of economic expectations for Switzerland falls by 17.8 points to a level of 2.2 points. The indicator falls back to the level of March 2013. Expectations towards Swiss exports pulled back. The balance of export expectations declines from a solid level of 21.0 points in April to negative territory of minus 2.5 points in May. The future development of unemployment is also judged more pessimistic. 34.1 percent (+3.3 percentage points) of respondents project that Switzerland's unemployment rate will increase, and no one foresees an improvement. The assessment of the current economic situation improves mildly. The respective indicator increases reaching a level of 20.0 points. By May 2013, 80.0 percent of analysts rate the present economic situation as "normal".

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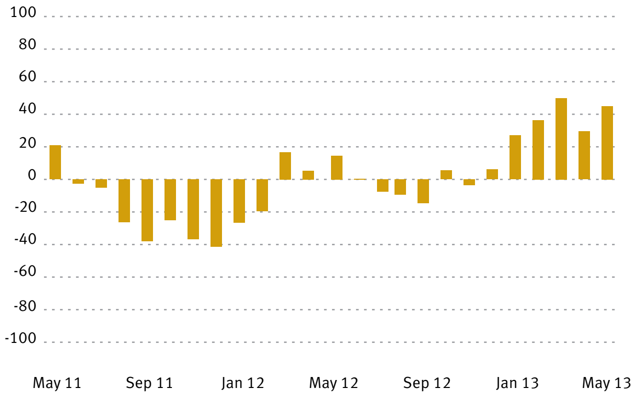

Balance of positive and negative assessments concerning economic development in the CEE region. Source: ZEW

CEE Region: Optimistic Trend Recurs

In May 2013 economic expectations for Central and Eastern Europe including Turkey (CEE) display a revision of last month's decline, thereby crawling back to a positive trend.
The ZEW-Erste Group Bank Economic Sentiment Indicator for Central and Eastern Europe increases by 15.4 points. The balance of experts' expectations is currently set at 44.9 points.
In spite of prevailing uncertainty in the Eurozone, experts' optimism increases in May for all countries in the CEE region and for the Eurozone. The by far strongest increase is displayed by the economic sentiment for Romania. In May 2013, the experts' assessment of the current economic situation for the CEE region remains almost unchanged at a level of 6.7 points after an increase by 0.7 points in the last month.

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OPINION

The Reform of International Taxation: An Uphill Battle

The taxation of multinational companies is not a topic suited for soapbox platitudes. It is simply too complex. Yet politicians continue to make it a subject of public debate. The governments of France, Germany, and the UK have declared that public coffers are threatened by the tax avoidance practices of multinational companies. EU Council President van Rompuy placed this issue on the agenda of the EU summit in May. And the president of France, François Hollande, has even declared that he wants to "eradicate" tax havens.

Generally it is a good thing that policymakers are dealing with the problem of tax avoidance. Yet there is a danger that this newfound attention for the issue will devolve into nothing more than an effort to pass the blame for the horrendous state of public finances, with multinational companies simply serving as a whipping boy. We can hardly blame companies for taking advantage of opportunities to lower their tax burden, provided they are not violating the law. Clearly, there are gray areas in which the dividing line between legal tax avoidance and illegal tax fraud is blurry. And while there are clear cases of tax evasion, these mostly concern individuals, and not multinational corporations.

In any event, tax fraud and tax avoidance are only one side of the coin. On the other side is the danger of double taxation. Invariably, multinational companies are faced with several countries seeking to tax their profits. One example is the upper limit on the deductibility of interest payments in Germany. Multinational companies that finance their activities with credit obtained from foreign subsidiaries are required to include interest payments taxable profits in Germany. However, these interest payments are also taxed as revenues abroad. In addition, some governments that denounce international tax avoidance create rules in their taxation systems that promote such avoidance. In the UK, for example, the so-called Patent Box came into effect on 1 April 2013. According to this rule, revenues from patents receive favorable treatment, with a lower tax rate on earnings of 10%. This creates an incentive to shift taxable profits to the UK. The reform of the international tax system does not merely require tax rules to become stricter. Double taxation as well as non-taxation need to be minimized. And this can only be achieved with action at the EU and global level. The international community needs to come to an agreement on if and how the right to tax corporate profits should be reallocated.

Source country taxation is an important topic in reform discussions. This form of taxation has the advantage of making the relocation of profits to low-tax countries much more difficult. However, double-taxation agreements and European law place severe restrictions on source taxes . Changing the existing rules would be difficult, but not impossible. Participating countries would have to accept two things that they don't like: First, while they would acquire some taxation rights, they would have to forgo others. If cross-border interest payments and license fees are taxed at source, then they cannot be taxed a second time elsewhere. Germany, for example, would have to forgo taxing interest payments and license fees obtained by domestic firms from abroad. At a minimum, taxes paid abroad would have to be credited against taxes in Germany. Second, countries that collect source taxes lose attractiveness for international investment. For this reason, many countries do not collect such taxes. Accusations and inflammatory language are little help when it comes to reforming the international tax system. Reform requires tough negotiations, and making progress will always be an uphill battle. It remains to be seen whether international policymakers will demonstrate the patience and willingness to compromise that is essential for progress on this issue.

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