

THE BEST IS YET TO COME

*The ZBW shapes the library of the
future—the ZBW does Science 2.0*



Leibniz-Informationszentrum
Wirtschaft
Leibniz Information Centre
for Economics



THE ZBW IS THE WORLD'S LARGEST INFORMATION PRO- VIDER FOR ECONOMICS

*4.3 million volumes, 31,500 current journals, 319 databases,
9 million datasets in EconBiz, 47,000 Open Access documents
in EconStor*

New acquisitions



21,405

working papers

The comprehensive collection of theoretical and empirical literature for economics establishes the ZBW – Leibniz Information Centre for Economics as the library with the world's largest holdings of economic literature, ahead of the London School of Economics and Political Science Library (UK) and the Library of Congress (USA). At the ZBW, students and researchers in economics and business studies can find nearly every international publication relevant for their work.

The ZBW's internationally acknowledged competence in the field of economics and librarianship is reflected in the quality and intricate detail of its metadata. This reputation persuaded the business daily "Handelsblatt" to entrust the institution with providing the data that underlie its "Handelsblatt BWL" rankings, which identify the leading researchers in business studies in Germany, Austria and the German-speaking parts of Switzerland.



19,646

online documents



17,392

printed books



Handelsblatt BWL ranking

<http://tinyurl.com/aoe42sy>



ZBW podcast

Kirsten Jeude explains
metadata management

<http://tinyurl.com/bjbew6w>



Holdings

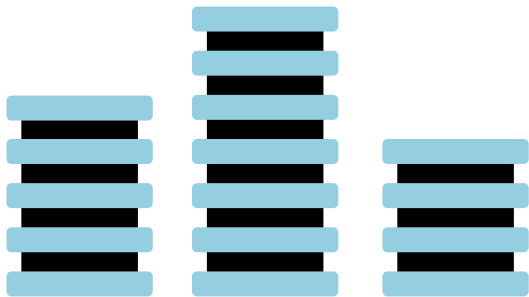
31,444

current journals (total)



19,700

digital journals



319

databases



79

kilometres of shelving

THE ZBW SUPPORTS RESEARCH AND PUB- LISHING PROCESSES IN ECONOMICS

Research, publishing and service—these are the three pillars of integrated information supply. The ZBW offers high-quality online services for all three.

*“With the EconBiz App
I get fast and reliable access to
economic literature, whether I am in
Milan, London or Hamburg.”*

Mattia Montagna

PhD student in Quantitative Economics,
Kiel Institute for the World Economy

Research with EconBiz

Nine million datasets with one click





The flagship of digital literature supply for economics is EconBiz. With EconBiz, the ZBW offers a free portal for international subject-specific information to researchers, teachers and students where they can find the most important works in economics and related disciplines. For mobile use, the EconBiz app was programmed for iPhone, iPad and Android smartphones.

Today, EconBiz is integrated into the working environments of economists all over the world. Researchers in economics can search EconBiz regardless of their location or directly access a million free online documents through EconBiz Open—free of charge and without access restrictions.

EconBiz is also present on the online platforms of international conferences such as the Global Economic Symposium (GES), which the Kiel Institute for the World Economy organises annually in cooperation with the ZBW. The portal can also be used through Social Media channels such as Facebook and Twitter, where students and researchers may find the interface more intuitive.

Did you know?

- EconBiz is used not only in Germany, but also in the USA, UK, Austria, Switzerland, Netherlands, Taiwan, China, Lithuania and India.
- The major share of publications in EconBiz is written in English, but users can also find articles in 38 other languages, ranging from Afrikaans to Ukrainian.



EconBiz Open

With one million free online documents:
open.econbiz.de

EconBot

The automated reference service on
Twitter: twitter.com/econbot



ZBW podcast

Dr Tamara Pianos explains
EconBiz

<http://tinyurl.com/b94ocp6>



ZBW-EconBiz-App

<http://tinyurl.com/aj64rxy>



“At Koç University we regard the cooperation with EconBiz Open as an opportunity to offer our students access to the latest findings in international business and economics research and to build networks within their global community. We also see it as a chance to teach efficient research strategies to our future academics.”

Mithat Zencir

Reference Librarian – Business & Economics,
Koç University, Istanbul

THE TOP TEN COUNTRIES OF ECONBIZ



“With its Open Access service EconStor the ZBW has created a giant archive for economic literature. This means I can easily do my research anywhere in the world and present my own findings to a large readership.”

Dr Toman Omar Mahmoud

Postdoc, expert for development and international migration,
Kiel Institute for the World Economy

Publishing with EconStor

*Increasing the international visibility
of publications*



Scientific reputation is accorded to scholars whose works are cited repeatedly. If they deliver new and high-quality results, and if they can be found easily on the internet, their publications are cited more frequently.

This is the mission of the publication server EconStor: to make research findings in economics accessible in Open Access and thus internationally visible. EconStor distributes the research findings of economists into highly frequented international databases and search engines. Since 2008, more than 100 university-affiliated or independent research institutes, such as the Bundesbank or the ZEW Centre for European Economic Research, have entrusted the dissemination of their publications to EconStor. Almost 50,000 articles can be accessed online and in full text in this way, including 85 per cent of all working papers in economics published in Germany.

Did you know?

- Researchers access documents in EconStor from the following countries: Germany, USA, France, UK, China, India, Spain, Russia, Japan, Austria.
- The most successful paper in EconStor achieved 12,000 downloads. The average download rate for the Top 100 working papers is 2,800.
- On average, research papers published in Open Access are downloaded and cited three times more frequently than licensed works. See Lawrence (2001) in Nature, 411(6837), 521.



The main principle of EconStor is Open Access. Free access to scholarly information facilitates the working processes of researchers and increases the visibility and findability of their publications. Immediate and unlimited knowledge transfer without Open Access has become unimaginable in the modern scientific community.



ZBW podcast

Olaf Siegert explains Open Access

<http://tinyurl.com/at24q3h>



“We significantly increased the number of our downloads through RePEc. ZEW values the service of EconStor which reliably transfers our discussion paper series into RePEc.”

Stephan Reichert

Assistant to the board of directors, ZEW Centre for European Economic Research

“We use the charge-free full service of EconStor for our publications. This increases our visibility in databases and search engines without any efforts on our part.”

Professor Justus Haucap

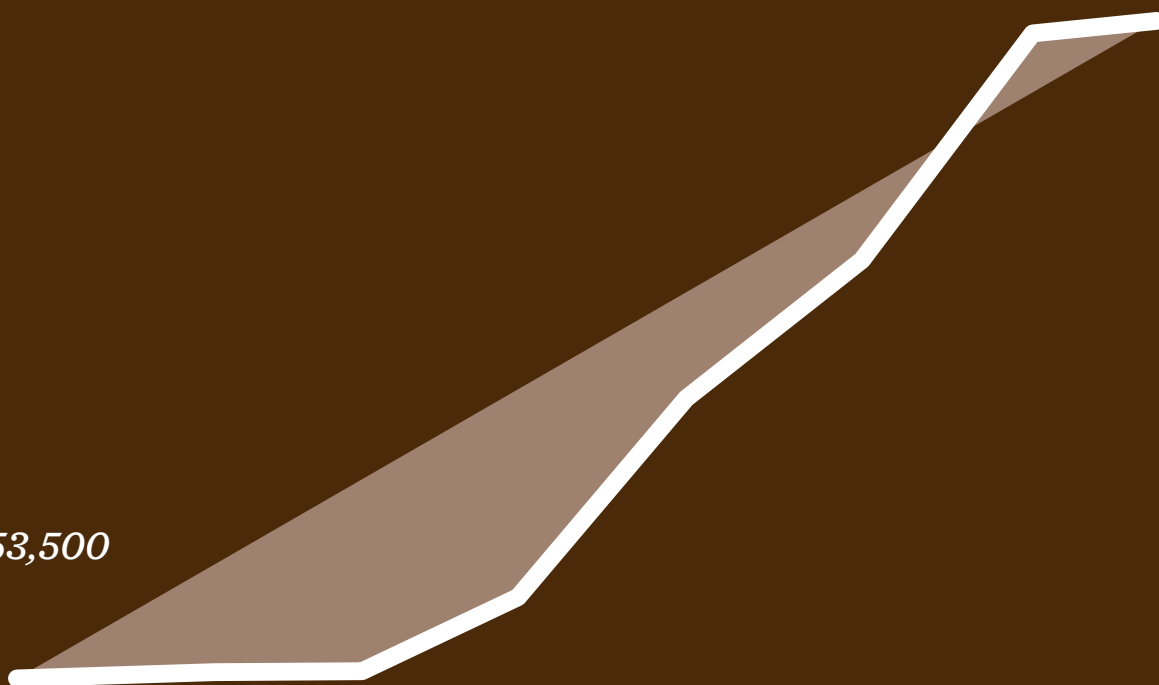
DICE – Düsseldorf Institute for Competition Economics

EVOLUTION OF USAGE AND CONTENT



*1.3 million
downloads*

153,500



5,116

*47,479
documents*



2006



2007



2008



2009



2010



2011



2012

“The ZBW offers uncomplicated and highly individual support in my research for data and literature so that I can concentrate fully on my studies.”

Kirstine Kilsgaard
Student at the Christian-Albrechts-
University of Kiel

Service with EconDesk

Individual multimedia research assistance





Students as well as PhD candidates often confront unexpected problems during their research. The ZBW offers individual support with its reference service, EconDesk. EconDesk answers questions by email, online chat and telephone or during a personal appointment with a librarian in our branches in Kiel and Hamburg. EconDesk can be accessed through the EconBiz app for iPhone, iPad and Android smartphones or on social networks.

Did you know?

- In 2008, the initiative “Germany – Land of Ideas” honoured the EconDesk reference service with its “Landmark in the Land of Ideas” award.
- 98 per cent of all EconDesk users would recommend this service to their best friend.



EXAMPLES OF CUSTOMER QUERIES

Testing at the ZBW

New functions in the ZBW's online services are submitted to comprehensive usability tests. A team of information scientists and psychologists ensures that the website is user-friendly and gives recommendations for its optimisation. A state-of-the-art usability test lab is available to the team at the Hamburg branch of the ZBW.



ZBW podcast

Dr Stephanie B. Linek explains usability testing.

<http://tinyurl.com/aquvphg>



Find more ZBW services and products at www.zbw.eu.

“How many return migrants are there in Ghana, Mozambique, Tunisia and Algeria, and how does this impact new firm formation?”

“IS THERE ANY
LITERATURE ON
ELECTRICITY
BALANCING?”

“Where do I find information about the marketing campaigns of national and foreign public transport associations? Are there statistics on the usage of public transport in the German Länder?”

“I need information on the worldwide salt industry: salt-producing industry and companies, distribution of salt, salt-processing industry and companies, distribution channels for salt.”

READY FOR THE HEIRS OF KEYNES, HAYEK AND CO.— THE ZBW RESEARCHES SCIENCE 2.0.

Application-oriented research aims to develop internet-based working environments to support excellence in economic research

→ **Knowledge Discovery**

Arne Martin Klemen

Research Assistant in Knowledge
Discover

→ **Web Science**

Dr Anna Maria Koeck

Head of Innovation Management
and Social Media



→ **Science 2.0**

Dr Timo Borst

Head of Innovative Information
Systems and Publishing
Technologies

→ **Management of Research Data**

Sven Vlaeminck

Project Manager for Research
Data Management

→ **New Paradigms for Information
Provision**

Dr Stephanie B. Linek

Head of Usability Lab



Libraries are facing changes of a magnitude never seen before. The ZBW wants to take an active part in these changes, instead of merely watching them passively. This happens in accord with the vision guiding research at the ZBW:

The development of internet-based working environments to support excellence in economic research.

The ZBW has identified the three “Grand Challenges” that define the future of scholarly information provision:

- New working habits
- New technologies
- New forms of usage

At present, the ZBW pursues the following themes:

- **New paradigms for information provision:** (New working habits)
- **Web Science:** (New forms of usage)
- **Knowledge Discovery:** (New technologies)
- **Management of Research Data:** (New technologies)

All these themes can be summed up in one term: **Science 2.0**



Professor Klaus Tochtermann
ZBW director

“The concept of Science 2.0 picks up on a phenomenon that has been going on for some time, but whose mechanisms of action have not yet been researched: the gradual shift of science towards entirely different and primarily digital means of participation, communication, collaboration and discourse in the research and publishing processes. Scholars increasingly use wikis, blogs and other collaborative communication channels, such as social networks, to share ideas, theories, concepts and the resulting findings online. The ZBW investigates how the World Wide Web and its many Web 2.0 applications engender sustained change in the research and publishing processes of the scientific community and what the underlying mechanisms of action are.”



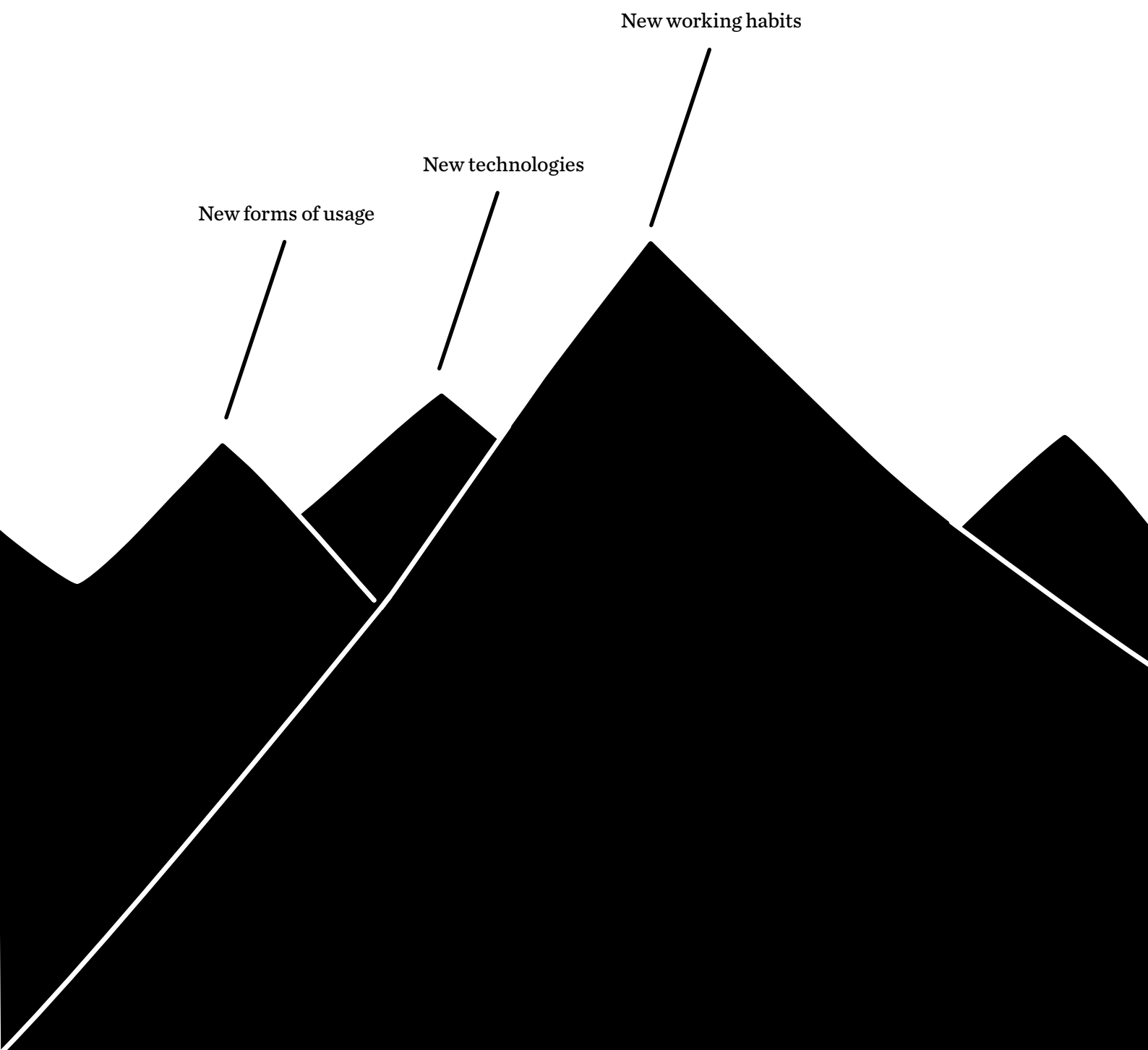
ZBW podcast

Professor Klaus Tochtermann explains Science 2.0

<http://tinyurl.com/aksbw6g>



THE GRAND CHALLENGES OF ZBW RESEARCH



New working habits

New paradigms for information provision

Researchers increasingly communicate and cooperate on the internet, in virtual research environments, in digital research libraries or in social networks. Scholarly working habits are changing, which creates new challenges for scholarly information provision and raises new questions:

- How do scholars work on the internet?
- What is the best way for scholars to have relevant literature, customised to their individual working habits, delivered to them in the environment where they are already active online?

These and similar issues are the subject of the first main research focus at the ZBW. The large EU-funded project EEXCESS—“Enhancing Europe’s eXchange in Cultural, Educational and Scientific Resources”—uses a completely novel approach to information dissemination in order to link web content, such as images, videos, infographics, statistics or texts from social media channels and blogs, with cultural, educational and scientific content in a personalised and contextualised manner.

“Take the content to the user, not the user to the content” is the basic idea of the project according to Professor Klaus Tochtermann, ZBW director.

The ZBW – Leibniz Information Centre for Economics cooperates with ten other European partners in EEXCESS. Within this project, the ZBW is primarily concerned with the design of novel, linked and multidisciplinary information landscapes and with the technical integration of its research portal EconBiz into these environments. The ZBW also ensures that the project’s research findings become part of the public debate and find sustained use.



The **project partners** of the ZBW are based in Germany, Austria, Switzerland, France and the United Kingdom. The project is funded with 6.9 million euros and scheduled to run for 42 months.

www.eexcess.eu

“EEXCESS departs from the traditional paradigms of libraries whose primary concern is to create as many incentives as possible for researchers to come into the library in order to use its literature. In the future, it is rather a question of libraries using the numerous possibilities of Web 2.0 in order to provide literature to researchers at their point-of-need, which can be a virtual research environment, a wiki, a blog or a social network.”

Professor Klaus Tochtermann
ZBW director

“It’s time to change the way we do research. This is one of Mendeley’s maxims. Therefore we collaborate with top universities in US and Europe. With ZBW we have another renowned, high-profile partner for bringing research support to the next level.”

Dr Victor Henning
Co-Founder & CEO, Mendeley Ltd.



New forms of usage

Web Science

Many of the new scholarly working habits, characterised by participatory applications of the World Wide Web, depend on tools such as wikis or blogs, which originally were not designed to carry out research. With this in mind, the research complex Web Science focuses on the following questions:

- How do researchers use the currently available participatory tools on the World Wide Web?
- What are the general aspects of the interaction between the usage of such modern tools and research, particularly in economics?
- What are the requirements that tools must fulfil if they are to support research work even better than before?

In order to investigate these questions thoroughly, the ZBW puts the socio-technological phenomena of the World Wide Web at the centre of its second research focus, Web Science.

The ZBW concentrates its Web Science research on the analysis of collaborative usage behaviour and usage patterns in web-based communication and research environments. It adopts instruments of innovation management to initiate interaction with researchers, using the Open Innovation approach as its central tool. This approach deliberately opens the innovation process to involve external stakeholders actively in the idea-finding process for the development of ZBW products. In 2012, the ZBW received the “Movers and Shakers in Libraries Award” for its excellent work.

The ZBW also uses Social Media channels to make its services directly available on the Social Web, where thousands of students and scholars spend their time. The ZBW primarily uses Facebook, Twitter and Google+ to provide

the target audience with information from the world of economics and news from the institution. The ZBW Twitter service currently ranks among the Top Ten of Twitter accounts for economics, as identified by the business daily “Handelsblatt”.



ZBW podcast

→ *Dr Anna Maria Koeck* explains innovation management

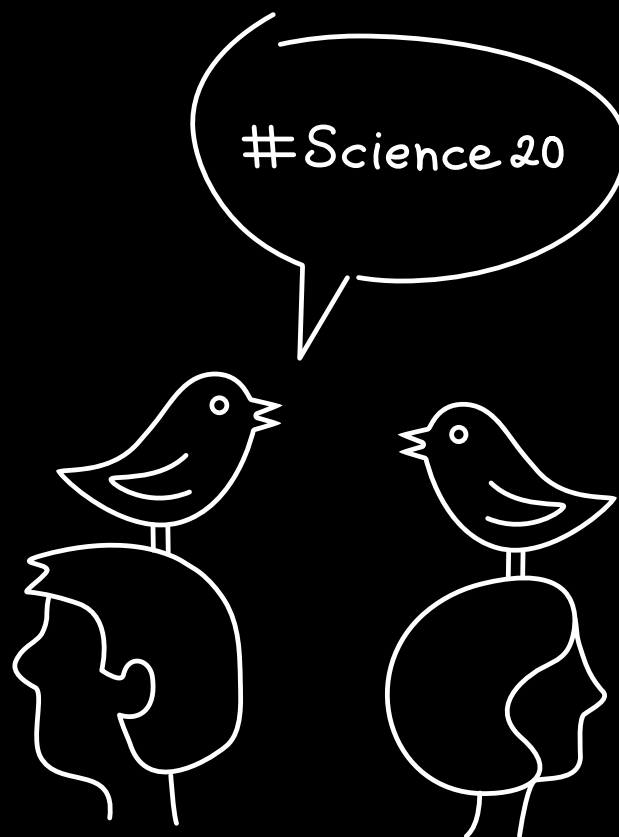
<http://tinyurl.com/aq9h6nx>



→ *André Vatter* explains community management

<http://tinyurl.com/b3bsz3h>





New technologies

Knowledge Discovery

Research findings about new usage behaviour lead directly to the development of new technologies. The main objective here is the discovery of unknown, subject-specific relations between digital objects from large document corpora on the World Wide Web. Today's search technologies are based on delivering such documents in the results of a query that contain the search term used in the query as often as possible. This search paradigm does not deliver documents which do not contain the search term, but encompass content on a related topic and could thus be relevant, in the results list of a query. In this context, the investigation of new search paradigms is the subject of the third research focus, Knowledge Discovery.

The ZBW works in various projects to release and migrate bibliographic metadata and its own set of concepts, the "Standard Thesaurus for Economics", on to the so-called Semantic Web. The Semantic Web is an extension of the World Wide Web, where all information expressed in human language is described in ways that computers can "understand" and process based on this "understanding". Once these machine-readable data are published on the Semantic Web, they can be linked with the datasets of other institutions, generating new meaning and the basis for further applications. For instance, it is possible to offer literature for related disciplines such as social or agricultural sciences based on a search for economics.

International networking with other research teams and content providers is of major importance here. The ZBW participates in top-class working groups, for instance in the Linked Library Data Incubator Group of the W3C, a consortium coordinating the further development of the

World Wide Web. It also regularly organises conferences such as the "SWIB – Semantic Web in Libraries". In 2012, the ZBW gained recognition with the Best Paper Award for a contribution on this topic to "Networked Digital Technologies", an internationally renowned Semantic Web conference.

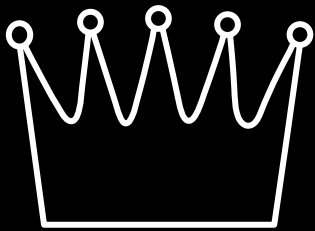


ZBW podcast

Dr Atif Latif explains semantic technologies

<http://tinyurl.com/cschs9p>





\neq



Management of Research Data

Transparency in scholarly publishing

At present, economists rarely offer their data to others for repurposing—in contrast to other research disciplines, in particular the natural sciences. This ignores the obvious advantages of data sharing: research data can be reused and expensive collection procedures and duplicate work can be avoided. In addition, the scholarly discovery process can be accelerated through such forms of collaboration. Several ZBW projects are intended to foster the sharing of research data. With the fourth research focus, Management of Research Data, the ZBW aims to be a competent partner for research data in economics and the corresponding technologies.

Scientists are keen to have exclusive use of their own data for as long as possible; they have spent a long time collating and processing these data, after all. The efforts to promote the advantages of data sharing within the economic community must be intensified. Therefore the project EdaWaX (European Data Watch Extended) specifically addresses the problem of incentive structures for the sharing of research data. This groundbreaking project in economic data sharing aims to build a pilot application for a data archive for journals. In 2012, the ZBW received the LIBER Award for Library Innovation, which honours sustained and future-oriented strategies for academic libraries and infrastructure providers, for this innovative project approach.

Another important subject, especially within the context of incentives for data sharing, is the stable linking of research data. In order to make research data persistently identifiable and citable, they must be registered with a unique identification number, a so-called Persistent Identifier, for instance a Digital Object Identifier (DOI). This ensures that researchers can be rewarded for their labour-intensive data processing with a citation of the dataset—comparable to the long-established practice of citing a publication. The registration agency *data*ra assigns these DOI numbers to datasets in social sciences and economics in Germany. It is jointly built and operated by the ZBW and GESIS – Leibniz Institute for the Social Sciences.

The ZBW also processes historical statistics for the management of research data within the project “Digitale Reichsstatistik”, which is funded by the German Research Foundation (DFG). Statistical material which has so far been only available in print is being digitised and converted into formats readable with spreadsheet and statistical software. The data are derived from the “Statistics of the German Reich (1873-1883)”, which represent the foundation of official German statistics. They provided, for the first time, data collected according to uniform criteria across all of Germany within its borders at that time.



EDaWax is a joint project of the RatSWD (German Data Forum), the INNO-tec Institute at LMU Munich and the ZBW.

www.edawax.de



ZBW podcast

Sven Vlaeminck explains management of research data

<http://tinyurl.com/a688jy7>





Professor Gert G. Wagner,
Chairman of the German Data Forum

“The free availability of literature in Open Access is not the only requirement for the speedy circulation of knowledge and the rapid acceptance of new findings. Research data must also be available online in order to allow independent verification and the gaining of new knowledge through re-analysis. Copyrights and data protection rules must be observed, of course. Therefore it is very welcome that the ZBW engages not only in services and projects for open access to literature, but also in the problems of archiving and accessing research data.”





Professor Sönke Albers

Kühne Logistics University Hamburg (KLU),
Professor of Marketing and Innovation, Head of
Management Department and Dean of Research

“In business studies, there are hardly any articles publishing the underlying data or the programming codes for statistical or optimising calculations. This is unfortunate, since the availability of research data and the programming codes

increases the replicability of articles. It would enable PhD students to familiarise themselves with the topic and the established methods and could also allow them to finish their theses earlier. It would also improve the verification of findings. We can assume that eager PhD students would verify everything, which would mean that potential mistakes are discovered and eradicated more easily.”

THE ZBW IS A MEMBER OF THE LEIBNIZ ASSO- CIATION

The ZBW is an information infrastructure institution for economic research in Germany with a tight focus on interdisciplinarity and internationalisation

The Leibniz Research Network Science 2.0

During the last years, the academic landscape with its various actors has suffered epochal change and will continue to see considerable paradigm shifts. Information and communication technologies especially have driven the fundamental shift towards Science 2.0 in scholarly work.

It remains a desideratum of current research to investigate how the internet with its new possibilities, in particular the Social Web, modifies the working habits of researchers in detail, or how existing and traditional research processes can find support from Science 2.0—a desideratum which only an interdisciplinary approach can fill holistically.

In order to investigate these complex questions with uncompromising quality, the ZBW, based on its unique concentration of professional competence in both media informatics and information science, has launched the interdisciplinary Leibniz Research Network Science 2.0.

On the initiative of the ZBW, a consortium of currently 24 institutions will use the next ten years for a multidisciplinary approach to a joint and comprehensive analysis of Science 2.0.

“Right now, we are living in what is possibly one of the most exciting moments for science in a very long time. It is a time of change that can be felt in all disciplines. The Research Network »Science 2.0« is our contribution and we are looking forward to the new challenges. There is much to be done.”

Dr Sascha Friesike

Alexander von Humboldt Institute for Internet and Society

“Science depends on the steady succession of young and internationally networked researchers. Especially young scholars communicate as a matter of course through social networks. For this reason, the Leibniz Association widens the range of its information on the Web 2.0 in order to meet the media usage of this target group. This will be based on the research findings of the Leibniz Research Network Science 2.0, professionalising the scientific community and improving the competitiveness of Germany as a research location.”

Professor Karl Ulrich Mayer

President of the Leibniz Association



The **Leibniz Research Network Science 2.0** is a consortium of 15 institutes from the Leibniz Association and nine other institutions (universities, Wikimedia Deutschland e. V.).

www.leibniz-science20.de

International networking at the ZBW

Just as the world of economic research is global, the ZBW also thinks in global terms. The ZBW cooperates in projects with other libraries and economic research institutions as well as in research in the field of applied media informatics with international partners.

Within the circle of information infrastructure institutions, this international engagement includes document delivery through WorldCat (the world's largest library catalogue, with more than 1.5 billion entries), participation on the board of the European Business Schools Librarians' Group (EBSLG) and close collaboration in the context of DataCite, an international not-for-profit organisation to support data archiving and free access to research data.

The network of international economics institutions spans from Brussels, home to the Centre for European Policy Studies (CEPS) to Malaysia, where the Technical University Mara, a member in the EconBiz partner network, enrolls thousands of economics students.

Next to these long-standing relationships, the ZBW has recently become active in international research. In 2012, the ZBW became one of the first libraries in Germany to have established an international research team investigating semantic technologies, the Social Web and the management of research data. PhD students from India, Macedonia, Malaysia and Germany are supervised by Professor Klaus Tochtermann, the director of the ZBW and also a professor of computer studies at the Christian-Albrechts-University of Kiel.

NETWORKS

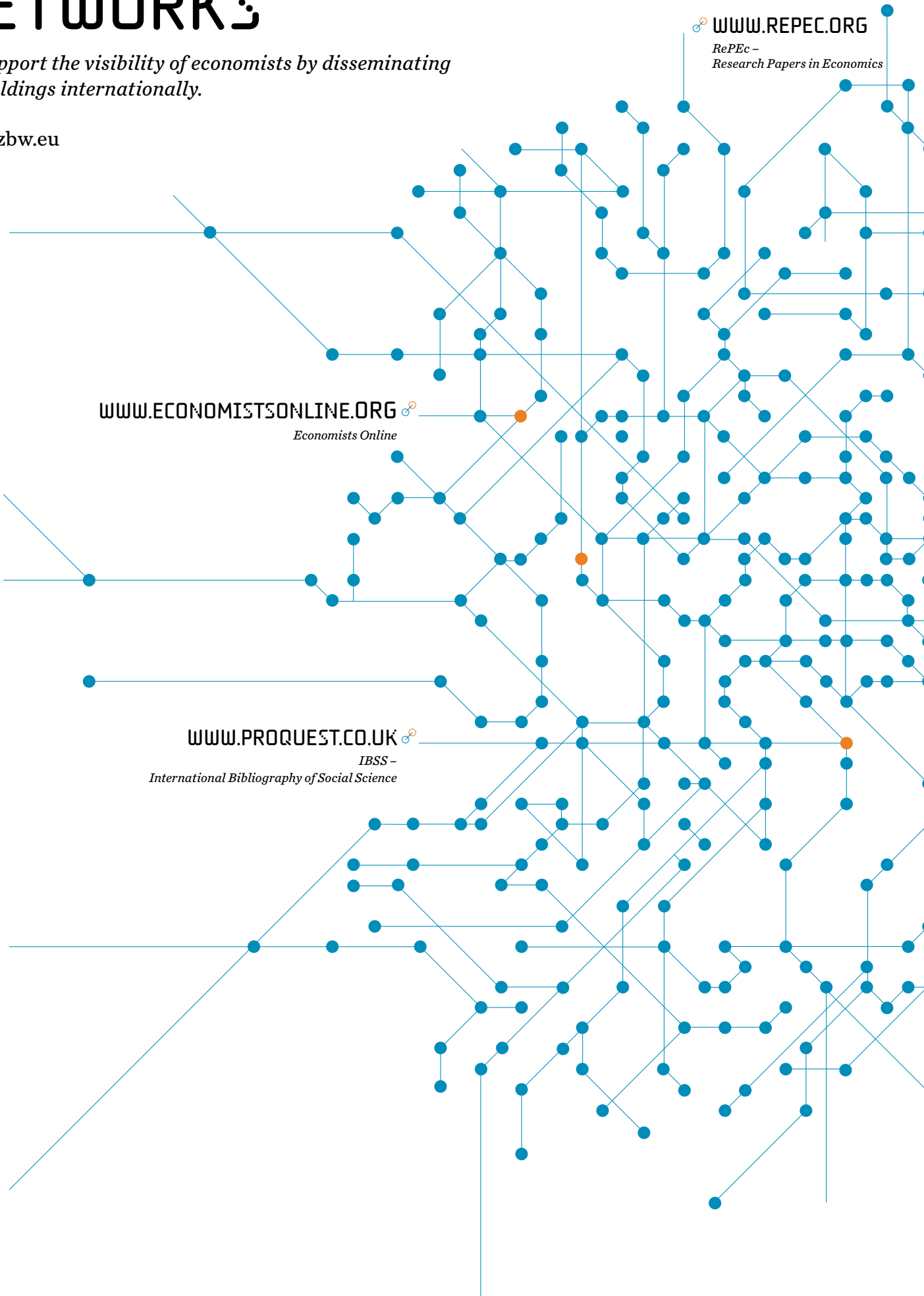
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our holdings internationally.*

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IBSS –
International Bibliography of Social Science





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*Subject-specific information system for education /
Literature database*

 **WWW.WORLDCAT.ORG**
*WorldCAT –
Network of Library Content and Services*

Imprint

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Layout:

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Translation:

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Photo credits:

ZBW – German National Library of Economics:
title photo, p. 9, 13, 17, 22+23
Photographer: Pepe Lange, www.pepelange.com

ZBW – German National Library of Economics:
p. 24, photographer: Sven Wied

DIW Berlin: p. 34, photographer: Detlef Güthenke
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Printed by:

nndruck, Kiel

February 2013

