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## Knowledge Society in Germany 2015

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### Purpose

The EUFORIA foresight project on Germany is part of the European four-year work programme: Analysing and Anticipating Change to Support Socio-Economic Progress 2001-2004. In the framework of this programme the European Foundation for the Improvement of Living and Working Conditions launched a project on the impacts of the European Knowledge Society on living conditions, working conditions, and industrial relations. The report describes the present situation in Germany, provides different scenarios of the Knowledge Society in this country, and addresses policy implications accruing from the findings.

### Closing the Gap between Lisbon Agenda and Technological Progress

The foresight project EUFORIA is a child of European integration. The European Foundation for the Improvement of Living and Working Conditions has been EUFORIA's mid-wife. In the context of its four-year programme the Foundation has launched a foresight project – EUFORIA – on the “European Knowledge Society and its influence on living conditions, working conditions and industrial relations.” At the same time the project was inspired by the Lisbon Objectives, EUFORIA's godfather. The Lisbon Objectives of the year 2000 laid out that the EU was to become “the most competitive and dynamic knowledge-based economy, capable of sustained economic growth with more and better jobs and greater social cohesion.” EUFORIA was supposed to help identify how social foresight might fill the gap between forecasts on technological developments and the Lisbon Council employment strategy. Furthermore, the foresight concept of EUFORIA is closely linked to the Commission's Sixth European

Research Programme 2002-2006 concerning network-building and the innovation policy framework of the European Research Area.

Accordingly, EUFORIA has analytical, forward-looking, and policy-oriented objectives:

- First and foremost it is to increase our understanding of the forces – called “drivers” – that shape the evolution of a Knowledge Society in Europe.
- In addition, it is to anticipate potential impacts of the Knowledge Society on living and working conditions and industrial relations.
- Finally it is to explore the best paths toward positive transformation while avoiding unsatisfactory developments. Hence, it includes policy aspects.

In the year 2002 the project has entered its second phase in which a report on advancement indicators was to be developed, national foresight centres were to be set up, and national foresight reports as well as a synthesis report were to be produced. Apart from the report on Germany, there are reports on



the Knowledge Society in Finland, Greece, and Ireland and

also studies on the European Knowledge Society.

## EUFORIA: An Open-ended Approach

The way EUFORIA came into being as well as the objectives pre-determined the nature and the unique character of this project. Three features set EUFORIA apart from other forecast projects: its *open-endedness*, its *encompassing* nature, and the use of a *mix of methods*. EUFORIA is *open-ended* because it does not provide a forecast in a traditional sense. The goal is not to predict a specific future but rather to identify possible paths toward a Knowledge Society. EUFORIA attempts, hence, to identify factors that shape and form possible futures. The project is *encompassing* because it takes technological issues as well as the working and living conditions and industrial relations into account. In the framework of the project a *mix of methods* has been applied. Foresight methods were combined with socio-cultural, socio-political, and socio-economic reasons. In total, 10 (soft and hard) foresight methods - including: Delphi, SWOT, STEEP, brainstorming - were

used. Overall, the approach was characterized as: **integrative** - involving experts, policy-makers etc. from 25 countries, **explorative** - because 10 different foresight methods were applied, **experimental** - new methods were developed like the Critical Influence Analysis, **developmental** - findings from one method were used as inputs in later stages thus creating a sort of dynamic learning curve and **forward-looking** - the time horizon was set at 2015.

Empirica that set up a National German Knowledge Society Centre and organized two workshops involving 23 experts prepared the German report. In order to analyze the current situation, identify the “drivers” toward a Knowledge Society (KS) in Germany, and forecast possible scenarios official and public data as well as other indices were used. In addition, the Delphi-method and EUFORIA KS-indicators contributed to describe strengths, weaknesses, opportunities, and threats (SWOT) of the KS in Germany.

## Current German Situation: ‘Sleeping Giant’ or ‘False Giant’

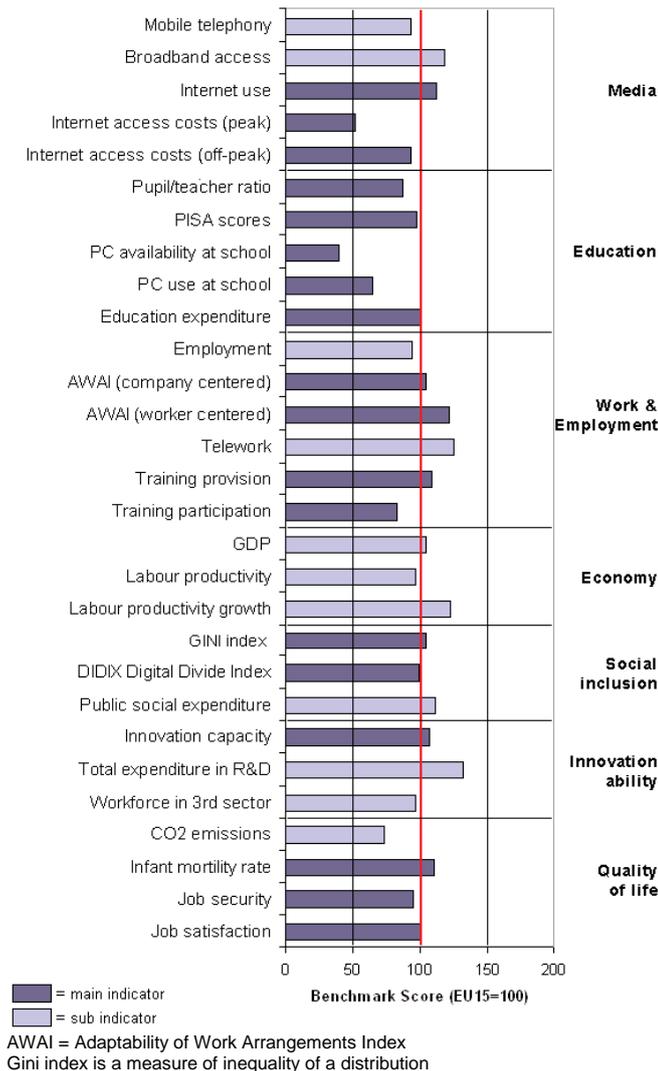
Like other foresight projects EUFORIA had to deal with the problem that we tend to think in linear terms. We analyze a situation, identify forces that will change the situation and then predict the future. Even though the foresight project partly proceeded in the same manner it deliberately took into account that respective developments are highly contingent and include forces that influence each other. In consequence, the report not only provides an analysis of current national circumstances - living conditions, working conditions, industrial relations - as well as on the German Knowledge society, but it also identifies forces that might drive Germany towards a Knowledge Society. In addition, the approach embraced the idea that the future can shaped through politics.

It is difficult to tell whether Germany is on its way towards a Knowledge Society. Actually, Germany gives conflicting impressions: On the one hand, it can be regarded as a sleeping giant. The country remains well under its possibilities and potentials. Yet, if awakened the giant could easily catch up to the leading Knowledge Societies in Europe. On the other hand, Germany can be compared to “Tur-Tur”, a figure from a former popular TV child series. “Tur-Tur” was a false giant. Even though he looked gigantic, even frightening, from afar, he became small, even tiny to those who dared approaching him. Based on the current situation Germany can be: a sleeping giant or “Tur-Tur”. The analyses of the national circumstances and the Knowledge Society offer enough proof for both images.

*National circumstances* include living conditions, working conditions and industrial relations. As far as these dimensions are concerned the situation in Germany is well known. Like other European countries, Germany has to deal with **demographic developments** - ageing society, **changing family patterns** - e.g. increase in single households, **severe economic problems** - e.g. low economic growth, high unemployment, low female unemployment, rising saving ratios etc. and rather **low flexibility of work forms**. At the same time, trade unions have experienced a decline as far as membership, influence and acceptance were concerned. This is even more problematic as trade unions are institutions that can help to make working conditions socially acceptable.

*Knowledge Society in Germany*: Based on indices, ratings, and studies from e.g. IDC, World Economic Forum, UNDP and others Germany is doing fairly well as a Knowledge Society, but by far not excellent. The country seems to catch up with the best though, but no study shows Germany as a frontrunner in this domain. The analysis provided by the EUFORIA project mostly confirms these findings. As a Knowledge Society Germany is just average. But a more detailed analysis shows that Germany does have the potential to catch up with more advanced countries like Finland. The country profile (figure 1) brings this potential to the fore. The figure provides an overview of the current situation in Germany along 29 relevant KS-related indicators. The EU average was set at 100. Germany performed better - meaning that e.g. infant mortality in Germany is lower than in other EU countries - in those dimensions where the country exceeds EU average.

Figure 1: Knowledge Society country profile Germany:



Based on these findings the strengths, weaknesses, opportunities, and threats (SWOT) can be analyzed. According to a SWOT analysis the German Knowledge Society does show some **strengths** - innovation ability, willingness to self-directed training, appreciation of flexible work forms, broadband access - and provides **opportunities** - strong shift toward service industry, little income disparities, high degree of quality of life. However, there are also important **weaknesses** - poorly educated new generation of workers, rising unemployment, gap between electronic media and education - and significant **threats** - poorly educated generation of workers, negative effects of high unemployment on the economy, which in turn threatens R&D activities. Germany has to address the basic question, whether the country will be able to profit from its potential, in spite of the fact that many KS-related indicators are just at average EU-level.

### Drivers of the Knowledge Society in Germany: Biased Indicators?

In order to forecast future developments it is necessary to identify those factors that shaped the current Knowledge Society in Germany. EUFORIA attempted to specify these “drivers” through workshop discussions with experts. During two workshops the experts came up with 18 factors that were thought to have had at least some impact on past developments. The factors cover various areas. Some factors address **living conditions** - like ageing society, immigration, problems in education, others **labour market issues** - e.g. “culture of dependency”, exaggerated certificate culture, others **economic structures** - e.g. strength in traditional industries, others **political issues** - e.g. society of compromise, permanent political blockade, cost of reunification and some just took the size of the country as a disadvantage. On the whole the list of these factors not only looks a bit arbitrary, but it also gives the impression that the experts thought of weaknesses and threats rather than of strengths and opportunities. In fact, it is difficult to see which of the factors mentioned in the report actually contributed to the existence of a Knowledge Society in Germany.

The experts also tried to evaluate the impact of a future national trend towards a Knowledge Society. For this exercise the Metaplan technology was used. It produced differentiated and context dependent results in various areas. The report has grouped the effects discussed in the workshops under six headings: economy, technology, social issues, politics, environment, and values. Overall the exercise identified 32 impacts that will be affected by the trend toward a Knowledge Society. For each area the experts could rate the importance of the impacts; they had to assign values ranging from -3 to +3, which allowed determining the relevance of each factor. For example in the domain of the economy the most important impact was accredited to “networking and outsourcing” - it received 9 points. It was assumed that telework would become more widespread, that organisations will outsource tasks, which in turn will foster and accelerate the development of global networking. The highest rating (29 points) received the factor: “Organisational set-up and culture, which recognises the human being and puts them at the central focus” - social issues. Overall this was an attempt to combine analytical approaches with the Delphi method.

### Scenarios for the Future German Knowledge Society

As a result the EUFORIA team developed a series of scenarios about the future of the Knowledge Society in Germany. The scenarios had the same structure and were based on some common elements - demography, I&C technologies, global economic growth, European cohesion, security, social issues, labour market and education.

The EUFORIA team at Empirica developed three scenarios:

- CRASH: “Crash into the second league”
- STAGNATION: “Business as usual”
- CHANGE: “From average to excellence”

In order to determine policy strategies and the roles of key players it was necessary to pick one of the scenarios as the most desirable one. It goes without saying that the experts selected "CHANGE" unanimously as the scenario Germany should strive to achieve. In this scenario the problems mentioned above will mostly have disappeared. Just to mention a few of the many examples that are given in the report:

- The government will have managed to overcome institutional inertia and successfully embarked on structural reforms.
- There will be sustainable economic growth between 1.5 and 2.5 per cent and a balanced federal budget.
- Unemployment will have significantly been reduced and the social security system has undergone structural reforms.

Similar positive developments will have taken place in other areas.

Based on the scenario CHANGE the experts made a number of policy recommendations. In a nutshell Germany is to continue and expand its so far cautious reform steps. The government should implement e.g. Agenda 2010 and the finance and tax reform. Whether these reforms can best be realized by a new Alliance for Jobs or not, remained an open question. Yet it was agreed that the reforms undertaken so far can only be seen as a very first step in the right direction. In addition, trade unions as well as other key players will have to redefine their roles.

## German Policy-makers – Resistant to EUFORIA Advice?

The EUFORIA project is an ambitious and challenging foresight enterprise. It offers new and innovative approaches and new methods for the difficult task of forecasting the future. Especially the attempt to enlarge the perspective beyond mere technical developments and include social and working conditions as well as industrial relations has to be regarded as exemplary for similar enterprises. In addition, the idea that politics will have an important say for future developments is highly instructive. It argues against the widespread opinion that the future will be exclusively determined by technical and/or economic factors.

EUFORIA has moved foresight projects on a new methodological level. The combination of analytical and foresight methods, and the use of a mix of methods have produced interesting and promising results. In consequence, the approach has already triggered a reorientation in respective research and has been applied, e.g. in various PhD projects. It should be pointed out though that for some parts of the report a more structured and analytical approach would probably have produced better results. In addition, the method applied in the project is resource intensive.

Even though the project also includes policy recommendations, it is not clear from the report whether EUFORIA had any impact on political decisions in Germany so far. According to other reports this was different in other countries as well as in the EU where EUFORIA had a significant impact on decision-makers. And it is likely that at a later stage of the project EUFORIA might also become a major source for political decision-makers in Germany.

## Sources and References

The Knowledge Society in Germany: Current situation and future trends, Dublin 2004; in:  
<http://www.eurofound.ie/pubdocs/2004/06/en/1/ef0406en.pdf>

Reports of the project can be retrieved from either:

- [www.eurofound.eu.int/areas/industrialchange/knowledgesociety.htm](http://www.eurofound.eu.int/areas/industrialchange/knowledgesociety.htm) or
- <http://les1.man.ac.uk/PREST/euforia/reports.htm>

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