IMPACT OF KNOWLEDGE ON SOCIETAL PERCEPTION AND ACCEPTANCE OF COAL:
Insights from a representative survey in Germany

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Content

Context  Research Study  Selected Findings  Key Insights
CONTEXT
Coal in the German Economy

Coal plays a key role in the German economy – **45.2%** of Germany’s *electricity generation* in 2013.

In particular **lignite** (brown coal) is an **important domestic** energy source:

- **Germany** is **largest lignite producer** in the world.
- Lignite mining & generation industries contribute to **> 85 000 jobs**.

Sources:
Statistisches Bundesamt (2014); DEBRIV (2013); Pöyry (2013)
Motivation for Research Study

A lack of societal support for coal power generation may represent a significant obstacle to future coal-related policy development, R&D activities, technology deployment and business investments.

Representative survey study in Germany

Objective – Gain insights into the drivers of acceptance/resistance toward coal in Germany
RESEARCH STUDY

Context

Research Study

Selected Findings

Key Insights
Research Study

Research Questions

1) What do people know about the role of coal in Germany’s electricity mix?

2) How is coal evaluated along social, economic and environmental dimensions?

3) What is the level of acceptance/support for the role of coal in Germany’s (future) electricity mix?

• Period of survey: October 2013
• Supported by “TNS Emnid” through CATI
• N = 1008 German citizens
SELECTED FINDINGS

Context

Research Study

Selected Findings

Key Insights
What do people know about the role of coal in Germany’s electricity mix?
Subjective and Objective Knowledge

Subjective Knowledge

- Feeling of being informed

Objective Knowledge

- % coal in electricity mix
- Change in share of coal
- Import dependency
Subjective Knowledge:
Feeling of being Informed about Use of Coal in Germany

- Very well informed: 4%
- Well informed: 24%
- Badly informed: 56%
- Very badly informed: 15%
- Do not know/no answer: 1%

 Majority of the participants felt badly informed about the use of coal in Germany.
Objective Knowledge: Belief of Coal % in Electricity Mix

Fact: Coal accounted for about 45% of Germany’s electricity mix in 2012

Accuracy in belief of coal % in Germany’s electricity mix in 2012

- Accurate = +/- 5% of actual coal % in 2012
- Underestimated = <+/-5% of actual coal % in 2012
- Overestimated = >+/-5% of actual coal % in 2012

70% of the participants underestimated the role of coal in Germany’s electricity mix in 2012.

N = 1008
Objective Knowledge: Change in Electricity Generation from Coal in the Last 2 Years

Fact: Coal in Germany’s electricity mix increased from 42% in 2010 to over 45% in 2013.

Accuracy in belief of change in coal electricity generation over the last 2 years

- **Increased**: 74%
- **Do not know**: 3%
- **Decreased**: 23%
- **No change**: 44%

The majority of the participants believed that there was no change or even a decrease in coal’s contribution to Germany’s electricity generation.

N = 1008
Objective Knowledge: Dependence on Coal Imports

Fact: Germany is not dependent on brown coal import. About 75% of hard coal used was imported.

Over 85% of the participants were unaware and were inaccurate in their belief of Germany’s dependence on hard coal import.

75% of the participants were not aware that Germany does not import brown coal.
Relationship Between Subjective & Objective Knowledge

Participants who felt better informed also exhibited higher accuracy in their objective knowledge.
Does knowledge have an impact on how people

1) evaluate coal along different dimensions?

2) their acceptance of coal in Germany’s (future) energy mix
We need coal power plants in Germany as renewable energy sources are currently not able to meet our energy demand.

Citizens should accept coal power plants in the long run as Germany's electricity demand is very high.

Coal is a domestic resource and contributes to Germany's energy supply security.

Utilization of domestic coal can reduce environmental impact arising from the transportation of imports.

Utilization of domestic coal can reduce environmental impact arising from the transportation of imports.

Germany’s electricity prices will increase without coal power plants.

I am concerned about the impact of German coal power plants on my health.

I am concerned about the impact of German coal power plants on the environment.

Participants who felt better informed are less concerned about the impact of German coal power plants on the environment.

Participants who felt better informed evaluated social impacts associated with coal more positively.

Participants who felt better informed evaluated economic contribution of coal more positively.

Participants who felt better informed exhibited higher degree of willingness to support coal power plants.

Well informed about coal utilization

Badly informed about coal utilization
Impact of Objective Knowledge

Participants who are **aware** of coal’s role in Germany’s electricity mix believe:

- Coal plays a key role in keep electricity prices affordable.
- Coal is needed until renewable energy sources are able to meet Germany’s electricity demand.
Impact of Objective Knowledge

Participants who believe (accurately) that coal % in Germany’s electricity mix has increased in the last 2 years:

- Are more concerned about the associated impact on the environment.
- Are more worried about potential impacts on their health.
KEY INSIGHTS & IMPLICATIONS

Context → Research Study → Selected Findings → Key Insights
Key Findings

1) Not only do participants felt badly informed about the use of coal in Germany, they also exhibited a general lack of objective knowledge about the role of coal in German economy.

2) Participants who felt better informed also exhibited higher accuracy in their objective knowledge.

3) In particular a subjective feeling of being informed contribute to more positive evaluations and higher level of acceptance for coal.

Implications & Directions for Future Research

1) Developing targeted measures to increase individual’s subjective knowledge about coal utilization in Germany can have a significant impact on public’s coal evaluations & acceptance.

2) Identifying ways to increase objective knowledge of the role of coal in Germany’s economy can avoid decisions based on “false” assumptions.

3) Insights into why subjective feeling of being informed is lacking despite information availability (in particular in view of intense discussion regarding Germany’s Energiewende) are needed.
THANK YOU!
Feedback & Comments are most welcome.

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