

Watt's the Score? Unleashing Energy Financial Literacy through Social Dynamics and Energy Asset Ownership

Constanze Liepold, Institute for Future Energy Consumer Needs and Behavior (FCN), School of Business and Economics / E.ON Energy Research Center, RWTH Aachen University, +49 241 80 49832, Constanze.liepold@eonerc.rwth-aachen.de
Reinhard Madlener, Institute for Future Energy Consumer Needs and Behavior (FCN), School of Business and Economics / E.ON Energy Research Center, RWTH Aachen University; Department of Industrial Economics and Technology Management, Norwegian University of Science and Technology (NTNU), 7491 Trondheim, Norway, +49 241 80 49820, RMadlener@eonerc.rwth-aachen.de

Overview

This study assesses energy-related financial literacy among private households, focusing on its relationship with ownership of energy-related assets and socio-economic characteristics. Using data from over 10,000 respondents - 5,000 from Germany and 2,500 each from Austria and Switzerland - it explores the influence of literacy and socio-economic factors, providing insights for targeted educational strategies. Blasch et al. (2018) introduced the concept of 'energy-related financial literacy' and highlighted gaps in knowledge about energy consumption and costs, focusing on smaller samples and comparing the Swiss context with the situation in Italy and the Netherlands. The present study extends the previous work with a larger cross-national sample and integrates a socio-economic indicator based on education, income and occupation to enable a more comprehensive analysis.

Methods

Building on Blasch et al. (2018), this study uses a questionnaire survey to assess energy-related financial literacy, measuring knowledge of energy consumption, appliance lifespans, and electricity costs, as well as the ability to calculate potential energy savings. It also incorporates a socio-economic indicator and examines ownership of assets like solar PV panels, electric vehicles, and smart meters across Germany, Austria, and Switzerland.

Results

The findings suggest a link between higher literacy levels, socio-economic status, and ownership of energy-efficient technologies. Socio-economic factors, such as education and income, appear to influence both literacy and technology adoption, with variations observed across different contexts.

Conclusions

The study emphasizes the role of energy-related financial literacy and socio-economic factors in shaping technology adoption. By broadening the scope of existing research, it provides a more comprehensive perspective on these dynamics. Future studies could explore how targeted initiatives impact literacy and technology adoption over time.

References

- Blasch, J., Boogen, N., Daminato, C., & Filippini, M. (2021). Empower the consumer!: energy-related financial literacy and its implications for economic decision making. *Economics of Energy & Environmental Policy*, 10(2), 149-180.
- Liepold, Constanze; Madlener, Reinhard (2025). Watt's the Score? Unleashing Energy Financial Literacy through Social Dynamics and Energy Asset Ownership. FCN Working Paper xx/2025 (in prep.).