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Sufficiency in transport policy

An analysis of EU countries' national energy and climate plans and long-term strategies



WHY SUFFICIENCY?

- Transport sector policies did not contribute to GHG emission reduction in the past
- Different policies – apart from technical solutions – needed to reach GHG targets!?
- Our definition of sufficiency:

„Energy sufficiency is the **strategy** of achieving **absolute reductions** of the amount of energy-based services consumed, notably through promoting **intrinsically low-energy activities**, to reach a level of “enoughness” that ensures sustainability.“



EU REPORTS ON CLIMATE AMBITION

- National Energy and Climate Plans (NECPs – target year 2030)
 - 27 plans analysed
 - Chapter structure defined in Governance Regulation
- Long-term Strategies (LTSs – target year 2050)
 - 15 LTSs analysed (cut-off date October 2020)
 - No specified structure



METHODS

- 6 researchers
- 2 for each report, inter-coder validity
- Key terms, key chapters and more
- Discussion on found measures, consolidation



CATEGORISATION

- Sector (and cross-sectoral)
- Sufficiency type / policy target
 - Reduction of km
 - Modal shift
 - General supporting
- Instrument type (UNFCCC 2000)



TRANSPORT SUFFICIENCY

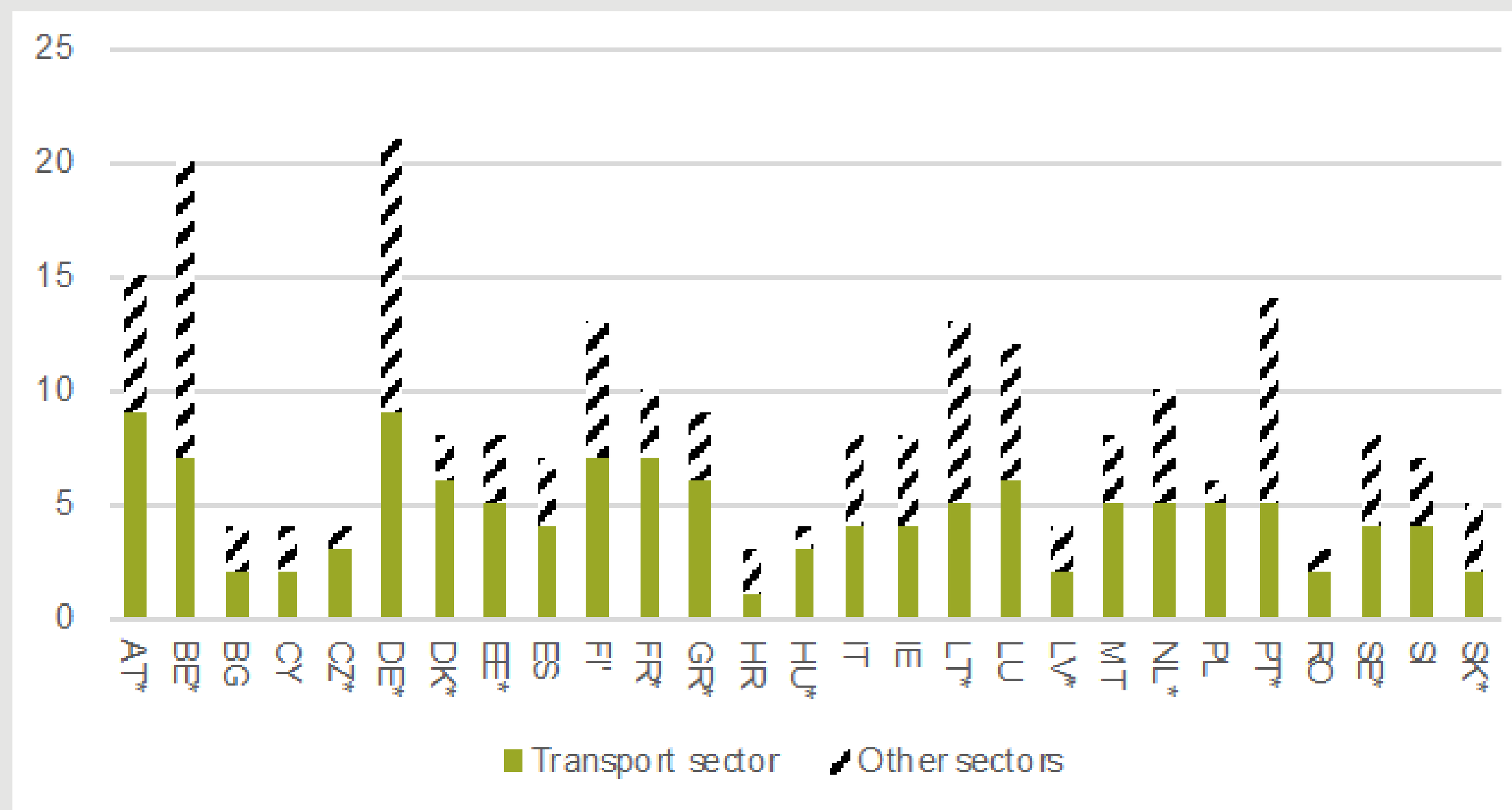
Avoid	Shift	Improve
Sufficiency	Fuel/tech swich = Consistency or Efficiency	Efficiency
	Mode shift = Sufficiency (substitution)	

- Teleworking / city planning
- Public transport / cycling + walking



RESULTS - # OF MEASURES

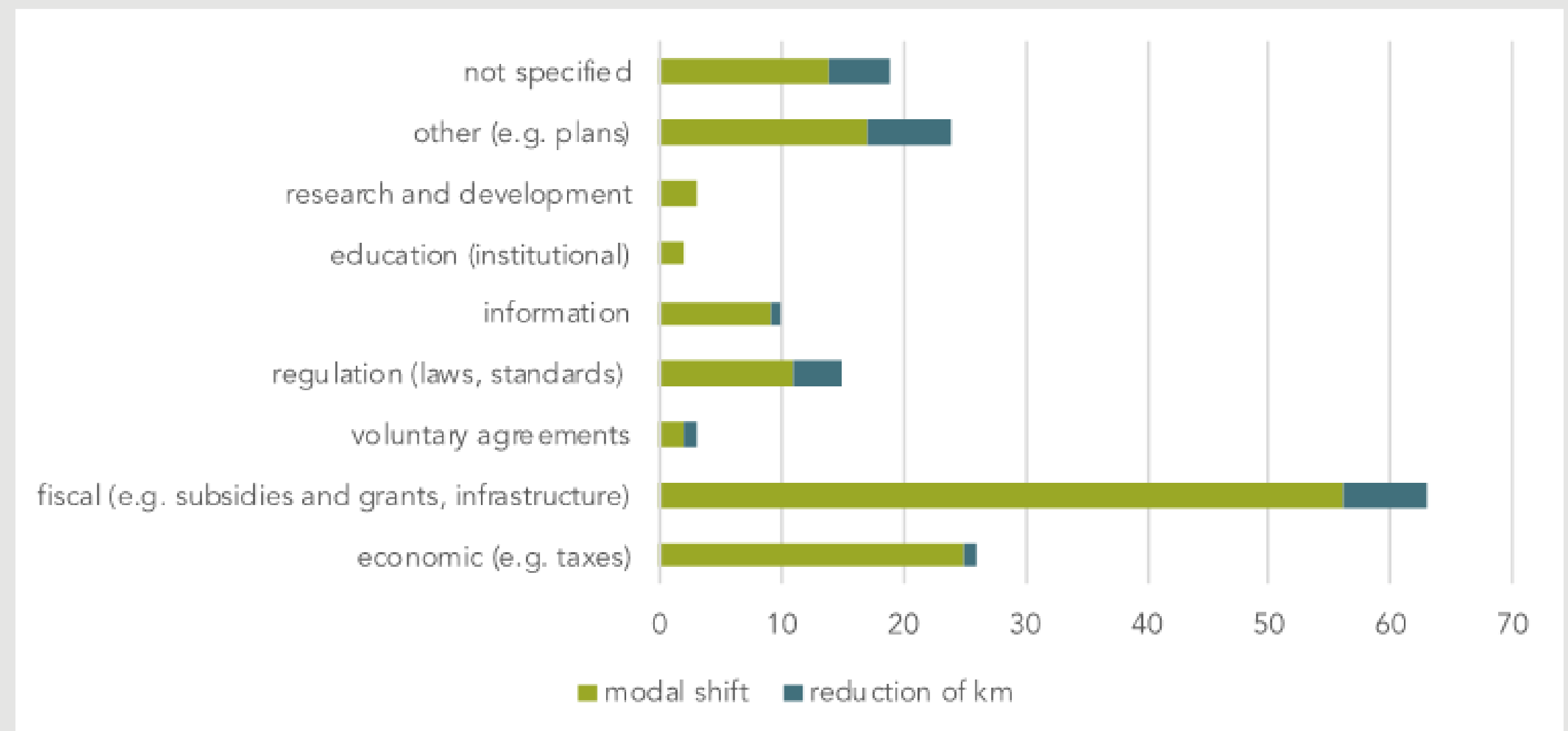
- 236 in all sectors, 124 in transport (53 %) and 41 cross-sectoral
- By country:





RESULTS – SUFFICIENCY & INSTRUMENT TYPES

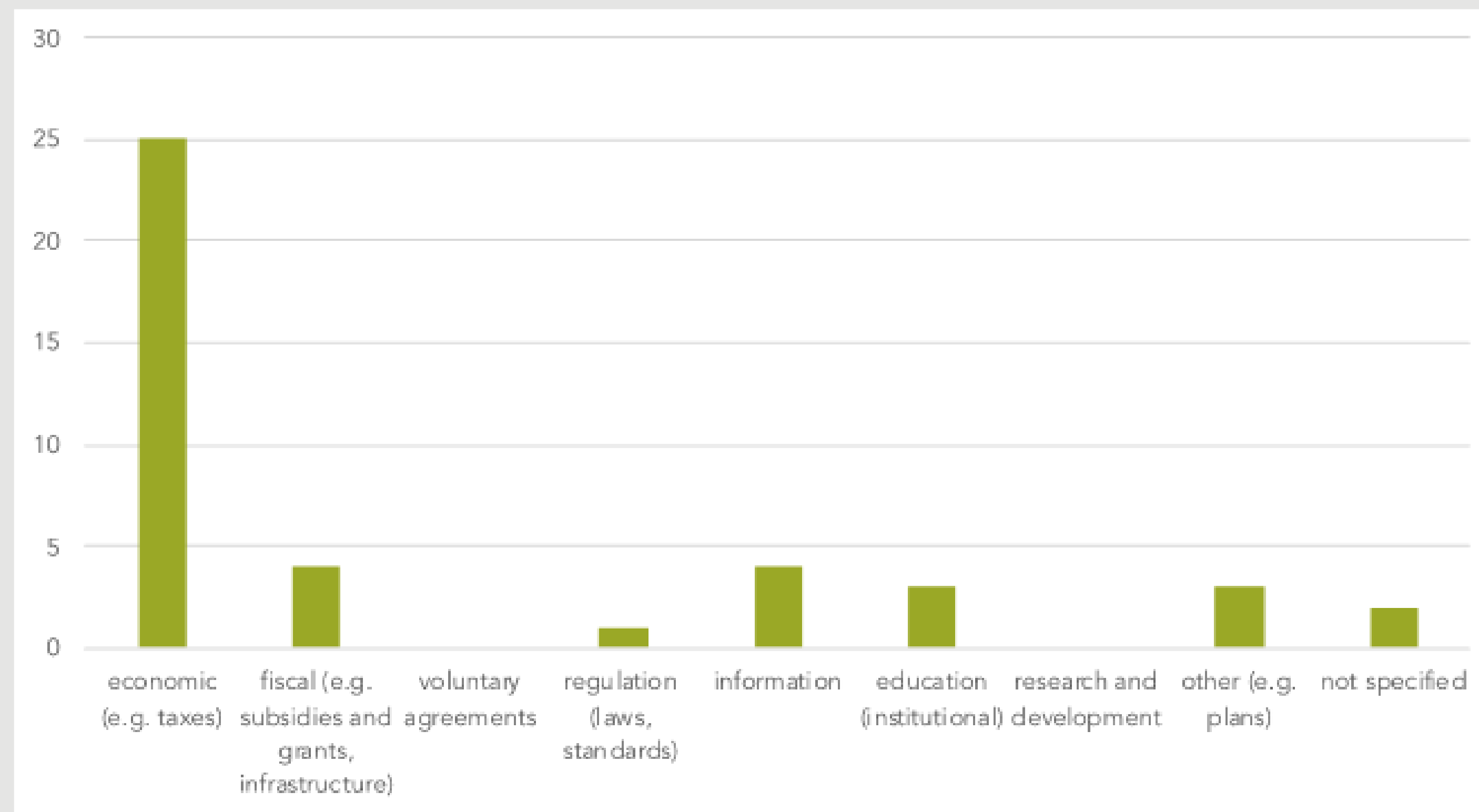
- Majority (82 %) aim at modal shift
- Fiscal and economic instruments dominate – infrastructure!





RESULTS – GENERAL SUPPORTING MEASURES

- From 41 cross-sectoral measures 25 use economic instruments (mainly carbon taxation or emission-driven tax reforms)





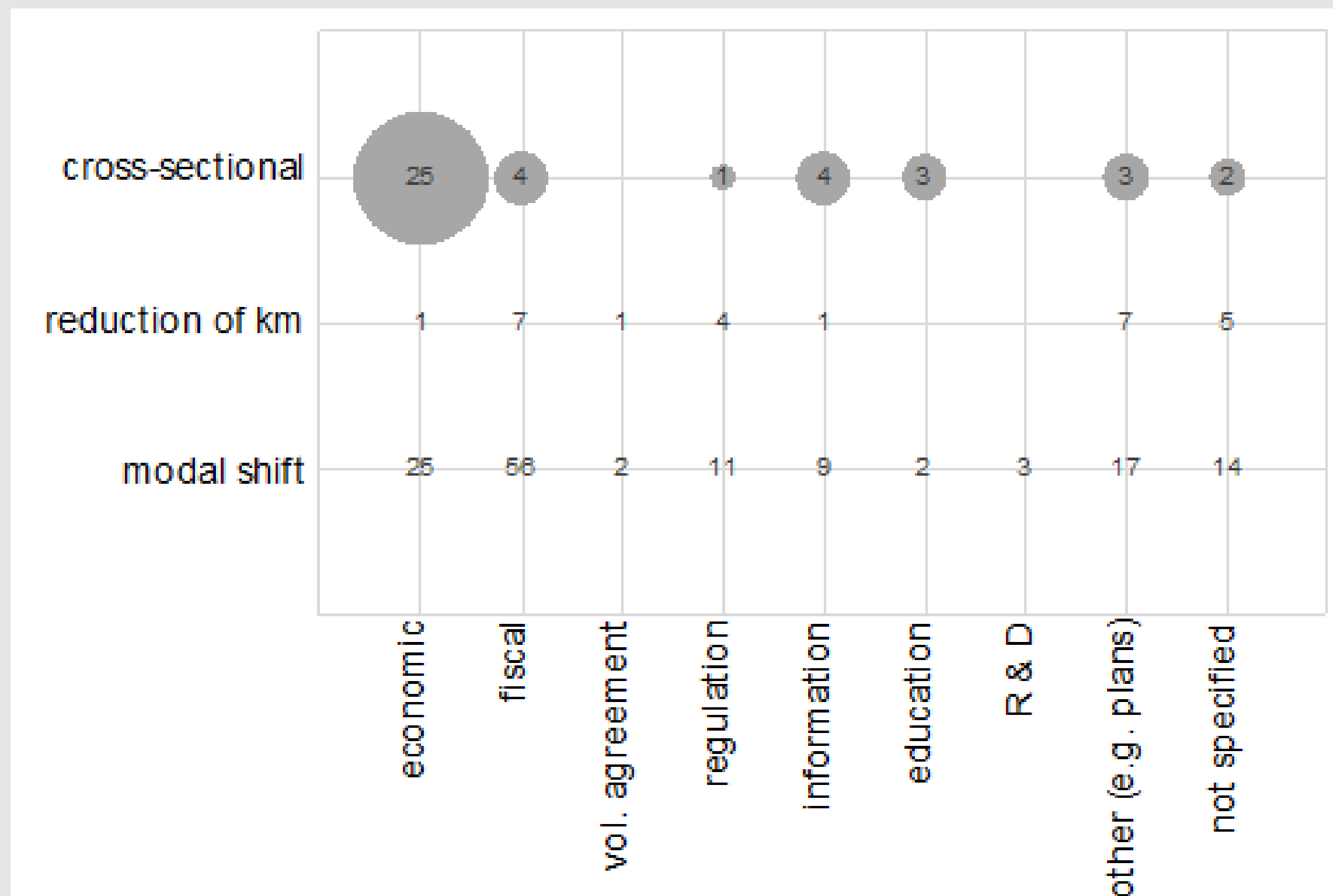
MORE RESULTS

- Much more measures to make modal shift and less travel **attractive (pull)**, few measures to make other forms of transport **unattractive (push)** (e.g. reducing parking lots)
- Few **freight** measures (18 from 124) and no one aiming at reduction



RESULTS - OVERVIEW

- Barely measures on reduction of km
- Instrument type **regulation** not much intended to use





DISCUSSION AND CONCLUSIONS

- NECP measures will lead to **GHG reduction of 41 % (EU)** by 2030 which is not sufficient for the revised target of -55 %
- Direct comparison of efficiency, consistency and sufficiency would be good
- NECP / LTS structure: include a chapter on sufficiency



DISCUSSION AND CONCLUSIONS

- We need stringent governance to reach targets and to transform the transport sector. **Ideas:**
 - obligation to localities to ensure public transport anywhere with a certain frequency (e.g. half-hourly)
 - car size/weight standards and/or absolute consumption limits
 - stricter speed limits
 - city access restrictions
 - fossil fuel phase-outs

THANK YOU!



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We want to thank Jonas Lage and Annika Schmidt for their contribution to the NECP / LTS sufficiency analysis.

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SOURCES

Bierwirth, Anja, and Stefan Thomas. 2015. 'Almost Best Friends: Sufficiency and Efficiency: Can Sufficiency Maximise Efficiency Gains in Buildings?'

Brischke, Lars-Arvid, and Stefan Thomas. 2014. Energiesuffizienz Im Kontext Der Nachhaltigkeit. Definition Und Theorie. . Arbeitspapier. https://www.ifeu.de/wp-content/uploads/2014.04_WI-ifeu_Thema-Brischke_energiesuffizienz-im-kontext-der-nachhaltigkeit.pdf (May 12, 2020).

Bundesministerium für Wirtschaft und Energie. 2020. 'Integrierter Nationaler Energie- Und Klimaplan'. https://ec.europa.eu/energy/sites/default/files/de_final_necp_main_de.pdf (March 29, 2021).

Bundesministerium Nachhaltigkeit und Tourismus. 2019a. 'Integrierter Nationaler Energie- Und Klimaplan Für Österreich'. https://ec.europa.eu/energy/sites/default/files/documents/at_final_necp_main_de.pdf (March 29, 2021).

———. 2019b. 'Langfriststrategie 2050 Österreich'. https://ec.europa.eu/clima/sites/lts/lts_at_de.pdf (March 29, 2021).

CAN. 2020. 'Science Shows 65% Emission Reduction by 2030 Is Feasible and Pays Off'. https://caneurope.org/content/uploads/2020/09/CAN_Europe_65percent_is_feasible_sep20_short2.pdf (March 26, 2021).

Creutzig, Felix et al. 2018. 'Towards Demand-Side Solutions for Mitigating Climate Change'. *Nature Climate Change* 8(4): 260–63.

EC. 2019. 'United in Delivering the Energy Union and Climate Action - Setting the Foundations for a Successful Clean Energy Transition'. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52019DC0285> (July 6, 2020).

———. 2020a. 'An EU-Wide Assessment of National Energy and Climate Plans - Driving Forward the Green Transition and Promoting Economic Recovery through Integrated Energy and Climate Planning'. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0564&from=EN> (March 26, 2021).

———. 2020b. 'National Energy and Climate Plans (NECPs)'. *Energy - European Commission*. https://ec.europa.eu/energy/topics/energy-strategy/national-energy-climate-plans_en (October 23, 2020).

———. 2020c. 'National Long-Term Strategies'. *European Commission - European Commission*. https://ec.europa.eu/info/energy-climate-change-environment/implementation-eu-countries/energy-and-climate-governance-and-reporting/national-long-term-strategies_en (October 23, 2020).

———. 2020d. 'Proposal for a Regulation of the European Parliament and of the Council Establishing the Framework for Achieving Climate Neutrality and Amending Regulation (EU) 2018/1999 (European Climate Law)'.

———. 2021. 'Transport Emissions'. *Climate Action - European Commission*. https://ec.europa.eu/clima/policies/transport_en (March 24, 2021).

EC, and Council of the European Union. 2018. Regulation (EU) 2018/1999 Governance of the Energy Union and Climate Action. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018R1999&from=EN> (July 6, 2020).

Estonia. 2017. 'Resolution of the Riigikogu - General Principles of Climate Policy until 2050'. https://ec.europa.eu/clima/sites/lts/lts_ee_et.pdf (March 29, 2021).

Fawcett, Tina, and Sarah Darby. 2019. 'Energy Sufficiency in Policy and Practice: The Question of Needs and Wants'. In *European Council for an Energy Efficient Economy*.

Hainsch, Karlo et al. 2020. Make the European Green Deal Real: Combining Climate Neutrality and Economic Recovery. DIW Berlin: Politikberatung kompakt.

Heyen, Dirk Arne et al. 2013. Mehr als nur weniger - Suffizienz: Notwendigkeit und Optionen politischer Gestaltung. Öko-Institut. Working Paper. <https://www.oeko.de/oekodoc/1837/2013-506-de.pdf>.

Martin, Benoit et al. 2020. 'A Radical Transformation of Mobility in Europe: Exploring the Decarbonisation of the Transport Sector by 2040'.

Moser, Corinne, Andreas Rösch, and Michael Stauffacher. 2015. 'Exploring Societal Preferences for Energy Sufficiency Measures in Switzerland'. *Frontiers in Energy Research* 3. <http://journal.frontiersin.org/Article/10.3389/fenrg.2015.00040/abstract> (October 30, 2020).

Raworth, Kate. 2017. *Doughnut Economics: Seven Ways to Think like a 21st Century Economist*. Chelsea Green Publishing.

Samadi, Sascha et al. 2017. 'Sufficiency in Energy Scenario Studies: Taking the Potential Benefits of Lifestyle Changes into Account'. *Technological Forecasting and Social Change* 124): 126–34.

Schneidewind, Uwe, and Angelika Zahrnt. 2014. *Politics of Sufficiency*. München: oekom verlag.

Shove, Elizabeth. 2018. 'What Is Wrong with Energy Efficiency?' *Building Research & Information* 46(7): 779–89.

Sorrell, Steve, Birgitta Gatersleben, and Angela Druckman. 2020. 'The Limits of Energy Sufficiency: A Review of the Evidence for Rebound Effects and Negative Spillovers from Behavioural Change'. *Energy Research & Social Science* 64: 101439.

Spain. 2020. 'Integrated National Energy and Climate Plan 2021-2030'. https://ec.europa.eu/energy/sites/default/files/documents/es_final_necp_main_en.pdf (March 29, 2021).

Toulouse, Edouard. 2020. 'La Sobriété Énergétique, Une Notion Disruptive de plus En plus Étudiée'. *La Revue de l'Énergie* mars-avril(649): 21–32.

Tsoi, Ka Ho, Becky P.Y. Loo, and David Banister. 2021. "'Mind the (Policy-Implementation) Gap": Transport Decarbonisation Policies and Performances of Leading Global Economies (1990–2018)". *Global Environmental Change* 68: 102250.

TUMI, SUTP, and GIZ. 2019. Avoid-Shift-Improve (A-S-I). <https://www.sutp.org/download/7010/>.

UNFCCC. 2000. Review of the Implementation of Commitments and of Other Provisions of the Convention. UNFCCC Guidelines on Reporting and Review. Bonn. unfccc.int/resource/docs/cop5/07.pdf (October 23, 2020).

Vadovics, Edina, and Lidija Živčič. 2019. 'Energy Sufficiency: Are We Ready for It? An Analysis of Sustainable Energy Initiatives and Citizen Visions'. *Proceedings of European Council for an Energy Efficient Economy, Summer Study, France, Belambra Presqu'île de Giens: 20193–98*.

Vita, Gibran et al. 2019. 'The Environmental Impact of Green Consumption and Sufficiency Lifestyles Scenarios in Europe: Connecting Local Sustainability Visions to Global Consequences'. *Ecological Economics* 164: 106322.

von Winterfeld, Uta. 2002. 'Reflexionen Zur Suffizienz Als Politischer Angelegenheit in Sieben Etappen' eds. Manfred Linz et al. *Wuppertal Paper* 125: 27–37.

Zamora, Juan Carlos Pérez. 2014. 'The "Avoid-Shift-Improve" Model: A Powerful Planning Tool for Transportation Schemes with Low GHG Emissions'. *MIPALCON*: 141.

Zell-Ziegler, Carina et al. forthcoming. 'Enough? The Role of Sufficiency in Energy and Climate Plans of European Countries'. Submitted to *Energy Policy*.