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Sustainable Motoring, Renewable Energy and Renewable Fuels: Multi-Level Governance and Strategy Model

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Research Questions

Main questions

- MQ1. What conceptual model can be used to analyse the co-evolution of policies and technologies, as well as the role of agenda setting process, during sustainability transitions in the UK automotive industry?
- MQ2. Are the technological and environmental considerations faced by carmakers and policymakers mutually reinforcing or mutually exclusive during the reconfiguration of the UK automotive industry?
- MQ3. What is the optimal response of carmakers to UK decarbonisation policies, such as the industrial Strategy, Road to Zero Strategy and Clean Growth Strategy?

Sub-questions focus on the technological trajectories of the automotive, renewable, and fuel industries; the links between policy windows of opportunity that have opened in these industries; and the specificity of the UK transport sector regulatory system within the multi-level governance context.

Theoretical Underpinning

Dijk, M. and Yarime, M., 2010. The emergence of hybrid-electric cars: innovation path creation through co-evolution of supply and demand. Technological Forecasting and Social Change, 77(8)

The authors developed a co-evolutionary framework to analyse the supply and demand for hybrid and internal combustion cars, using statistical data and secondary sources, including policy initiatives in the EU and the US.

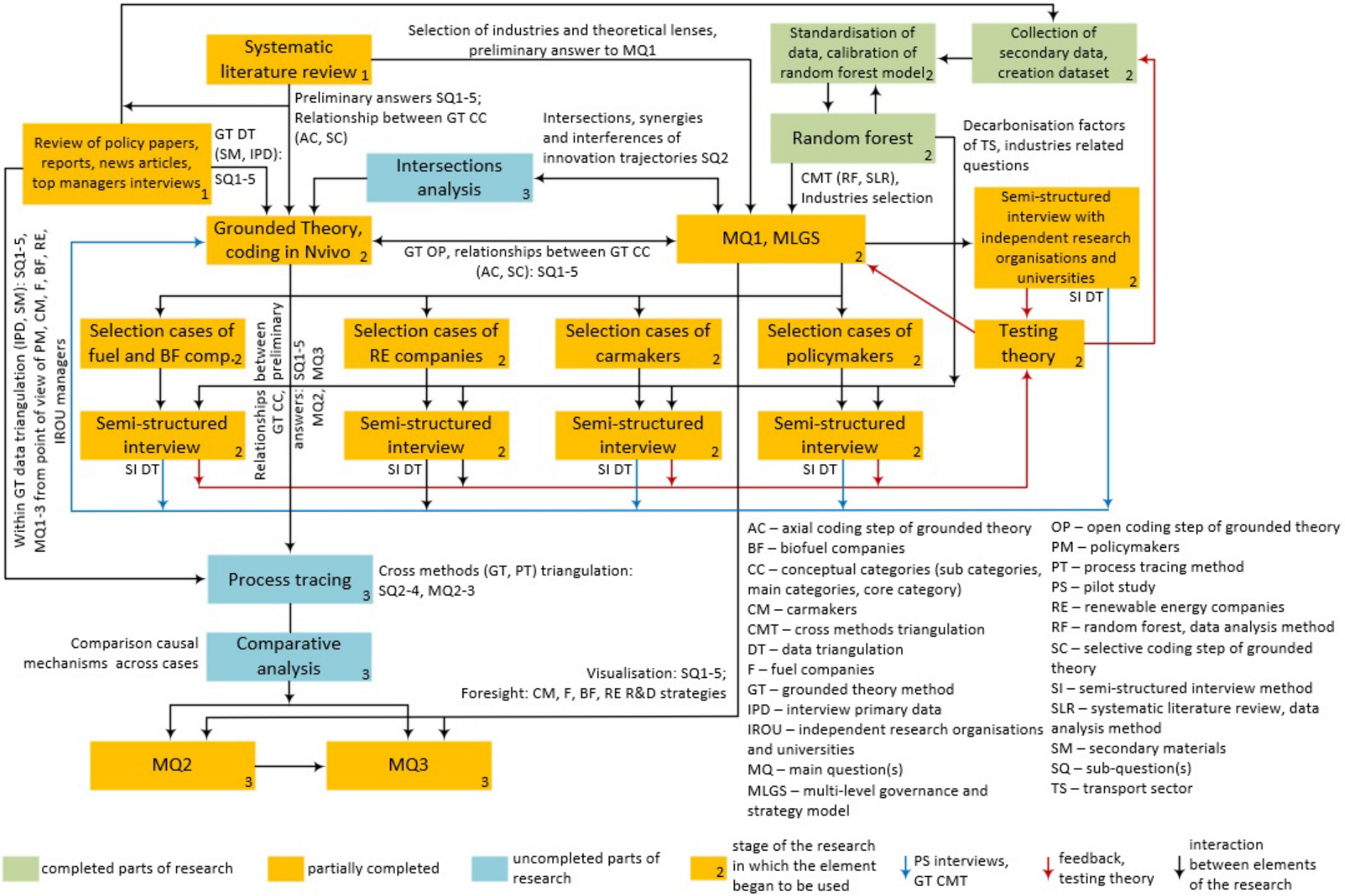
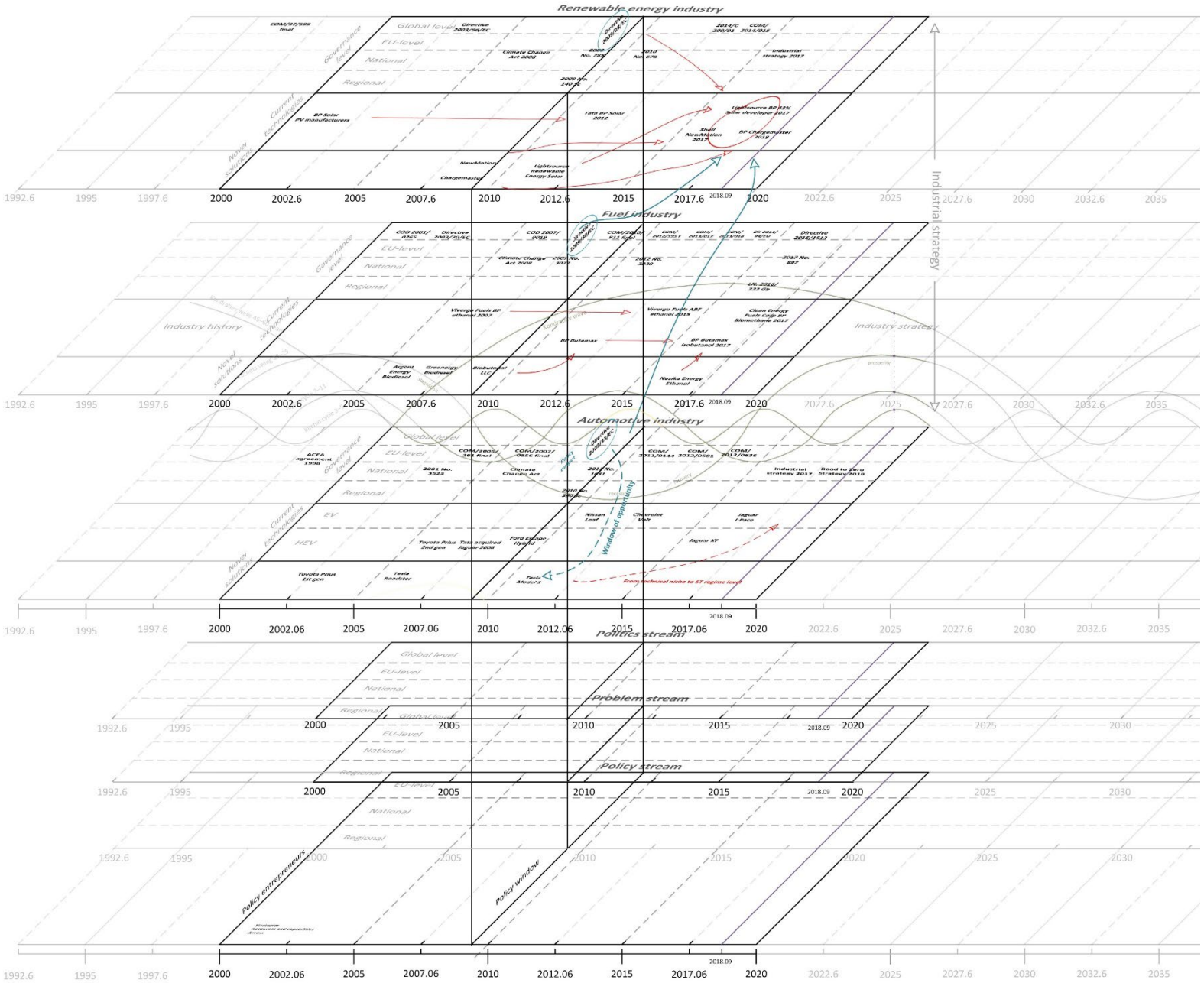
Cherp, A., Vinichenko, V., Jewell, J., Brutschin, E. and Sovacool, B., 2018. Integrating techno-economic, socio-technical and political perspectives on national energy transitions: A meta-theoretical framework. Energy Research and Social Science, 37

The authors provided a meta-theoretical framework that encompasses three perspectives: techno-economic, socio-technical, and political.

Basu, S., Bale, C., Wehnert, T. and Topp, K., 2019. A complexity approach to defining urban energy systems. Cities, 95

The authors developed an urban energy complex systems framework that incorporates insights from Arnulf Grubler's energy transition study, Liesbet Hooghe and Gary Marks' multi-level governance theory, and Frank Geels' multi-level perspective framework.

Mixed Method Approach



Multi-Level Governance and Strategy Model