

# T04W01 / Promoting, regulating and standardizing emerging technologies

**Topic :** T04 / Public Administration, Governance, Networks

**Chair :** Jona van Laak (Fachhochschule für Oekonomie und Management (FOM))

**Second Chair :** Stefan Wurster (The Bavarian School of Public Policy)

**Third Chair :** Hanna Hottenrott (Technische Universität München)

## CALL FOR PAPERS

We welcome contributions that address theoretical, methodological, and empirical research questions on the promotion, regulation, and standardization of emerging technologies. The workshop aims to develop a comparative perspective on innovation at the intersection of policy studies and political economy. Our main intention is to show, how innovation can be promoted and regulated and how standardization can be used to support this process.

For this reason, contributions are welcome, that work on one or at the intersection between the three leading topics “promotion”, “regulation” and “standardization”. The promotion of innovation plays an important role in creating interfaces and communication standards on markets that improve networking, enable technology development, and enhance the quality of coordination. The promotion of innovation is there for closely linked to the institutions, which set the framework for economic activity and provide incentives for the innovative behavior of individuals. In addition to the basic institutional framework, standardization enables market participants to join the development process of market rules and processes. In this way, market actors in turn play a decisive role in the governance structure, which can provide a strong impetus for the development of emerging technologies.

As mentioned above policy processes are key to understanding policy decisions for the promotion, regulation and standardization of emerging technologies. Therefore, studies focussing on the link between innovation politics and policy outputs and outcomes are very welcome.

The workshop is methodical open to all kinds of research, including qualitative and quantitative studies as well as mixed-method approaches. The theoretical design can take on institutional, governance, or functionalistic assumptions. As we expect a high variance of different topics and studies, it's intended to publish this workshop's unique combination of different research approaches in form of an edited book.

Possible research questions or approaches could work on: Correlations between institutional design and emerging technologies; Regulation and cross-sectorial technology share; Behavioural economic effects on competition and R&D-cooperation; Innovations cluster and innovations spaces; Comparisons of innovation policy systems; Individual case studies; Governance characteristics or policy impact assessments; Sectorial and regional macroeconomic policy studies

## ABSTRACT

Incentives for innovation and the formation of emerging clusters are among the key mechanisms to shape future economic development and contribute to technological renewal. The last decade's evolution of innovation policy from a list of individual policy components such as research funding or technology policy to a comprehensive innovation system (Cf. Gerybadze (2015): 517) has made coordination to the key feature of innovation policy. Second, it has created a close coupling of innovation and standardization policy, which regulates the status “normal” and enforces market participants to contribute in the design-process of “their” markets. The recent complaint of Tesla-CEO Elon Musk about the hurdles of German regulation may show these differences in the self-perception of a corporates role and processes of policy making when developing national innovation systems.

The aim of the workshop is to bring together research from the fields of policy studies and political economy, working on the promotion, regulation and standardization of emerging technologies. The workshop is open to all types of theory designs, following institutional, governance and functionalistic assumptions.

Institutional approaches set the focus on the correlations between institutions and behavioural changes,

which cause innovation effects. A connection to current research is provided by studies working on risk, liability or patent law requirements (cf. Gerybadze (2015), Pittinsky (2019)); output-evaluation via patents and R&D investments (cf. Nagaoka et al. (2010)), infrastructure quality, ISO certifications, capital circulation or research networks. The governance perspective analyses innovation policy with regard to structural and procedural aspects of the implemented decision making process, chosen institutional settings (e.g. actor constellation) and policy objectives; e.g. focusing on actor constellation or coordination quality (interactive innovation modelling). This includes a variety of policy fields (cf. Elstub, Escobar (2019); Fritzsche, A. et al. (2020)), technology distribution models (cf. Bresnahan (2010)), inter-firm cooperation, cluster development, research and government funding (cf. Freeman, Luca (2001)) as well as standardization effects (cf. Borraz (2007), Henman, Dean (2010)). It also links innovation politics with policy outputs and outcomes. The functionalistic approach enables the policy evaluation with respect to its problem-solving capacity (cf. Sørensen, E. (2017); Hervas-Oliver et al. (2021)); that offers scope for comparative approaches, case studies, policy design comparison etc.

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## Session 1 Policy and Institutions

Tuesday, June 28th 10:00 to 12:00 (C418)

### **(Virtual) Mission Orientation and Innovation Clusters**

Hanna Hottenrott (Technische Universität München)

Stefan Wurster (The Bavarian School of Public Policy)

### **The Role of Intermediary Institutions as Policy Instruments for the Promotion and Regulation of Emerging Technologies**

Charles Conteh (Brock University)

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## Session 2 Case Studies 1: Artificial Intelligence & Patents

Tuesday, June 28th 14:00 to 17:00 (C418)

### **(Virtual) The Regulatory Governance of Artificial Intelligence: Challenges, Goals and Instruments**

Markus Siewert (Technische Universität München)

Stefan Wurster (The Bavarian School of Public Policy)

### **(Virtual) Canada and the Innovation Challenge: Artificial Intelligence and Pharmaceutical Manufacturing**

Shirley Anne Scharf

### **The Patent Paradox and the Alienability Motive to Patent**

Simon Trlifaj (Central European University)

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## Session 3 Case Studies 2: Industry & Digitalisation

Wednesday, June 29th 09:00 to 12:00 (C418)

### **Innovation trends and clusters in smart cities: Implications for regulatory design**

Kritika Sha (National University of Singapore)

Araz Taeihagh (National University of Singapore)

### **Locating disruptive innovations activities and processes in knowledge-intensive industries**

Dr. Anita Nusselt (Fachhochschule für Oekonomie und Management (FOM))

### **(Virtual) Misleading governance? The influence of European standardisation on competition and innovation in the metal construction sector**

Jona van Laak (Fachhochschule für Oekonomie und Management (FOM))