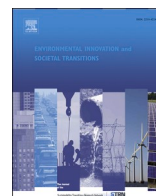


Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Environmental Innovation and Societal Transitions

journal homepage: www.elsevier.com/locate/eist

Introduction to ‘Markets in sustainability transitions’

Wouter Boon^{a,*}, Thomas Magnusson^{b,c}, Sampsa Hyysalo^d

^a Copernicus Institute of Sustainable Development, Utrecht University, the Netherlands

^b School of Business, Innovation and Sustainability, Halmstad University, Sweden

^c Industrial Management, Linköping University, Sweden

^d Aalto University School of Art, Design and Architecture, Helsinki, Finland

ARTICLE INFO

Keywords:

Markets
Market formation
Market shaping
Transitions

ABSTRACT

If sustainability transitions research is to be relevant for upscaled diffusion of radical innovations and wide systemic socio-technical changes, then markets remain critical to account for. Founding frameworks in transition studies regard markets and market formation as important. Yet, the conceptualization of markets has so far not been elaborate: markets are mostly pictured as target areas for sustainable innovation and emphasis is on diffusion and user involvement. This special issue aims to unpack the notion of markets and market formation in sustainability transitions. The special issue contains in total 13 papers, which draw on theory from various scientific disciplines, use diverse research approaches, and cover a multitude of contexts. Altogether, the collection of papers stimulates broader theorizing of markets in sustainability transitions and the formulation of an agenda for future studies on markets in sustainability transitions. This editorial paper proposes relevant topics for such a research agenda.

1. Introduction

Founding frameworks in transition studies regard markets and market formation as critical for transitions to unfold (Geels, 2004) and innovation systems to emerge (Dewald and Truffer, 2011; Hekkert et al., 2007). Conceptualization of markets have, however, so far not been elaborate, perhaps because empirically sustainable technologies only recently began to be ready to scale (Hyysalo et al., 2018) or because markets are regarded as rational trade arenas (Diaz Riuz, 2012). Presently, markets are mostly pictured as target areas for sustainable innovation and emphasis is on diffusion and user involvement.

This special issue aims to unpack the notion of markets, market formation and market shaping in sustainability transitions. The main motivation for this focus is that if sustainability transitions research is to be relevant for upscaled diffusion of sustainable innovations, wide systemic socio-technical changes, and extensive restructuring of economies, then markets remain critical to account for. Markets affect the form of consumed goods and services; they can facilitate and inhibit exchange of resources, hence serving to coordinate or stall transformative processes. We build on recent sustainability transitions literature that made initial steps in conceptualizing the development, formation, creation, and shaping of markets (Boon et al., 2020; Dewald and Truffer, 2012; Hyysalo, 2021; Ottosson et al., 2020; Schanz et al., 2019) and a dialog session at the 2020 International Sustainability Transitions Conference.

Moreover, there is decades of theoretical work that builds on literature on markets in economics and has gone beyond perceiving markets as trade arenas in which buyers and sellers with rational preferences and full information maximize utility and profits. This

* Corresponding author.

E-mail address: w.p.c.boon@uu.nl (W. Boon).

<https://doi.org/10.1016/j.eist.2022.08.006>

Received 25 August 2022; Accepted 30 August 2022

Available online 6 September 2022

2210-4224/© 2022 The Author(s). Published by Elsevier B.V. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

Table 1
Articles in the special issue with their main characteristics and contributions.

Author(s)	Title	Empirical field (or in case of no empirical basis: type of paper)	Topic area(s)	Contributions
Beumer et al. (2022)	It is not the market, stupid: On the importance of non-market economies in sustainability transitions	Agriculture (rice intensification)	Alternatives to market mechanisms	<ul style="list-style-type: none"> - Market mechanisms are central in sustainability transitions - There are alternative ways of organizing exchange based on principles of reciprocity, redistribution, and subsistence
Boon et al. (2022)	Conceptualizing market formation for transformative policy	Health (eHealth and genetic testing) and 3D printing	Policy for market formation	<ul style="list-style-type: none"> - Five distinct market formation processes are explored - The processes facilitate diagnosis of bottlenecks and drivers - Policy design can address these bottlenecks
Dordi et al. (2022)	Ten financial actors can accelerate a transition away from fossil fuels	Energy market	Role of investors in creating sustainability markets	<ul style="list-style-type: none"> - Capital markets may prove to be enablers to the sustainable transition innovation processes - Capital markets may be conceived in terms of networks of actors that may support or hinder transitions
Gomes et al. (2022)	The role of governments in uncertainty orchestration in market formation for sustainability transitions	Electric carsharing, bioplastics, biofuels, and biological pesticides	Management of uncertainties related to market formation	<ul style="list-style-type: none"> - Exploration of how government actors orchestrate uncertainties regarding market formation - Types of uncertainties identified: configurational uncertainty, affiliation uncertainty, and interdependence uncertainty
Groenewoudt and Romijn (2022)	Limits of the corporate-led market approach to off-grid energy access: A review	Off-grid solar technologies	Non-market-based routes	<ul style="list-style-type: none"> - Corporate-led market development route is dominant but reproduces structural injustices - Non-market-based routes like non-profit and government-led interventions are needed for sustainability transitions to unfold
Hyysalo et al. (2022)	Market intermediation and its embeddedness – Lessons from the Finnish energy transition	Energy and built environment	Market formation; market embeddedness; intermediation	<ul style="list-style-type: none"> - Development of mass markets in low carbon energy solutions is slower than expected - Intermediation is important in market formation prior to mainstream markets - Ecologies of intermediation and socio-material arenas pattern intermediation in partial and shifting ways
Karnøe et al. (2022)	Introducing the lens of markets-in-the-making to transition studies: The case of the Danish wind power market agencement	Wind power	Framing and overflowing of markets	<ul style="list-style-type: none"> - Markets for new technologies are shaped by actors and devices - Discursive, economic and technical devices contribute to articulate the value created in the market - Markets are thus 'framed'
Lindberg (2022)	The power of power markets: Zonal market designs in advancing energy transitions	Electricity markets	Contribution of market designs to energy transition	<ul style="list-style-type: none"> - Comparison of market designs in liberalized electricity markets and the role of policy preferences and institutional logics - Certain market designs are better aligned with the energy transition than others
Nijhof et al. (2022)	Sustainable market transformation: A refined framework for analyzing causal loops in transitions to sustainability	Conceptual paper	Market transformation	<ul style="list-style-type: none"> - Causal loops contribute to sustainable market transformation - Market transformation follows four phases (inception, competitive advantage, synergy, and institutionalization) - Actors have different roles and responsibilities in these phases
Sareen et al. (2021)	E-scooter regulation: The micro-politics of market-making for micro-mobility in Bergen	Urban micro-mobility (e-scooters)	Micro-politics, regulation, contestation	<ul style="list-style-type: none"> - Disruptive technologies may lay claims on (urban) public space and/or are contested

(continued on next page)

Table 1 (continued)

Author(s)	Title	Empirical field (or in case of no empirical basis: type of paper)	Topic area(s)	Contributions
	market-making for micro-mobility in Bergen			- Regulation often lags behind - Market formation of such technologies should take micro-politics into account
Valor et al. (2021)	Understanding the limits to forming policy-driven markets in the electricity sector	Electricity sector (flexibility markets)	Resource integration, policy-pushed markets	- Development of markets is contingent on resource integration - Resource integration is influenced by actors' resources, and inability and/or unwillingness to interact - Actors anticipated negative valuing are reluctant to obtain resources or to interact - Institutional arrangements should support actors in this
Werner et al. (2022)	Using dynamic capabilities to shape markets for alternative technologies: A comparative case study of automotive incumbents	Automotive industry	Market-shaping capabilities, resources, legitimation	- Framework to map how incumbents deploy market-shaping capabilities to shape favorable future markets - Analysis shows how incumbents mobilize resources and engage key stakeholders to create different kinds of value - Firms induce system-level reconfigurations to create internal legitimation
Zaman and Borsky (2021)	The impact of supply structure on solar home system installations in rural off-grid areas	Solar home system installations in rural off-grid energy markets	Supply structure, market concentration	- Supply structure influences the shaping of markets - The study finds that market concentration influences number and size of new installations, and total capacity.

theoretical work has been done in disciplines such as *Evolutionary economics*, bringing in the ideas of dominant product categories and processes of preference formation (Kaplan and Tripsas, 2008; Suarez et al., 2015); *Marketing*, advancing ideas of markets constituting of practices and markets as collective efforts involving various actors (Kjellberg and Helgesson, 2007; Nenonen et al., 2019); and the *Sociology of markets*, focusing on markets as politics and as categories that require legitimation work (Çalışkan and Callon, 2010; Fligstein and Dauter, 2007; Navis and Glynn, 2010). Nevertheless, applying, combining and integrating these theoretical perspectives with transition research is still much needed, both empirically and conceptually.

2. Overview of the special issue

The goal of the special issue is to stimulate broader research and theorizing of markets in sustainability transition studies. The papers in the special issue (Table 1) use a wide range of research approaches including historical and contemporary research designs, drawing on qualitative and quantitative data to investigate relationships between market structures and evolutionary processes. The contributors analyze market evolution on different levels and at different scales (from local to global), and in different countries, socio-political settings and sectors. Most empirical cases are on European markets, yet there are contributions focusing on the global south. A majority of the empirical papers analyze cases from the energy sector, but the special issue also contains case analyses from transport, health, finance, agriculture and food.

Contributions to the special issue combine basic ideas from transition studies in terms of normative directionality, multi-dimensionality and co-evolution, multi-actor and long-term processes, stability and change, open-endedness and uncertainty, and values, contestation and disagreement (Köhler et al., 2019), with theories and concepts from established research traditions such as evolutionary and ecological economics, science and technology studies, innovation studies, economic sociology, and business administration and marketing. The intention with this cross-fertilization is to generate novel insights, clearer conceptualizations, and an elaborated understanding of markets in sustainability transition studies.

3. Main take-aways from the special issue

Based on the results and discussions presented in the articles of the special issue, we have been able to extract main lessons about markets in transitions. We frame these lessons as topics for a future research agenda of markets in sustainability transitions. These points include the following:

- (1) In innovation and transition studies, entrepreneurs and especially large incumbents have been regarded as important players in shaping new markets as well as in maintaining existing market structures and categories for the introduction of their new products or services. Some contributions to this special issue emphasize the role of businesses, yet also make an effort to nuance their position. As [Zaman and Borsky \(2021\)](#) showed, our view on the supply-side structure of markets should be more granular. They studied differences in supply structure and competition and how they affect the sales of solar home systems in rural markets, always being aware that suppliers are embedded in a network of other market actors with competitive configurations and associated power relations. [Werner et al. \(2022\)](#) studied how incumbent firms shape markets by demonstrating value and creating a narrative. Through these activities, firms also aim to justify their strategic choices internally. [Lindberg \(2022\)](#) show that vested company interests and related institutions can dominate choices on how to determine the design of electricity markets.
- (2) Transition studies have focused on the early stages of sustainable technology development. Especially in the context of the multi-level framework, shaping of markets has been associated with incumbent firms being counteractive and regimes being dominated by apparent market failures. Consequently, transition studies have regarded markets as an ambiguous concept, and research seemed to favor e.g. niche-level experimentation. Nowadays, technologies aiming for sustainable solutions enter the acceleration phases which leads some transition scholars to re-embrace the importance of commercialization, companies and creating markets to ensure large-scale deployment. The reevaluation of markets even leads to over-emphasis both of the evidence of capacities of the markets to spread sustainable solutions and on delegitimizing the importance of non-firm actors. Pairing the neglect of studying markets with an expectation that they nonetheless catapult sustainable innovations widely in society can at worst lead to a perilous ‘market fetish’. The contributions to this special issue make clear that markets in transitions take many shapes and that their shaping is important for their capacity to further transitions. Building on the sociology of markets ([Karnøe et al., 2022](#)), a number of articles emphasize that markets are more than mere places for economic exchange. Rather, they should also be perceived as spaces determined by social interactions between stakeholders ([Hyysalo et al., 2022](#)). These spaces are then demarcated by narratives, and furthermore, through this social interaction, stakeholders actively shape narratives to demarcate what is part of the market and how the market should be conceived, as such emphasizing the cognitive dimension of markets ([Boon et al., 2022](#); [Werner et al., 2022](#)).
- (3) Markets should not (only) be defined by activities of entrepreneurs nor restricted to their transactions with users. [Lundvall et al., 1988](#) already posited that information exchange goes beyond ‘pure’ market signals of price and quantity. To enable product innovation, market interactions should also incorporate supplier capabilities and user demands. Moreover, there are many other stakeholders involved in the forming and functioning of markets. [Hyysalo et al. \(2022\)](#) demonstrate that market formation is always embedded in intermediation performed by many actors in different arenas. In focusing on financial capital, [Dordi et al. \(2022\)](#) find that investors may form networks of actors that can support (and hinder) creative destruction needed for these markets to be transformed. A few contributions highlight the conflicts and contestation involved in these multi-actor processes, e.g. between incumbents and newcomers and between public and private interests ([Sareen et al., 2021](#); [Valor et al., 2021](#)). Power relations between the stakeholders are important to consider when analyzing markets in sustainability transitions.
- (4) Markets can take different shapes and evolve during the course of transitions. They are different in embryonic phases (e.g. in terms of actors and narratives involved) as compared to acceleration phases, and are potentially reshaped again if mass market conditions are achieved ([Nijhof et al., 2022](#)). This shaping requires institutional work and intermediation. Different actors have different ways of attaining legitimacy to influence this work in their desired directions. [Karnøe et al. \(2022\)](#) delve into this by showing in the case of wind power that creating – or framing – a stable market is difficult and costly due to socio-political, economic and new technological pressures external to the market. [Hyysalo et al. \(2022\)](#) examine how patterns of intermediation change during the course of the development of markets for low-carbon solutions.
- (5) An open question remains as to which sustainable products in the context of transitions require, or even can become exchanged in mass markets and which products will be transacted in smaller, patchy markets, or as parts of larger bundles of solutions deployed in e.g. low carbon reconfiguration of the built environment. Niches have been regarded as proto-markets and precursors to mass markets. Yet, whether niches develop into mass markets or something else is an open question. What would the transition between one market shape and another look like? And what would it mean for stepping up or down niche protection? What about monopolies or other types of market power forming in these niches? And would it be possible for multiple niche markets to co-exist as part of an interconnected ecosystem ([Boon et al., 2022](#))? There is a need for investigating the exact barriers to speed up market formation and/or markets transitioning from one stage to the next. To this end, [Nijhof et al. \(2022\)](#) propose a framework with causal loops, illustrating what kind of interventions are most effective to accelerate a sustainable market transformation process. [Hyysalo et al. \(2022\)](#) point out that much of the requisite intermediation in a maturing market involves the very opposite of catalyzing solution emergence: reducing the complexity of goods and services and forming intermediary actor categories that simplify and stabilize the markets for final adopters.
- (6) Several papers in the special issue argue that policy has important roles to direct and stimulate emerging markets. This role is different from the role of policy to protect new technologies from regime pressures, as traditionally advocated in theories on strategic niche management. Instead of protection there seems to be a need for a controlled exposure to regime pressures. The papers published in this special issue present several propositions in this respect. [Valor et al. \(2021\)](#) show how in policy-driven markets, such as provision of distributed flexibility in electricity systems, value is co-created, but that available resources and market actors’ abilities and willingness to integrate resources impose limits to the success of co-creating markets. [Gomes and Barros \(2022\)](#) claim that governmental intervention is instrumental for dealing with uncertainties over which actors to involve, required interdependencies with other actors, and the unique identity of a market. Based on these different uncertainties, they

present a number of propositions on how governments may act. Regulatory uncertainty is a key aspect for Sareen et al. (2021) when markets are taking shape. Especially in cases of rapid innovation and diffusion, such as sharing platforms and micro-mobility options, private actors aim to create markets on their accord, and public actors are lagging in terms of how to regulate. Boon et al. (2022) disentangle five major processes of market formation that can be used as a diagnostic tool to identify misalignments, bottlenecks and failures for which transformative innovation policy interventions can then be devised. The framework enables capturing the systemic, contextualized nature of market formation processes from early phases of technology emergence onwards and can use this to study and design market-shaping policies that contribute to desired transitions.

- (7) Some papers in the special issue challenge the markets as a dominant form of organizing exchange of products and services, often dominated by companies. They argue that such corporate-led market development may reproduce structural injustices. Even perspectives that highlight the role of public actors in organizing exchange seem to do this with half an eye on markets, as does Mazzucato (2016) in her plea for the entrepreneurial state. Hence, these papers call for alternative ways of organizing exchange, with greater focus on local, non-affiliated entrepreneurs, non-profit organizations, and the public sector. Beumer et al. (2022) present a case of an agricultural innovation that diffused without relying on markets, based on principles of reciprocity, redistribution and subsistence. Such principles might form alternative bases for organizing exchange in the context of sustainability transitions. Groenewoudt and Romijn (2022) further point out that the corporate-led market development route creates certain biases and limitations in the case of off-grid energy. They call for broadening the possible routes for diffusion by integrating non-market-based options. The papers highlight how the relationships between environmental and innovation policies and markets are manifold and complex – policies are clearly a key means that can give rise to new solutions and markets. Policies are needed for shaping the markets as they develop, e.g. in terms of directing market development towards sustainable innovation as well as of regulating and curbing undesired market development.

4. Conclusion

The papers in this special issue have highlighted and nuanced the instance of markets and market formation in the context of transitions. The contributing articles show that markets are populated with a wide variety of actors, ranging from companies to community groups and public actors. Markets have material and exchange dimensions, but they are also embedded in wider socio-technical and economic systems. The demarcation of markets is subject to construction of material as well as socio-political and cognitive artefacts, such as narratives. Altogether, the special issue constitutes a basis for a research agenda for future studies on markets in sustainability studies. Future research may focus on specific aspects such as incumbency, policy and power relations influencing markets, different characteristics of markets, and different stages of market evolution. However, future research should also adopt critical perspectives to highlight the limitations of markets and situate markets in broader economic contexts. Markets can have a certain directionality and be precursor to future market developments and the formation of new markets. In this light, the main takeaway is to investigate markets and the opportunities there are to shape them to favor sustainable transformation by taking a process perspective.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

No data was used for the research described in the article.

Acknowledgments

As special issue guest editors we want to thank the contributors to the special issue as well as all reviewers involved. We also gratefully acknowledge the constructive support and feedback of Jeroen van den Bergh who as EIST editor oversaw the special issue's development.

References

- Beumer, K., Maat, H., Glover, D., 2022. It's not the market, stupid: on the importance of non-market economies in sustainability transitions. *Environ. Innov. Soc. Transit.* 42, 429–441. <https://doi.org/10.1016/j.eist.2022.02.001>.
- Boon, W.P.C., Edler, J., Robinson, D.K.R., 2020. Market formation in the context of transitions: a comment on the transitions agenda. *Environ. Innov. Soc. Transit.* 34, 346–347. <https://doi.org/10.1016/j.eist.2019.11.006>.
- Boon, W.P.C., Edler, J., Robinson, D.K.R., 2022. Conceptualizing market formation for transformative policy. *Environ. Innov. Soc. Transit.* 42, 152–169. <https://doi.org/10.1016/j.eist.2021.12.010>.
- Çalışkan, K., Callon, M., 2010. Economization, part 2: a research programme for the study of markets. In *Econ. Soc.* 39 (Issue 1), 1–32. <https://doi.org/10.1080/03085140903424519>. Taylor & Francis Group.
- Dewald, U., Truffer, B., 2011. Market formation in technological innovation systems—diffusion of photovoltaic applications in Germany. *Ind. Innov.* 18 (3), 285–300. <https://doi.org/10.1080/13662716.2011.561028>.

- Dewald, U., Truffer, B., 2012. The local sources of market formation: explaining regional growth differentials in German photovoltaic markets. *Eur. Plan. Stud.* 20 (3), 397–420. <https://doi.org/10.1080/09654313.2012.651803>.
- Diaz Riu, C., 2012. Theories of markets: insights from marketing and the sociology of markets. *Mark. Rev.* 12 (1) <https://doi.org/10.1362/146934712X13286274424316>.
- Dordi, T., Gehricke, S.A., Naef, A., Weber, O., 2022. Ten financial actors can accelerate a transition away from fossil fuels. *Environ. Innov. Soc. Transit.* 44, 60–78. <https://doi.org/10.1016/j.eist.2022.05.006>.
- Fligstein, N., Dauter, L., 2007. The sociology of markets. *Annu. Rev. Sociol.* 33 (1), 105–128. <https://doi.org/10.1146/annurev.soc.33.040406.131736>.
- Geels, F.W., 2004. From sectoral systems of innovation to socio-technical systems: insights about dynamics and change from sociology and institutional theory. *Res. Policy* 33 (6–7), 897–920. <https://doi.org/10.1016/j.respol.2004.01.015>.
- Gomes, L.A., de, V., Barros, L.S., da, S., 2022. The role of governments in uncertainty orchestration in market formation for sustainability transitions. *Environ. Innov. Soc. Transit.* 43, 127–145. <https://doi.org/10.1016/j.eist.2022.03.006>.
- Groenewoudt, A.C., Romijn, H.A., 2022. Limits of the corporate-led market approach to off-grid energy access: a review. *Environ. Innov. Soc. Transit.* 42, 27–43. <https://doi.org/10.1016/j.eist.2021.10.027>.
- Hekkert, M.P., Suurs, R.A.A., Negro, S.O., Kuhlmann, S., Smits, R.E.H.M., 2007. Functions of innovation systems: a new approach for analysing technological change. *Technol. Forecast. Soc. Chang.* 74 (4), 413–432. <https://doi.org/10.1016/j.techfore.2006.03.002>.
- Hyysalo, S., 2021. *Citizen Activities in Energy Transition: User Innovation, New Communities and the Shaping of Sustainable Future*. Routledge.
- Hyysalo, S., Heiskanen, E., Lukkarinen, J., Matschoss, K., Jalas, M., Kivimaa, P., Juntunen, J.K., Moilanen, F., Murto, P., Primmer, E., 2022. Market intermediation and its embeddedness – lessons from the Finnish energy transition. *Environ. Innov. Soc. Transit.* 42, 184–200. <https://doi.org/10.1016/j.eist.2021.12.004>.
- Hyysalo, S., Juntunen, J.K., Martiskainen, M., 2018. Energy internet forums as acceleration phase transition intermediaries. *Res. Policy* 47 (5), 872–885. <https://doi.org/10.1016/j.respol.2018.02.012>.
- Kaplan, S., Tripsas, M., 2008. Thinking about technology: applying a cognitive lens to technical change. *Res. Policy* 37 (5), 790–805. <https://doi.org/10.1016/j.respol.2008.02.002>.
- Karnøe, P., Kirkegaard, J.K., Caliskan, K., 2022. Introducing the lens of markets-in-the-making to transition studies: the case of the Danish wind power market agencement. *Environ. Innov. Soc. Transit.* 44, 79–91. <https://doi.org/10.1016/j.eist.2022.05.003>.
- Kjellberg, H., Helgesson, C.F., 2007. On the nature of markets and their practices. *Mark. Theory* 7 (2), 137–162. <https://doi.org/10.1177/1470593107076862>.
- Köhler, J., Geels, F.W., Kern, F., Markard, J., Onsongo, E., Wieczorek, A., Alkemade, F., Avelino, F., Bergek, A., Boons, F., Fünfschilling, L., Hess, D., Holtz, G., Hyysalo, S., Jenkins, K., Kivimaa, P., Martiskainen, M., McMeekin, A., Mühlmeier, M.S., Wells, P., 2019. An agenda for sustainability transitions research: state of the art and future directions. *Environ. Innov. Soc. Transit.* 31, 1–32. <https://doi.org/10.1016/j.eist.2019.01.004>.
- Lindberg, M.B., 2022. *The power of power markets: zonal market designs in advancing energy transitions*. *Environ. Innov. Soc. Transit.*
- Lundvall, B.A., Dosi, G., Freeman, C., Nelson, R., Silverberg, G., Soete, L., 1988. *Innovation as an interactive process: from user-producer interaction to the national system of innovation*. *Technical Change and Economic Theory*. Pinter Publishers, pp. 349–369.
- Mazzucato, M., 2016. From market fixing to market-creating: a new framework for innovation policy. *Ind. Innov.* 23 (2), 140–156. <https://doi.org/10.1080/13662716.2016.1146124>.
- Navis, C., Glynn, M.A., 2010. How new market categories emerge: temporal dynamics of legitimacy, identity, and entrepreneurship in satellite radio, 1990–2005. *Adm. Sci. Q.* 55 (3), 439–471. <https://doi.org/10.2189/asqu.2010.55.3.439>.
- Nenonen, S., Storbacka, K., Windahl, C., 2019. Capabilities for market-shaping: triggering and facilitating increased value creation. *J. Acad. Mark. Sci.* 47 (4), 617–639. <https://doi.org/10.1007/s11747-019-00643-z>.
- Nijhof, A., Wins, A., Argyrou, A., Chevrollier, N., 2022. Sustainable market transformation: a refined framework for analyzing causal loops in transitions to sustainability. *Environ. Innov. Soc. Transit.* 42, 352–361. <https://doi.org/10.1016/j.eist.2022.01.010>.
- Ottosson, M., Magnusson, T., Andersson, H., 2020. Shaping sustainable markets—A conceptual framework illustrated by the case of biogas in Sweden. *Environ. Innov. Soc. Transit.* 36, 303–320. <https://doi.org/10.1016/j.eist.2019.10.008>.
- Sareen, S., Remme, D., Haarstad, H., 2021. E-scooter regulation: the micro-politics of market-making for micro-mobility in Bergen. *Environ. Innov. Soc. Transit.* 40, 461–473. <https://doi.org/10.1016/j.eist.2021.10.009>.
- Schanz, H., Federer, J., Wilczynski, M., 2019. Markets as leverage points for transformations of economic systems: the example of the German bioeconomy. *Environ. Innov. Soc. Transit.* 33, 140–161. <https://doi.org/10.1016/j.eist.2019.04.003>.
- Suarez, F.F., Grodal, S., Gotsopoulos, A., 2015. Perfect timing? Dominant category, dominant design, and the window of opportunity for firm entry. *Strateg. Manag. J.* 36 (3), 437–448. <https://doi.org/10.1002/smj.2225>.
- Valor, C., Lind, L., Cossent, R., Escudero, C., 2021. Understanding the limits to forming policy-driven markets in the electricity sector. *Environ. Innov. Soc. Transit.* 40, 645–662. <https://doi.org/10.1016/j.eist.2021.10.022>.
- Werner, V., Flaig, A., Magnusson, T., Ottosson, M., 2022. Using dynamic capabilities to shape markets for alternative technologies: a comparative case study of automotive incumbents. *Environ. Innov. Soc. Transit.* 42, 12–26. <https://doi.org/10.1016/j.eist.2021.10.031>.
- Zaman, R., Borsky, S., 2021. The impact of supply structure on solar home system installations in rural off-grid areas. *Environ. Innov. Soc. Transit.* 40, 625–644. <https://doi.org/10.1016/j.eist.2021.10.015>.