

The **Conference on the Regulation of Infrastructures** is the annual event that brings together all the Areas of the **Florence School of Regulation**. The **7th edition** aims at taking stock of the **major challenges infrastructure regulation is currently facing in the context of sharing economy and platforms**.

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The de- and re-regulation of the different network industries is an on-going process at both the national and global levels. As this process unfolds, ever new phenomena emerge, necessitating a constant reassessment of the content and objectives of regulation.

The rapidly evolving Information and Communication Technologies (ICTs) have significantly challenged the traditionally stable landscape of infrastructure services provision. The new data layer over the traditional infrastructure and service layers is transforming network industries: online platforms create new indirect network effects, they allow new service providers to enter the market (prosumers, sharing economy providers, etc.), and they challenge the central role of traditional infrastructure managers/service providers as entities ensuring the coordination of the sectors.

Offering traditional and new services in an innovative way is a growing trend among public authorities, traditional providers as well as new private operators, prosumers and platforms. However, together with great opportunities, disruptive innovations also give rise to new regulatory challenges, especially when it comes to infrastructure financing and the coordination of operations.

This 7th Florence Conference on the Regulation of Infrastructures aims at taking stock of the **major** challenges infrastructure regulation is currently facing as a result of technology, indirect network effects, **newly emerging network structures** (decentralized networks, distributed networks, sharing economy), and **new actors** (prosumers, OTTs, platforms, etc).





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# Antonioli Mantegazzini, B., Giusti, A. “Smart Grid, Load Management and Dynamic Pricing For Electricity: Findings from a Field Project in Switzerland”

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## Abstract

The electricity sector is in transition toward a market where the roles of the operators as well as institutional actors are changing. The rise in renewable energy sources is determining a move from a centrally, fossil-fuel generation to a local distributed one with, among the other things, implications in terms of volatility, intermittency and reserve “backup” capacity. New players, such as “prosumers” (energy consumers able to produce electricity themselves, supplying it to the energy network) are emerging, while others – mainly distribution system operators, DSOs - seems to changing or rethinking their business model. In this renewed and challenging scenario, the grid management – mainly intended as the pursuing of the exact balancing of demand and supply - is becoming more and more crucial and complex. The new production mix is partially weather-dependant and consumption periodically volatile; peak loads are more frequent and this call for additional investments to meet new consumption’s profile.

Two main strategies could address the fluctuating feed-in of renewables: increasing demand elasticity and/or store surplus power. With the first one, the focus should be on the so-called enabling technologies such as advanced metering infrastructures (AMI), considered as a core component of the overall smart electricity system. With reference to the latter, innovation and declining cost and size of storage facilities could help, extending their utility also at residential level; batteries are more and more integrated within the electricity network, and also electric vehicles (EVs) could play an interest role in storing and balancing the flows. This renewed and challenging scenario represents the basis for the Swiss2Grid pilot project. Its main objective is the development of an innovative approach for the grid load management based on the adoption of an active algorithm (HAC) located on individual homes – then decentralised - governed by simple network rules aimed to reduce the level of complexity of the system, flattening at the same time the peak load curve. This load optimization is intended also having positive effects in terms of consumers’ bills expenditure; the estimation of the magnitude of potential savings is made for selected price scenario hypothesis, sketched out in order to find the price scheme that better fit to the new consumption’s profile and, in a wider prospective, to the new smart electricity market.

The amount of potential consumers’ costs reduction associated to a load shifting by HAC has been estimated for several price scenario hypothesis, sketched in order to find the price scheme that better

fit to the new consumption's profile. In detail, we tested time constant rates as well as time variable ones, from flat rates to real price ones. This project has indeed given us the opportunity to investigate about use – and actual advantages - of real time prices for electricity combined with enabling technologies and on the new roles of utilities and DSOs.

# **Bieri, D., Franzi, S., Simundza, D. “Regulatory Networks in the US Blockchain Industry”**

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## **Abstract**

This paper analyzes the network structure of regulators of the blockchain fintech industry in the United States. One of the innovative features of the blockchain is that the technology is both a process and infrastructure, and as a consequence of this duality, there is significant uncertainty over its future regulation. Therefore, one important question this research addresses is: who is going to regulate the blockchain, and fintech more generally? We examine existing blockchain companies and their regulators through a sample of member firms of two prominent blockchain consortia— R3 and Hyperledger. We use the companies’ self-reported data on regulators to generate and analyze the regulatory network, extending the layered interbank lending model of Craig and von Peter (2014). We classify the various entities in the US federal regulatory ecosystem into five categories, i.e. federal regulators, federal reserve system, self-regulatory agencies, state regulators, and private regulators. Our network of regulators is compact and dense, with many federal, state, and self-regulatory groups exhibiting a high degree of connectivity. The results of the econometric model show the regulators are tiered in a core-periphery structure, with the core composed, as we might expect, mainly of federal regulators and regional federal reserve banks, but also, surprisingly, some state and self-regulatory bodies.

# Espinosa Apráez, B., Lavrijssen, S. “Exploring regulatory barriers for the use of Data-Driven Innovation in the management of key infrastructures”

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## Abstract

The rise of Big Data has become a driver of innovation in multiple sectors in the recent years. The management of infrastructure employed for key services – such as water, energy and transport- is one of the fields that may benefit from the use of certain types of Data-Driven Innovation (DDI), like smart meters, sensors, Internet of Things and artificial intelligence, to name a few. This type of innovation allows to obtain improved information about structural assets and their surroundings, resulting in better decision-making by the infrastructure managers, which in turn contributes to the achievement of public values related to the aforesaid services, such as reliability, affordability, safety and sustainability.

However, the introduction of DDI for infrastructure management gives rise to questions regarding the adequacy of current regulatory frameworks to account for the new possibilities enabled by technology, evidencing, among other issues, the existence of gaps in regulations. Regulatory gaps are critical in the context of the management of infrastructures used in highly regulated sectors such as energy, water and transport, and they might become a barrier for reaping the advantages offered by DDI.

This study is an exploratory exercise to understand why regulatory gaps may become evident when introducing DDI for the management of infrastructure. The paper employs the concept of ‘regulatory disconnection’ as a theoretical framework and analyzes the possibility of introducing smart water meters in the Netherlands as an example of a DDI that currently encounters regulatory gaps.

It is concluded that DDI, as a technological development, might enable new possibilities of action that are not duly acknowledged in existent regulatory frameworks, revealing the need to create or adjust rules to facilitate further development and adoption of this type of innovation, and control its potential risks.

# Frieden, R., “The Internet of Platforms and Two-Sided Markets: Implications for Competition and Consumers”

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## Abstract

This paper examines developments in the Internet marketplace that favor embedded intermediaries that have significant market power and the ability to install a platform that both upstream sources of content and applications as well as downstream consumers need to access. Ventures such as Amazon, Facebook and Google have exploited, “winner take all” networking externalities resulting in the creation of seemingly impenetrable barriers to market entry even by innovative companies. Courts and regulatory agencies recognize the substantial market shares these ventures have acquired, but refrain from imposing sanctions on grounds that consumers accrue ample benefits when platform operators use upstream revenues to subsidize downstream services. Consumers also benefit when platform intermediaries eschew short term profits in the quest for greater product diversity and “shelf space” in the Internet marketplace. Additionally, courts and regulators may over-estimate the opportunities for consumers to migrate to alternatives, but underestimate the harms to competition and consumers occurring on either or both sides of an intermediary’s platform.

The paper identifies four types of government responses to price and quality of service discrimination that exploits choke points within the Internet ecosystem where large volume of traffic has to traverse a single digital, broadband carrier’s network, or service provider’s platform. Governments can refrain from regulating access and accept aspects of market concentration as proper rewards to ventures offering desirable content and carriage services. Alternatively, they can impose access sanctions for antitrust violations, unfair trade practices, consumer harms and unreasonable access discrimination to offset market-driven concentration and dominance. Between these poles, governments can apply antitrust/competition policy remedies, or rely on expert regulatory agencies to respond to complaints.

The paper examines digital broadband platform operators with an eye toward assessing the aggregate benefits and costs to both upstream firms and downstream consumers. The paper notes that in some instances, government-imposed, ex ante safeguards anticipate and attempt to resolve transitory, comparatively insignificant, or possibly nonexistent problems. In other instances, governments have stated an intention to rely on ex post remedies, but they never get around to refining procedures to reduce the potential for false negatives that ignore or underestimate significant marketplace harm.

The paper concludes that governments have failed to revise and recalibrate tools that examine potential marketplace distortions and assess the potential for damage to competition and consumers. The paper demonstrates how the Justice Department, Federal Trade Commission and the Federal Communications Commission have relied on economic and legal doctrine ill-suited for digital broadband market assessments. These agencies have generated false positives, resulting in market intervention where not major problem exists and false negatives, where undetected major problems cause harm without remedy. Additionally these agencies appear to misallocate their resources and attention on insignificant matters when more compelling problems exists.

# Gautier A., Jacqmin J. “PV Adoption in Wallonia: The Role of Distribution Tariffs under Net Metering”

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## Abstract

The deployment of decentralized production units (DPU) like rooftop solar panels is a major challenge for energy transition. Under a net metering system where the meter runs backward when there is excessive PV production, the electricity produced is valued at the retail price. Higher retail prices thus encourage the deployment of DPU. In this paper, we study the impact of tariffs on the decision to install residential solar PV installations. We analyze a panel data from Wallonia, where tariffs depend largely from volumetric charges. We exploit the presence of 13 different grid operators with different tariffs, to disentangle this relationship. Using various specifications, our results suggest that a one eurocent per kWh of tariff increase leads to, all else equal, an increase of around 5% in the number of new installations.

# **Gonçalves, E., Dutra, J., Barbalho, A. “Utilities of the future? The effects of newly emerging network structures on the cost of capital and Financials of Energy Distribution Firms”**

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## **Abstract**

There is a profound transformation on the electricity sector worldwide being brought by the deployment of Distributed Energy Resources - DER. This transformation is disruptive in nature, affecting traditional business models based on economies of scale and scope - characteristics of natural monopolies and networks and requires revisiting and revising the traditional revenue requirement calculation adopted in the utilities' regulation, based on earning a rate of return (WACC) on the value of investments ("Regulatory Rate Base"). Brazilian distribution companies constitute an interesting case study for the evaluation of potential impacts of these changes on the financial structure and firm's cost of capital considering the recent discussion about the level of regulatory cost of capital used to compensate investments in the segment. Thus, in this article we examine the potential effects of new business models on the financial risks perceived by electric energy distribution firms and its implications for determining the regulated rate of return.

# Gori, P., Parcu, P.L. “Postal operators as “ground based” online platforms?”

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## Abstract

In the last century the advent of voice telecommunications challenged but did not displace postal services. However, yesterday’s challenge of telecommunications to postal services appears quite minor in respect to today’s disruption to post caused by the online communications world. That the Internet is having a disruptive impact on many, or maybe all, business models is obvious, what is still less clear is if, and how, different sectors affected by the impact of new online services can react to the disruption and survive by transforming it in an opportunity.

The European Commission, analysing the digital revolution, has listed a number of essential features of the so-called online platforms, namely: they create and shape new markets (substituting or integrating traditional ones); they operate in a multi-sided market environment; they exploit direct and especially indirect network effects; they rely on ICT to constantly reach users; they create digital value (European Commission, 2016).

Among the key ingredients for the affirmation and success of online business models, no matter the specific type, there is the ability of gathering and exploiting large amounts of data and to acquire the trust of consumers. Historically, because of their intermediary role, POs fare well on both of these dimensions: they have developed and used large databases and have conquered a long-term relation of trust with consumers.

The aim of this paper is to understand whether POs could go in the direction of restructuring their business models by transforming themselves in a new kind of “ground based” online platforms or, at least, if they can find a permanent alliance with other major online platforms in virtue of a sort of “complementarity” of assets. To this purpose, after a brief recall of the nature of the disruption created by the online world to the traditional business of POs, we will examine behaviours and intentions of some important POs active within the European Union (Royal Mail, Deutsche Post DHL Group, Le Groupe La Poste, Poste Italiane, Correos Group). The paper will continue by looking at the assets and

peculiarities that may facilitate a move toward a stronger online role and sketch risks and opportunities for POs in this attempt to redefine themselves as a possible new genus of online platforms.

# Korsakaite, D., Biekša, D., Bieksiene, E. “Third Party Access to Existing Municipal Energy Infrastructure: Lithuanian Centralized District Heating Case Analysis”

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## Abstract

Ensuring third party (TPA) access to existing infrastructure and establishing working competition in previously monopolistic sectors have been at focus for academic, policy and public administration practice for a number of years [3,4,10]. Particularly in energy infrastructures, these efforts have been rewarded with significant market changes in electricity and gas sectors all over Europe, and beyond. Infrastructure of district heating (DH), while belonging to the family of energy infrastructures, was addressed with challenges of TPA and competitive forces to far lesser extent.

The academic literature keeps discussion over TPA, potential of competition, expected benefits and challenges of introducing competition into DH systems. Nevertheless, the conviction, that DH systems are not a subject to competition, is still prevailing in energy policy and practice [7].

The DH in Eastern Europe, and in particular, in Lithuania is of essential importance as source of thermal energy supply to households. The bills for DH are among of the most important items of average household spending, if not the most important, during heating season. In the aftermath of several major energetic and policy circumstances that have fallen in Lithuania back in 2010-2012, an essential regulatory and market structure change was introduced in Lithuania – opening existing DH infrastructure for TPA and introducing competition principles for thermal energy generation and supply at wholesale level with monthly price and quantity formation auctions under single buyer model.

The essentially reformed regulatory and market structure works for 6 years by now, and the reform has brought major changes in the sector, regarding the number of active market participants, structure of fuels used, thermal energy price, ownership concentration.

The objective of this paper is to present and assess the impact of regulatory reform conducted in DH sector in Lithuania, suggest further regulatory steps to complete the reform. The academic and practical novelty of the work – recent regulatory reform of DH generation market is analyzed and impacts of the

fresh reform are assessed. The practical applicability may be considered in terms of reforming further Eastern European markets of countries under transition as well as reforming other municipal sectors introducing market based principles.

# Knieps, G. “Internet of Things and the Economics of Shared Mobility”

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## Abstract

In this paper the potentials for shared mobility services based on ICT innovations are characterized requiring a paradigm shift from intramodal transportation markets towards intermodal shared mobility markets. Heterogeneous ICT innovations are characterized entailing various combinations of App-based mobile communications, (camera based) sensor networks and big data processing. The potentials of shared mobility concepts to avoid traffic collapse and significantly reduce congestion and pollution in cities are considered referring to different simulation studies of the impact of complete or partial replacing of private vehicles in a city with shared mobility services. Furthermore, the changing role of regulations due to the transition from traditional intramodal transportation markets towards intermodal shared mobility services markets are considered. Firstly, the abolishment of legal entry barriers in the local taxi market and public transit market are required. Secondly, competition for subsidies of politically desired non-cost covering (shared) mobility services should be symmetrically for all active and potential providers of shared mobility services. Thirdly, technical regulation and consumer protection including privacy and cybersecurity for the shared mobility markets should be applied symmetrically and consistently. Finally, the role of pilot projects to establish shared mobility concepts are demonstrated.

# **Kurosaki, F., Higashino, S. “A Study of IC Card Systems within Japanese Urban Railway Lines: Considering the Integration of Transportation Services”**

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## **Abstract**

Since IC cards have much larger data capacity in comparison with paper-based magnetic tickets, they can record the precise data of passengers’ travel. Beyond their aim to minimise costs, Japanese passenger railways have tried to utilise this advantage to make public transport more convenient and to expand their business scope. Thus, they have introduced IC card systems without support from the public sector since the early 2000s, and their usage has become commonplace—especially in urban areas. Although various IC card systems were developed by different railways, inter-operation among them has been promoted since 2013, and now a single major IC card is valid for public transport in urban areas all over Japan. As such, Japanese passenger railways have garnered fruitful results by utilising IC card systems so far. To make public transport in urban areas more convenient, the public sector can also utilise IC card systems to introduce new rules like those found in Singapore.

# **Molinos-Senante, M., Farias, R. "Economic Group's Influence on the Efficiency and Quality of Service of Water Companies under Model-Firm Regulation"**

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## **Abstract**

The privatization of water and sewerage services (WSS) has led to the foundation of water economic groups, which integrate several water companies and have gained notable importance at the global level. In the framework of benchmarking studies, there are no prior studies exploring the impact that economic groups have on the efficiency and quality of service provided by water companies. This study investigates, for the first time, whether the membership of water companies in an economic group influences their performance. Quantity- and quality-adjusted efficiency scores were computed using data envelopment analysis models. An empirical application was developed for the Chilean water industry since most of their water companies are private and belong to an economic group. The results show that independent water companies provide WSS with better quality than do water companies that belong to an economic group. From a statistical point of view, it was evident that membership in an economic group impacts both the quantity- and quality-adjusted efficiency scores of water companies. The results of this study illustrate that applying the model-firm regulation to the Chilean water industry has significant drawbacks that should be addressed by the water regulator to promote the long-term sustainability of the water industry.

# Oliveira Cruz, C., Miranda Sarmento, J. “Maximizing the Value for Money of Road Projects through Digitalization”

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## Abstract

Roads are a central element of transportation systems, enabling economic and social development, fostering territorial cohesion, and facilitating the movement of people and cargo. Governments have devoted significant financial resources to developing and improving their road networks, and are still facing increasing pressure to ensure proper maintenance and payments to those concessionaires that developed roads under PPP arrangements. As in other sectors, digitalization is paving a way towards significant changes in the way we build, operate, and finance infrastructure. These changes will have a profound impact on the entire lifecycle of an infrastructure, from the design and/or construction stage, to its operation and transfer. This paper provides an overall overview of the main technological developments which are, or could impact road infrastructure in the short, medium, and long-term. For each technological development identified in our research, we analyse the potential impact on CAPEX, OPEX, and revenues as well as their level of maturity and expected lifetime for mass adoption, and also the main bottlenecks or barriers to implementation. The findings show that digitalization and technological development in the road sector can significantly impact the economic performance of roads, thus enhancing the value of money for the society. The findings also show that there might be some excess capacity of road systems once autonomous vehicles achieve higher market penetration. However, there are still some relevant legal, regulatory, institutional, and technological and economic barriers that are slowing down the digitalization process.

## Ortiz-Arce Vizcarro, S."EU-ETS and CORSIA: rivalry or partnership?"

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### Abstract

Aviation has significant effects on the climate system. Limiting the impact of air transport on climate change is a problem of paramount importance. A comprehensive global response to climate change demands effective policies to be extended worldwide. On aviation and climate mitigation two different regimes will coexist in the following years. There is, on the one hand, the EU ETS framework, which has a European dimension but an international vocation to expand. The inclusion of aviation in this carbon trading scheme has been operational since 2012. This regulation is mandatory for most airlines operating flights in airports within the European Economic Area (EEA). On the other hand, there is also an international market based measure. The CORSIA (Carbon Offsetting and Redaction Scheme for International Aviation) has been established at international level, within the ICAO framework. The first regime has paved the way to the CORSIA, based on offsetting, but many substantial elements still remain to be developed before becomes mandatory in 2027. The problem of balancing effectiveness and embracing most world States and commercial aircraft operators are still pending.

# Pakizer, K., Lieberherr, E. “Alternative Governance Arrangements for Modular Water Infrastructure: a Systematic Review”

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## Abstract

This paper provides an overview of the alternative governance arrangements for modular and decentralized systems in the urban water sector. The aim is to shed light on how these arrangements work in terms of the policy instruments in use, their organizational structure and underlying mechanisms. The article starts out by highlighting the need for alternative governance arrangements supporting the implementation of modular water systems. We then develop an analytical framework to be able to systematically investigate publications dealing with alternative arrangements for innovative technologies, which we then identify through a literature review. We analyze the functionality of the alternatives by applying grounded theory and in particular theoretical sampling, allowing us to identify publications that have a high explanatory power for the framework. The preliminary results highlight the importance of state involvement to ensure public and environmental health in the context of modular and decentralized water infrastructures. The findings also suggest that in order to gain public acceptance for new water systems additional accountability mechanisms might become necessary, such as answerability toward citizens and consumers. Moreover, the analysis shows that economic efficiency plays a key role and that this could be achieved in the context of flexible solutions that do not economically burden the municipalities or that lead to lower costs than retrofitting centralized systems. This goal seems to be best addressed by policy instrument mixes, involving formal and informal measures.

# **Panadès-Estruch, L. "ICT-LED Challenges for the EU's Transport Infrastructure Funding: a Critical Assessment of Public-Private Partnerships"**

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## **Abstract**

Transport is one of the EU's long-held interests, where the EU has sought to intervene extensively directly via regulation, as well as indirectly via funding. The Trans-European Networks for Transport, as the main funding programme for a pan-European integrated network, has sought influence on the EU's infrastructure in a variety of ways. One of these areas of influence has been Public-Private Partnerships, where a variety of ICTs facilitating exchange of information between EU and national levels of government has reshaped the traditional distribution of competences.

This conference communication starts from the following hypothesis: ICTs have created the policy space to reshape the regulatory dynamics of transport policy at the European level. The communication focuses on Public-Private Partnerships in the Trans-European Networks for Transport. Methodologies include research based on primary and secondary sources plus empirical research based on questionnaires to funding awardees.

Expected findings are checking the hypothesis via the identification of relevant ICT-based spaces for communication and the appraisal of their influence in the selected case study.

# **Rossotto, C.M., Lal Das, P., Gasol Ramos, E., Clemente Miranda, E., Badran, M.F., Martinez Licetti, M., Miralles Murciego, G. "Digital Platforms: A Literature Review and Policy Implications for Development"**

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## **Abstract**

This article takes stock of the literature around digital platforms, and shows how this review can inform policy choices in developing countries. Through the review, this article sets a research agenda for platforms in emerging markets. Four elements are specifically analyzed. First, the definition of multisided-platforms (MSP); second technology and behavioral enablers; third, the emerging business models; and, fourth, platform dynamics. Each of these elements is assessed in terms of its relevance in emerging and developing countries. Policy implications for development are also highlighted, building the foundations for a new research agenda

# Vanrykel,F., Ernst, D., Bourgeois, M. "Fostering Share&Charge through proper regulation"

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## Abstract

This paper studies the emergence of Share&Charge, a German platform that organizes the sharing of charging stations for electric vehicles and the billing for the energy transactions. Share&Charge follows a peer-to-peer fashion, enabling direct transactions between charging station owners and electric vehicle (EV) drivers. On the demand side, the platform, with its interactive map, makes it possible for electric car or EV owners to find a charging station in the most suitable place, for instance at their place of work or where they live. On the offer side, it enables station operators (private individuals or companies) to rent their charging stations and eventually sell the electricity they produce. Charging tariffs within the charging station network are determined by the charging station owners themselves, but the platform provides indicative tariffs. Launched in September 2017, Share&Charge follows other initiatives, such as the French platforms Wattpop and ChargeMap, and the Swedish Elbnb, created in conjunction with the car brand Renault. All of these initiatives aim to make e-mobility a reality. Share&Charge's network has proved to be successful with German citizens, with more than 1200 charging stations currently in Germany.

Share&Charge adds certain elements of value at different stages of EV utilization. Firstly, this model allows for a co-financing of charging infrastructures by individuals and businesses in the private sector, by sharing the infrastructure costs between EV drivers. Besides the purchase price of EVs, the implementation of charging infrastructures, and their financing, represent a significant barrier to the rise of e-mobility. Share&Charge helps remove this obstacle, without adding a further burden on the governmental budget. In addition, this approach follows the "user pays principle", which engages in fair and effective financing. Secondly, the platform increases decentralized production value and facilitates its expansion. As renewable energy production is mostly decentralized, the platform further supports the development of electricity from renewable sources. It also helps to avoid grid congestion and energy loss, as well as to increase flexibility within the electricity market. Thirdly, data use enables the optimization of energy demand and supply, and the optimal determination of tariffs, although these remain facultative.

Models like Share&Charge could thus positively impact energy policy, by tackling several upcoming obstacles associated with the development of EVs and renewable energy production capacities. In particular, such models could foster the rise of EVs and facilitate the expansion of decentralized

renewable electricity production. However, new forms of network structures (decentralized networks, sharing economy), and new actors (prosumers, platforms, etc.) also raise regulatory challenges.

This paper presents the legal issues associated with the development of disruptive models, by using the example of Share&Charge. In particular, we study the applicable tax framework to such a platform, assuming that as such, it would be introduced into the Belgian market. Finally, we propose a policy recommendation to foster the development of platforms such as Share&Charge.

# Van Soest, H. “Peer-to-Peer Electricity Trading: a Review of the Legal Context”

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## Abstract

The peer-to-peer (P2P) trading of electricity is a recently developed transaction in the electricity system. In a P2P electricity trade, two equal market participants, in most cases prosumers, conclude a contract for the trade of electricity. This paper provides a review of the legal context of P2P electricity trading, with a focus on European energy law. We conclude that the current legal framework remains based on the traditional electricity system, with a strong vertical supply chain and a firm producer-consumer distinction. As a result, the legal framework is unadapted to the P2P electricity trading and needs to be reviewed.

# Wahyuningtyas, S. Y. “The Decentralization Via Self-Regulation of Online Platform and Competition Policy Challenges: A Study on Go-Jek in Indonesia”

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## Abstract

The emergence of the digital market brings new challenges to competition policy in how innovation could fit in the policy on one hand, and on the other hand, what would be the suitable approaches of competition policy to cope with innovation. The paper deals with the current development in Indonesia as a show case on how innovation responds to market demand faster than state regulations. Go-Jek exemplifies this development in the way it meets the need of public transportation and expands the services to delivery of foods, documents, and goods, offers other services such as shopping and money transfer. Thus, from tackling transportation problems to answer various needs of the community, it started to create new markets. The use of a sharing economy model as the underlying idea for an online service network by market players, like Go-Jek, raises a question regarding the best approach to address such development while maintaining fair competition in the various service markets both offline and online. An attempt to restore the imbalance of competition due to regulation asymmetry is done by decentralizing the law-making process by means of the self-regulation of the online platform.

While policy makers and regulators struggle to reach a compromise about the most workable policy and regulation, markets might take initiatives to regulate themselves in order to shield the interests of the contracting parties. Although the principle of the freedom of contract protects such market-initiated regulation, questions remain about the extent to which the party interests are balanced and how self-regulation could meet established public policy. Hence, to what extent state intervention would be needed.

The analysis will take into account two main the Indonesian competition authority (Commission for the Supervision of Business Competition, hereafter KPPU) Regulations that refer to innovation as a key element in guiding how competition law should be implemented by the competition authority. First, innovation has a place in competition policy consideration in the context of the interplay between competition law and intellectual property rights. Second, innovation is used as a reference when evaluating whether a certain policy or regulation results in the decrease of consumer welfare when it reduces the incentive to compete.

The discussions in the paper resolve the problems into two key issues: First, how and to what extent self-regulation of online platform plays a role to decentralize the law-making process to regulate the

transactions being done on the platform. Second, which challenges posed to competition and how competition law should deal with them. The study focuses on Go-Jek to represent the new emerging market players in online business in Indonesia.