Current Issues in Turkish Network Industries

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Current Issues in Turkish Network Industries

In Turkey, following the economic crisis in 2001, comprehensive market-based reforms were launched in several sectors, including the network industries, such as telecommunications, electricity, and aviation. Privatisation of certain units has enabled the stimulation of investments in different segments and the establishment of sector-specific regulatory authorities, which in turn have resulted in significant improvements. However, the introduction of competition and regulatory achievements in the electricity and the telecommunications industries, have been slower than initially anticipated. Excessive infrastructural investments have created uncertainty around the future of the airline industry. Moreover, emerging platforms on the internet are witnessing problematic regulatory interventions.

This special issue of the Network Industries Quarterly will be dedicated to papers related to these developments currently observed across the network industries in Turkey. Academics and practitioners discuss the aforementioned evolutions in the electricity, broadcasting, airline, and platform industries.

Köksal and Uçar examine the public interventions towards the platform industries in Turkey. They emphasise the influence of interest groups and potential welfare effects of those interventions.

Gökdemir assesses the controversial decision of Turkish Competition Authority on sahibinden.com, which is the biggest classified advertisement platform in Turkey.

Ardıyok and Sağmanlıgil evaluate the draft regulation of Internet broadcasting in Turkey by including a comparison with other countries' regulations.

Delibaşı provides a feasibility analysis on the Istanbul Airport by simulating the number of passengers under two different scenarios for the following thirty years.

Eroğlu analyses whether it is possible to increase renewable energy production without incentives and excessive regulation. He examines unlicensed electricity regulation in Turkey as an example.

Guest editor of this issue: **Dr. Emin Köksal,** Associate Professor, Department of Economics, Bahcesehir University, Turkey

The guest editor of this issue is Dr. Emin Köksal (B.A. & M. A.: Galatasaray University, Ph.D.: Marmara University). He published extensively on competition and regulatory issues in telecommunications, energy, and other platform industries. Dr. Köksal has experience in platform business models, network neutrality regulations and Internet usage. He teaches industrial organisation, platform economics, innovation & competition policy in digital markets.

dossier

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Public interventions in platform industries: The role of interest groups and potential welfare effects

Emin Köksal*, Belkıs Gökçe Uçar**

We examine the public interventions towards the platform industries in Turkey. Through a regulatory and an antirust intervention, we emphasise the influence of interest groups and potential welfare effects and conclude that the public interventions benefit the relevant interest groups at the expense of other parties. Moreover, each of these interventions has potential negative effects specific to platform industries.

Introduction

The value created by platforms that operate as intermediaries between different customer groups has been increasing around the world. In parallel to their share in added value, their market power also increases. Entities that use these platforms to reach the final consumers have been troubled by such a distributional change as it causes their share in the value-added process to decline. They then call for public intervention to reverse it.

However, as the political economy literature suggests, public interventions generally benefit some parties at the expense of others (Krueger 1974). Moreover, any public intervention in platform industries may have unintended consequences (Tirole 2015). In this paper, we analyse the public interventions towards the platform industries in Turkey; in particular, we try to emphasise the influence of interest groups and potential welfare effects of the interventions through two cases.

Regulation for meal card platforms

In recent years, platform services have been on the agenda of Turkish authorities. Meal card platforms are examples of those services that have drawn attention and criticism from various actors. Currently, four platforms that dominate the Turkish market have been accused of charging high commission fees. A meal card platform is a multisided platform that operates as a payment intermediary. On one side of the platform are member restaurants that accept the card and on the other side are companies that load credits on the card for their employees. According to Turkish tax law, benefits paid to employees, such as meal payments, can be exempted from the corporate income tax. Such legislation has incentivised companies to work with meal card platforms.

A typical meal card platform charges a commission fee from the restaurants and subsidizes the companies. A typical meal card platform charges 10–12 per cent commission from the restaurants and subsidises the companies 5–6 per cent for their loaded credits. Overall, the platform receives revenue of 5–6 TRL for each 100 TRL spent on the platform.

In 2017, the association of restaurants and chambers of commerce of two big cities, Istanbul and Ankara, had started to complain via the media about high commission fees being charged by the platforms. The association of restaurants even decided to stage a day-long boycott against the platforms. After a series of meeting and negotiations with the platforms in the presence of the Ministry of Trade, a settlement was reached. In the Official Gazette on 22 May 2018, a regulation was enacted that capped the commission fees from the restaurants at 6 per cent and forbade the platforms from subsidising the companies.

Overall, the regulation preserves the revenue stream of the platforms, but changed its allocation. More concretely, the platforms still receive 6 TRL for each 100 TRL spent, but now restaurants pay less, and companies are no longer allowed to be subsidised. Accordingly, the welfare effects of this regulation indicate a situation in which the restaurants are better off, companies are worse off, and no welfare change occurs for the platforms.

However, effects on competition dynamics may potentially emerge in the long run. Before presenting our arguments on this issue, we will briefly mention a few concepts. A platform must create a feedback loop – called a network effect – in order to sustain its profitability in a multi-sided market. For instance, for a meal card platform creating a feedback loop there must be enough number of restaurants on one side and enough users (companies' employees) on the other side. This phenomenon is known as the chicken-and-egg problem (Caillaud & Jullien 2003) and requires the platform to achieve critical mass, in terms of numbers of customers, on each side of the market.

This point is more crucial for an entrant platform. The most common strategy for an entrant platform to achieve

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critical mass and solve the chicken-and-egg problem is penetration pricing (Katz & Shapiro 1994; Shapiro & Varian 1998). The fundamental mechanism of the penetration pricing strategy is based on applying lower prices for the money side and giving higher benefits to the subsidy side. Thus, an entrant platform utilises this pricing mechanism to gain ground in a multi-sided market. However, with the regulation, the penetration pricing becomes practically non-effective, since an entrant platform is not allowed to provide benefits to the company side. One can argue that applying lower commission fees for the restaurants may be sufficient for ignition. However, as David Evans and Richard Schmalensee (2016) put it, you can't have chickens without eggs but you need chickens to get eggs. Accordingly, a platform cannot attract restaurants without users, and no restaurant would be a member of the system that had no users available. Thus, we argue that, in the long-run, the regulation functions as an entry barrier and favours the existing platforms.

To sum up, the regulation for the meal card platforms, which was urged by the association of restaurants and chambers of commerce of two big cities, favours the main interest groups in the market. The short-run effects of the regulation indicate a situation in which the restaurants are better off, the companies (and, indirectly, their employees) are worse off, and the incumbent platforms secures their revenue stream. In the long run, the regulation restricts potential entries through limiting the pricing behaviour of entrant platforms.

Excessive pricing intervention: Sahibinden.com antitrust decision

Another interesting intervention to the platform industries is the Turkish Competition Authority's (TCA) sahibinden.com decision in 2018 (TCA 2018). The TCA decided that sahibinden.com – the largest classified advertisement platform in Turkey – abused its dominant position through applying excessive pricing in the market for online classified ad services for car dealers and real estate agencies.

The investigation started with a complaint by associations of car dealers and real estate agencies. Then the relevant general directorate of the Ministry of Trade became involved in the case as an additional plaintiff. Despite the opposing view of the majority of the reporters, the board decided that the platform had abused its dominant position by applying excessive pricing. This was, to our knowledge, the first ever antitrust decision for excessive pricing in online platform services. According to the TCA, sahibinden.com has a dominant position in the relevant market and abused this position by applying significantly higher prices than its competitors. The TCA also added that the price increases are non-proportional to the rise in company's cost. More interestingly, the TCA ruled that, in order to stop the violation, sahibinden.com should apply a price increase that is 'reasonable' and can be explained by the rise in its cost.

From the competition policy perspective, prohibiting excessive pricing is not an unusual application, especially for monopolies or de-facto monopolies. However, for the platform industries – in which commercial innovation plays a significant role to gain a competitive advantage – it is hard to figure out the objective of the decision. Moreover, the guidance in the decision for a lawful pricing (being cost basis and a 'reasonable' price increase) is odd for such a dynamic market in which frequent entries and exits occur.

When we look at the potential short-run effects the decision, we argue that the car dealers and the real estate agencies are better off and the platform is worse off. However, for the other side of the market (users/viewers) it is difficult to make an assessment at first sight. To elaborate the possible effects on them, we need to introduce a specific concept.

Pricing mechanism and its functioning in platform industries are more complex than in a single-sided market. In multi-sided markets, any price intervention may have further effects than initially anticipated. For instance, if a price intervention occurs on one side of the market, the platform offsets its loss from other side(s). In other words, the platform compensates its loss by charging the other side(s) of the market more or by subsidising them less. This phenomenon is known in the economic literature as the waterbed effect (Schiff 2008).

As a classified ad platform, sahibinden.com charges advertisers and provides free services to users/viewers. Those free services include innovative services such as customisable search, individual pricing alerts, historical price/rent indexes, etc. In this respect, the platform implicitly subsidises the users/viewers. As the theory and empirical findings related to the waterbed effect put it, a limit on pricing on one side has the potential to decrease the quality of the free services given on the other side (Genakos & Valletti 2012). Thus, we argue that the price intervention indicates a situation where users/viewers are worse off.

The possible long-run effects of the decision are beyond the relevant market. The guidance in the decision for a lawful pricing may have a potential negative effect on innovative business models. In platform industries, the value (and hence the pricing) of the product is not closely relat-

ed with the cost of production. The friction solved in the market and the magnitude of the network effects are the main determinants of the value of the product (Parker et al. 2016). Moreover, the commercial innovations adapted as novel business models have both cost-saving and value-creating effects. Considering the guidance in the decision, we argue that such guidance will disincentivise the creation of innovative services.

To conclude, the TCA's sahibinden.com decision takes an unusual antitrust approach towards the platform industries. While the decision favours the interest groups, the possible effects on the ultimate consumers are ignored. Moreover, the guidance in the decision for a lawful pricing creates uncertainty for the invention of novel services.

Conclusion

This paper has examined the public interventions towards the platform industries in Turkey. Through a regulatory and an antirust intervention, we emphasise the influence of interest groups and potential welfare effects. We conclude that the public interventions benefit the relevant interest groups, which urge for these interventions, at the expense of other parties. Moreover, each of these interventions has potential negative effects specific to platform industries.

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Can Antitrust Authorities' Intervention to Pricing Strategy of Multi-Sided Platforms Enhance Competition in the Market?

Bülent GÖKDEMİR*

Digital markets have been among the fast-growing businesses over the last three decades. Compared to traditional offline markets, network effects lead to non-traditional pricing behaviour in digital markets; namely, setting prices above the marginal cost on one side while implementing zero price for the others. This pricing strategy has attracted the attention of competition authorities as it addresses excessive and predatory pricing behaviour in competition law terminology. Whether competition authorities' intervention ends up enhancing competition in the market should be debated. The latest decision of the Turkish Competition Authority regarding sahibinden.com, one of the biggest platforms of vehicle and real estate trade, would be a good laboratory for discussion.

Introduction

Online-based multi-sided markets, or digital platforms, have become increasingly prominent businesses over the last three decades and have attracted the attention of economists and also governments in terms of regulatory requirements.

According to the OECD (2018), by taking the common elements of various definitions, a multi-sided platform can be defined as: "*a market in which a firm acts as a platform and sells different products to different groups of consumers, while recognizing that the demand from one group of customer depends on the demand from the other group(s)*."

Platforms are convenient ground for two or more groups of users to get together for goods, services or information exchange. Apart from the traditional offline markets, the evident feature of the platforms is the so-called network effect, a phenomenon through which a good or service gains additional value as more agents use it.

Maxwell and Penard (2015) underlined four economic features of digital platforms that can both constrain and stimulate competition. Firstly, such platforms have a specific cost structure – namely, high fixed costs and relatively low marginal costs of production – which creates economies of scale and induces a market structure dominated by few firms. They create large direct and indirect network effects. Thirdly, platforms provide positive feedback; economies of scale and network effects work together to create positive feedback or self-reinforcing diffusion processes, which causes strong platforms to become stronger and weak platforms to become weaker. Lastly, platforms are characterised by a fast pace of innovation, which can rebalance market power and facilitate entry. The dominant firms can never feel protected and must change continuously to preserve their position and prevent other firms from innovating more quickly.

One of the main benefits of platforms is that they reduce transaction cost. Transaction costs are associated with trade of goods or services and incurred in overcoming market imperfections. Since platforms bring all sides in an interactive single place (such as a computer or mobile phone screen), asymmetric information is largely eliminated. Platforms offer a wide variety of products to consumers and make it easier for them to find the goods they are looking for. Consumers often feel attracted by the presence of other consumers because it offers opportunities for social interaction and drawing benefits from each other's experience (Martens 2016).

Compared with offline markets, network effects lead to non-traditional pricing behaviour. Platforms may resort to setting prices below cost or mostly zero price to one group of users in order to make themselves more valuable to the other groups. This is likely to lead to them expanding their market share and revenue by leveraging network effects. The damages stemming from having below-cost prices are paid off through cross-subsidisation depending on the supply and demand elasticities. This has led to a variety of platform business models with fixed and variable pricing, cross-subsidisation for various parties in function of their measured behaviours and market power.

The strategy of setting prices above the marginal cost for one side while implementing zero-price for the others has drawn the attention of competition authorities because such a strategy addresses excessive and predatory pricing behaviours in competition law terminology. Competition authorities are disposed to think that high concentration ratios and dominant positions being observed in the markets are the consequence of such a pricing strategy, together with economies of scale and scope, which results in "winner-takes-all" or "lock-in" situations. Such reasoning may end up with authorities using competition law instruments to intervene in platforms' pricing strategies.

As Martens (2016) noted, traditional competition policy assumes that a welfare-maximising competitive equilibrium exists as long as prices reflect social value. In that

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case, competition policy aims to alleviate the inefficiencies caused by market power and price distortions. However, this approach does not fit well into digital platforms. Pricing on two sides of the market may not reflect social value and pricing practices may hurt some users but benefit others. Still, the overall price structure may be welfare-enhancing. When competition authorities consider an intervention to digital platforms, they should be aware that intervention on one side would affect the other side. A case-by-case overall analysis that includes all sides of the market is required.

Discussion on Turkish Competition Authority's Latest Case on Digital Markets

In the abovementioned context, the question of whether competition authorities' intervention results in enhancing competition in the market, thereby serving social welfare maximisation, deserves to be debated. The latest controversial decision by the Turkish Competition Authority (TCA) regarding sahibinden.com (Turkish Competition Authority, Decision Number 18-36/584-285, 1.10.2018), a leading digital platform for vehicle and real estate trading in Turkey, would be a good laboratory for debating.

The Turkish Competition Board ruled that sahibinden.com abused its dominant position by implementing excessive pricing to real estate agents and car dealers. The decision had not been made by consensus. On the other hand, four out of five rapporteurs argued that although sahibinden.com had a dominant position in the market and its prices against the vehicle and real estate traders in 2014–2017 were higher than those of its rivals, sahibinden.com cannot be deemed to have abused its dominant position on the grounds that there is no evidence of negative effect of pricing on consumer welfare; also, thanks to the financially robust and strong national and international newcomers, the price of sahibinden.com is to converge to the level of competitive markets.

In the early part of the decision, the TCA spelled out the peculiar features of digital multi-sided markets and underlined that the market definition for digital platforms show considerable differences from traditional one-sided markets. According to the TCA, that is why the classical methods, such as SSNIP, could be insufficient when the relevant market is determined. By taking digital markets' specific features, the TCA define two relevant markets as the on-line service market for real estate trading and the on-line service market for vehicle trading.

Following the market definition, excessive pricing behaviour is handled in the context of theory and Turkish competition law jurisprudence. By reference to the Turkish Council of State's decisions, the TCA underlined that the main parameter to be taken into consideration in competition law enforcement should be consumer welfare. However, the decision contains no analysis of the effect of excessive pricing on the consumer welfare. The matter of consumer welfare is discussed very briefly, only in the evaluation of the legal defence of sahibinden.com. In its legal defence, sahibinden.com alleged that the consumers were not negatively affected. In other words, there was neither welfare transfer from consumers to sahibinden.com nor welfare lost due to its pricing.

Against this argument, the TCA argued, sahibinden.com misinterpreted the concept of consumer by limiting it to final consumers. By their nature, multi-sided digital platforms have different consumer groups. From this point of view, the real estate and vehicle traders are the consumers of sahibinden.com and they were exposed to lost welfare because of sahibinden.com's excessive prices. This is a controversial interpretation in terms of economic theory.

In the part of dominant position analysis, the TCA examine various parameters such as market share, number of visitors, number of corporate customers and income from corporate customers and ruled that sahibinden.com holds the dominant position in both markets. The TCA also highlighted that sahibinden.com has retained relatively high market shares in both market over the years despite its higher prices, mostly thanks to a network effect creating entry barrier in digital markets.

In order to determine whether sahibinden.com abused its dominant position during 2014–2017, the TCA applied the "economic value test", which is also known as the "united brand test" and focuses on price-cost margin and benchmark prices. In that sense, the TCA compared the prices of sahibinden.com and its main rivals and concluded that sahibinden.com's were significantly higher (the exact numbers are not presented in the decision because of trade secrets). In terms of profit ratio, the TCA compared the profit ratio of sahibinden.com with the firms operating in different digital markets on the grounds that the price-cost margin is not opaque because the total cost of the sahibinden.com is hard to distribute among specific services. A profit-ratio comparison shows that the equity profitability of sahibinden.com was significantly higher than that of its counterparts in different digital markets.

Upon the said analyses, TCA ruled that sahibinden.com has infringed Turkish Competition Law by abusing its dominance through excessive pricing. In the decision, TCA did not propose any specific remedy for terminating the infringement. Hence, sahibinden.com should deter-

mine the price level, which is not deemed to be excessive and pull its price to this level.

This decision has the potential to raise some questions with respect to whether it results in enhancing competition in the market. According to the decision, there were significant differences between the prices of sahibinden.com and its rivals at both markets. On the other hand, the network effect has led sahibinden.com to maintain its dominance. So, what is expected to happen when sahibinden.com reduces its price? Can the current rivals and newcomers gain market share or vice versa? What will be the reaction of potential rivals thinking about entering the market?

Why did the TCA not consider potential competition? Various national and international digital platforms such as Letgo, Facebook Marketplace and zingat.com had just entered into market or prepared to enter at the time of investigation. The TCA alleges that those newcomers cannot create competitive pressure on sahibinden.com due to the network effect. However, the risk of entrenched monopolies is very limited. For example, MySpace was the leading social media platform in the mid-2000s but has now almost disappeared. Nokia/Symbian was the leading technology platform for mobile phones but has now been replaced by a de facto oligopoly between Android, Apple iOS and Windows. Windows' dominant position in the operating systems market is under increasing pressure from Apple iOS and other operating systems. Google AdWords' strong position in the online advertising market is under pressure from Facebook advertising (Martens 2016).

Why didn't TCA pay regard to specific features of digital markets in its dominant power analysis as it did in the market definition analysis? As Evans and Schmalensee (2014) explained, "methods used in traditional markets are not adapted or reliable for 'platform-based' industries. Reliance on market share or price-cost margins in assessing market power is questionable. A platform serves multiple groups of customers with interdependent demands and uses complex price strategies. Market shares are not the best instrument or index to measure market power."

The last critical question to be asked is how TCA came to the decision without conducting welfare analysis. As touched on above, the reasoning behind TCA's decision is based on the argument that the real estate and vehicle traders are the consumers of sahibinden.com and they suffered lost welfare. Is the TCA aware that such an approach clashes with welfare economics?

Conclusion

All of the questions above have implied answers. Sahibinden.com is expected to increase its market share after price adjustment. On the other hand, while some players will have to leave the market, potential rivals thinking about entering the market will give up. As a result, the market power of sahibinden.com will be strengthened by the TCA's decision.

By reference to Shelansky (2013) and Manne and Wright (2011), Maxwell and Penard (2015) raise an important issue in antitrust remedies. The risk of regulatory error is high when dealing with new Internet-based business models. Regulators have a systematic bias toward seeing anticompetitive conduct in new business models. More importantly, the cost of error is much higher in the case of a so-called "Type I" error (that is, when a regulator mistakenly imposes a remedy) than for a "Type II" error (that is, when a regulator mistakenly fails to impose a remedy). This leads to the conclusion that where there is significant uncertainty due to rapid technological and market changes, regulators should err towards doing nothing rather than imposing a remedy.

Accordingly, Maxwell and Penard (2015) warned, the error costs of over-enforcement of antitrust laws in digital markets would be much higher than the error costs of under-enforcement. It can be very costly to regulate digital platform markets given the rapid pace of change in these markets. The guidelines in digital markets should be "first do no harm" to avoid counterproductive effects. The consequence of the TCA's over-enforcement will be observed and evaluated in the upcoming years.

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OTT regulation in Turkey

Şahin ARDIYOK*, Sercan SAĞMANLIGIL**

Currently, one of the most controversial topics in the global regulatory debate on electronic communications is whether over-the-top (OTT) streaming media services should be regulated. This article explains why countries are so eager to regulate OTT services and scrutinizes the recent regulatory developments in Turkey.

Introduction

Rapid technological development has led to a growing range of services being able to consume online. This has affected the competitive dynamics and technological scenarios in communication markets, and many Internet-based services that are usually called "over-the-top" (OTT) have been flourishing in the broadcasting markets (BEREC, 2016).

More than 75 percent of Internet traffic now consists of transmitting video content, while online videos watched from TV represent 25 percent of total internet traffic (Cisco, 2017). In addition, it is estimated that almost half of the adults in developed countries are subscribers to at least two services that provide visual and audio content on the Internet, and the number of these subscriptions is expected to double by 2020 (Deloitte, 2018).

Most countries already have some kind of regulation of conventional media services, as for a long time these have been the main players in the broadcasting sector. However, as viewing habits of end-users have changed significantly, there is a need to revise the regulatory framework, which will primarily aim to set appropriate definitions, scopes, related obligations, etc. (TCA, 2017).

In recent years, a number of countries, particularly in Europe, have placed more emphasis on OTT regulations. Pursuant to this tendency, Article 29/A is issued in the "*Law no. 5651 on Regulation of Publications on The Internet and Suppression of Crimes Committed by Means of Such Publications*" (Code) in order to set out the general outline of the proposed regulation regarding OTT services in Turkey.

This paper will initially address the question of what OTT is in media markets, before scrutinizing recent developments in Turkey in detail. In this context, the draft regulation will be evaluated by including a comparison with other countries' regulations. Finally, potential amendment recommendations will be set out.

What is OTT?

From a general perspective, the term of "over the top" refers to the delivery of the film and TV content over internet without requiring a subscription to a traditional cable or satellite pay TV- service. Accordingly, BEREC, which is an important organization in the electronic communications sector, defines OTT as *"a content, service or practice transmitted to end users on the Internet"*. In line with BEREC's approach, it can be argued that all services and applications provided on the Internet can be included within the scope of the OTT concept. Moreover, it means that Internet service providers (ISPs) only have a role in the distribution of the OTT service, as the production is solely provided by the OTT service provider (BEREC, 2016).

The main reason why OTT services provided by a third-party content provider is that it provides the distribution of the video or other media on the Internet without a multiple system operator. In this context, the ISP is not responsible for the content and has no ability to control it unless the video is purchased from an ISP such as IPTV, which is a television programming being communicated using the internet protocol. (Remy & Letamendia 2014).

In this respect, OECD refers in the 2015 report of the OECD Working Group on Infrastructures and Service Policy to OTT services as *"an alternative way of providing services on a broadband internet environment"* (OECD, 2015). According to the OECD, OTT services use similar network facilities as the other content and application providers.

OTT services usually do not constitute a standalone service, as the production of these services does not represent a value in itself. Therefore, they can only demonstrate their function in conjunction with the other elements of the network such as the transmission of the content.

BEREC also points out that OTT services should be regarded as electronic communication services if they potentially compete with them (such as providing e-mail, mes-

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saging, etc.) In this respect, OTT services that are able to offer telecommunications services – such as SMS, MMS, voice-over-Internet protocol (VOIP), text, images, calls, etc. – will be deemed services that challenge the telecom operators (Remy & Letamendia, 2014). Skype is the best-known OTT service that can be substituted for conventional communication services. On the other hand, it is worth emphasising that OTT services that do not relate to the electronic communication sector, such as Uber and Airbnb, should not be regarded as electronic communication services (BEREC, 2016).

Recent developments in Turkey concerning online video on-demand platforms

The Radio and Television Supreme Board (RTUK) is the main authority for the regulation and supervision of radio, television and on-demand media services that are under the jurisdiction of the Republic of Turkey. In order to achieve its primary objectives and determine the required administrative, financial and technical standards for the media service operators, the RTUK releases its secondary legislation pursuant to the Broadcasting Code, which is the primary source of law in broadcasting services.

Conventional media services such as cable, satellite and terrestrial networks have already been regulated by the secondary legislation of the RTUK. These regulations mainly aim to determine the principles and procedures for granting cable and satellite licenses and transmission authorizations to media service providers.

Several video-on-demand (VOD) platforms have grown their presence in Turkey by targeting online users. Therefore, lawmakers took VOD service providers into the scope of RTUK surveillance, through Article 29/A of the Code, which was passed by the Turkish Parliament and published in the Official Gazette on March 21, 2018.

Article 29/A of the Code stipulates the obligation to obtain a licence from the RTUK to provide radio, television and on-demand broadcasting services exclusively on the Internet. Along with some other provisions that set a general framework for the supervision of the RTUK over the VOD service providers, the new article stipulates that secondary legislation shall be issued jointly by the RTUK and the Information and Communication Technologies Authority (BTK).

Although the RTUK released its draft regulation in the last quarter of 2018, the regulation has not been passed into law yet (as of the date of this article). As the draft regulation reflects the latest position of the RTUK for the supervision of internet broadcasting services, this paper will present its evaluations in line with the draft regulation.

Critical Analysis of the Draft Regulation

The draft regulation consists of 24 articles that set out the main principles and procedures for broadcasting via the Internet. In this respect, the draft regulation mainly aims to clarify licensing conditions and the supervision of the RTUK over OTT service providers.

Although this article only evaluates limited issues regarding the draft regulation, there are number of other aspects that can be taken into consideration.

In this respect, this paper only scrutinizes the draft regulation in line with the most controversial provisions related to the scope, authorization and content of the regulation.

The Scope

In line with the scope of the regulation, Article 2 includes any platforms providing radio, television and on-demand services over the Internet. However, in the second paragraph, it exempts the following service providers from the scope of the regulation:

- Individual communication service
- Platforms whose main activity is not associated with the transmission of radio, television and on-demand broadcast services via the Internet
- Real and legal persons who provide only hosting for radio, television and on-demand broadcast services.

First of all, it can be inferred that any broadcasting activity that targets the territory of Turkey, such as having subscribers from Turkey, will fall under the scope of the regulation. To assess this, the RTUK uses an impact analysis to determine the range of its surveillance.

The most problematic issue will be defining the individual communication services and hosting service providers, as this directly relates to the determination of the involvement of video-sharing platforms such as YouTube and Dailymotion. The draft regulation should not apply to an individual user who uploads a couple of videos to the video-sharing platforms. On the other hand, the design of the current video-sharing platforms can easily allow the OTT service providers to broadcast their content over a channel opened in the platform. More specifically, a medium-sized OTT service provider in Turkey can easily take shelter in the YouTube channel in order to evade the legal obligations provided in the regulation.

According to Article 2, it is not quite clear whether those channels will be included within the scope of the regulation; in fact, since it excludes the hosting service providers, one could argue that YouTube channels are not subject to the regulation.

In this respect, it is possible to argue that the law should embrace a two-pronged approach towards video-sharing platforms. Individual communications such as personal vlogs should be put to one side and exempted from the scope of the regulation. On the other hand, corporate communications should be distinguished from other content in the video-sharing platforms and made subject to the legal obligations set forth in the regulation and, consequently, in the Code.

As the main rationale of the OTT regulation is to determine the principles and procedures for OTT services that are now capable of generating a significant amount of business, hosting service providers should not go unnoticed. In this context, it will be plausible to claim that OTT services provided through video-sharing platforms should be covered within the scope of the regulations as long as they are substitutable with other broadcasting content provided through the Internet.

However, the regulation could create an unfair advantage for hosting providers – specifically YouTube – over the OTT providers. In South Korea, for example, local firms are worried because YouTube is free from proper regulation and poses a significant challenge to the country's OTT industry (Digital TV Life, 2018). Hence, it is likely that many countries will likely embrace an inclusionary approach to regulating hosting service providers in the near future.

Broadcasting Authorization

According to Article 5 of the regulation, media service providers that offer radio, television and on-demand broadcast services only from the Internet will need to request a broadcasting license from the Supreme Council of the RTUK. In addition, the providers will have to apply for a transmission authorisation from the Supreme Council of the RTUK. Pursuant to Article 8, before acquiring transmission authorisation, a provider must be established as a limited or joint stock company in accordance with the provisions of the Turkish Commercial Code.

Although strict OTT regulations have not been common until recently, many European countries now adopt various authorisation procedures for OTT providers. In this respect, many of them prefer to stipulate a notification obligation for OTT providers. Poland, Hungary, the Czech Republic and the United Kingdom are examples of countries that put service providers under a notification obligation (Blaguez, 2016). In order to determine the scope of the notification obligation, the countries generally release a guideline that provides criteria for being subject to the obligation (OFCOM, 2018).

On the other hand, Romania and Singapore regulate a similar authorisation regime with a draft regulation, as both countries lay down the licensing requirement as a condition, rather than a notification obligation. One could argue that countries that are relatively unattractive to foreign investors have a greater tendency to require licensing from the service providers. The main reason for this situation is that the countries strive to preclude tax avoidance by compelling service providers to establish a local company that will be under a tax obligation within that country.

Similarly, it is clear that the regulation stipulates an authorization process that leaves the service providers no choice but to establish a company in accordance with Turkish law. In this respect, the law aims to levy taxes on the income generated from Turkey's territory over the Turkish establishment of the service providers.

Since the alternative ways of abstaining from tax avoidance are quite limited within the scope of the international tax law, it can be accepted as a feasible policy that the legislator intends to reduce tax loss by planning a licensing process that stipulates the permanent establishment of the service provider.

The Content

The regulation aims to impose surveillance over the content of the broadcasting provided through the Internet. Although the regulation does not provide details on how this surveillance over the content will be implemented, it can be inferred that one of the significant purposes of the surveillance will be the protection of children.

This policy seems quite probable as the European Union also mainly targets the protection of the children with its Audiovisual Media Services Directive. According to the directive, Member States should take necessary precautions to protect minors from harmful content. Those precautions include scheduling restrictions, technical measures or visual indicators (EBU). In this respect, it can be clearly inferred that the directive does not prohibit harmful content; it only stipulates the obligation to take measures to prevent children from viewing the inappropriate content.

From this point of view, this paper suggests that the regulation should provide more certainty for the service providers over whether they are obliged to cut out all inappropriate content for the sake of protecting children. As it will not be cost-effective for the service providers to do this,

the regulation should determine the necessary precautions that the service providers should take in order to broadcast their content. For example, the encrypted channels can be exempted from content limitations as long as they keep the content out of the reach of children.

Conclusion

In conclusion, regulating OTT services should be regarded as an appropriate approach for Turkey since the income generated from those services is increasing every day. Therefore, putting the OTT services under surveillance will bring the treatment of the conventional broadcasting sector and the new technologies into balance.

On the other hand, the regulatory body must be careful not to ignore the business needs of the OTT service providers when stipulating new rules on the sector. Regulations that go too far could discourage the service providers from making significant investments in Turkey.

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Mega Istanbul Airport

Tuba Toru Delibaşı*

This paper shows that the planned number of passengers at Istanbul Airport can be reached if the Turkish economy grows to its potential over the next 25 years. However, the airport may only reach the capacity of 120 million passengers by the 2050s if economic growth rates stay below the potential level 5 per cent for the period 2013–2019, 4 per cent for the period 2020–2030 and 2 per cent for the period 2031–2043.

Introduction

Turkey has undergone major development in air transportation since the industry was deregulated in 2003. The increasing capacity of airlines, as well as the development of Turkish Airlines after its partial privatization, led to a significant increase in air traffic in Turkey. Air traffic grew by an average of 16 per cent per year in from 2002 to 2012, compared to 5 per cent annually around the world. Istanbul Ataturk Airport (IST) provided approximately 35 per cent of Turkey's total passenger traffic with 45 million passengers in 2012, and it was expected that the number of passengers would exceed 65 million by 2019. Therefore, the authorities decided to build a new airport in May 2012.

Istanbul Airport, which is built on around 7600 hectares, is expected to be the world's largest airport in terms of passenger traffic. The airport is planned to be built in three phases. In the first phase, the new airport is constructed to accommodate 90 million passengers. There are plans to increase the capacity of the new airport to 120 million in the second phase and then to 150 million in third phase. Istanbul Airport, which took over the Ataturk Airport's operations, is the only airport on the European side of Istanbul.

This mega-project has raised debate regarding environmental concerns and profitability. In this paper, I focus on the latter and provide a feasibility analysis on the new Istanbul Airport. To do this, I first simulate the number of passengers under two different scenarios for the following 30 years through an econometric model, and then predict the aeronautical and non-aeronautical revenues depending on the predicted number of passengers to assess the feasibility of the new airport.

Is the expected number of passengers realistic?

The enplaned passenger forecasts are developed using a bottom-up approach based on a regression model using socioeconomic variables. I regressed the number of passengers on the real ticket prices, real GDP and population. After obtaining the regression parameters, the number of passengers (domestic, international and connecting separately) for each year between 2013 and 2043 are simulated under two different scenarios.

In Scenario 1, the growth rate of real GDP is taken as 5 per cent for the period 2013–2019, 4 per cent for the period 2020–2030 and 2 per cent for the period 2031–2043, according to the OECD medium and long term predictions (OECD 2012). However, the realization of the potential growth rate is possible only if the necessary structural reforms are performed in order to overcome the restriction such as low savings and low competition power. If the necessary structural reforms are not made, then the potential growth rate will not be attained. Hence, I set up Scenario 2, which has lower economic growth rates such as 4 per cent for the first period, 3 per cent for the second period and 1.5 per cent for the last period (Gursel and Toru, 2013). I adapt Turkish Statistics Institute (TUIK) population increase projection; that is, 1.02 per cent for the first period, 0.74 per cent for the second period and 0.36 per cent for the last period (TUIK, 2012). Considering ticket fares, I posit an increase of 3 per cent, 2 per cent and 1.5 per cent for the respective periods. Note that the two scenarios differ only in terms of economic growth assumptions.

Having predicted the total number of passengers, I derive domestic, international and transit passengers according to past observations. In other words, I first project the growth rate of domestic and total international (that is, international and transit) passengers in the Ataturk Airport during 2005–2012 on the first period. Then, the shares of domestic passengers and international passengers in the total number of passengers are taken as 26 per cent and 74 per cent, respectively, for 2019–2043. For 2012–2043, the average annual growth rates are 4.9 per cent for total number of passengers, 4 per cent for domestic and 5.3 for international passengers under Scenario 1. Considering

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Scenario 2, the rates are 3.1 per cent, 2.2 per cent and 3.5 per cent, respectively. In order to identify the number of transit passengers, I use the observations from Turkish Airlines. Precisely, I assess the variation of this during the period from 2005 to 2012, then reflect the rate of variation on the period 2013–2043. The total number of passengers at the new airport will be 80 million under Scenario 1 and 68 million under Scenario 2 in 2019. The distribution of domestic, international and transit passengers are 21 million, 38 million and 22 million, respectively, under Scenario 1, and 18 million, 32 million and 19 million passengers, respectively, under Scenario 2.

Note that 90 million passengers are targeted for the new Istanbul airport in 2019; the capacity utilization in terms of the number of passengers will be 89 per cent under Scenario 1. This capacity utilization rate is acceptable (Vaze and Barnhart 2011). However, in Scenario 2 the capacity utilization rate will be 76 per cent.

Remember that the targeted number of passengers is 120 million and 150 million for the last two phases. To determine whether these targets are realistic, I predict the number of passengers until the end of the consortium's contract. According to the results, the new airport could reach its 150-million-passenger capacity by the 2030s in Scenario 1. Hence, a capacity of 90 million in the first stage seems more than reasonable and 150 million passengers would be achieved around 2030. In Scenario 2, however, the number of passengers barely reaches 70 million in 2019 and the planned airport could reach a maximum capacity of 117 million passengers by 2043.

Year	Number of passengers	Domestic	Total international	International	Transit
2012*	45.1	15.3	29.8	20.0	9.8
Scenario 1					
Year	**Number of passengers**	**Domestic**	**Total international**	**International**	**Transit**
2013	54.0	17.3	36.7	23.4	13.3
2019	80.3	20.9	59.4	37.9	21.6
2030	158.2	41.1	117.0	74.5	42.5
2043	201.1	52.3	148.8	94.8	54.0
Growth rate					
Period	**Number of passengers**	**Domestic**	**Total international**	**International**	**Transit**
2012–2043	4.9	4.0	5.3	5.2	5.6
2012–2019	8.6	4.6	10.4	9.6	11.9
2019–2030	6.4	6.4	6.4	6.4	6.4
2030–2043	1.9	1.9	1.9	1.9	1.9
Scenario 2					
Year	**Number of passengers**	**Domestic**	**Total international**	**International**	**Transit**
2013	52.8	16.9	35.9	22.9	13.0
2019	68.9	17.9	51.0	32.5	18.5
2030	106.4	27.7	78.7	50.2	28.6
2043	116.9	30.4	86.5	55.1	31.4
Growth Rate					
Period	**Number of passengers**	**Domestic**	**Total international**	**International**	**Transit**
2012–2043	3.1	2.2	3.5	3.3	3.8
2012–2019	6.2	2.3	8.0	7.2	9.4
2019–2030	4.0	4.0	4.0	4.0	4.0
2030–2043	0.7	0.7	0.7	0.7	0.7

Table 1. The Number of Passengers (million) and the Growth Rates (%) under Scenario 1

Source: Author's own computations

* Actual values in 2012

Operating Revenue and Cost Analysis for the New Istanbul Airport

The second main question is about how the airport could become profitable despite its huge costs. To assess the feasibility of the new airport, I predict the aeronautical and non-aeronautical (commercial) revenues depending on the predicted number of passengers.

According to the conditions of the bid, the new airport will charge 20 Euros per international passenger, 5 Euros per transit passenger and 3 Euros per domestic passenger. The total passenger revenue is calculated by multiplying these prices by the corresponding number of enplaned passengers. Considering the revenue obtained from landing, I obtain the number of aircraft landing by dividing the number of domestic and international passengers by the average number of passengers per aircraft (123). I then multiply the number of aircraft landing by the average maximum aircraft weight (190 tons). The regulated prices listed by General Directorate of State Airports Authority of Turkey (DHMI) are used to obtain the landing revenue (DHMI, 2013). The fees charged to passenger like airport security are collected under the name of other passenger revenue, which is assumed to be one-quarter of the passenger revenue, similar to Hartsfield–Jackson Atlanta International Airport (FAA, 2012). Following the statement of the consortium and the financial statement of Atlanta Airport, I assume that the commercial (non-aeronautical) revenue will be double the revenue from passengers. To compute the operating cost, I assume that the profit margin will be 30 per cent for the new airport, similar to the other two airports in Istanbul – Ataturk and Sabiha Gokcen airports (Operation Report of TAV and Malaysia Airports, 2012).

In Scenario 1, the passenger airline revenue is estimated to be 998 million Euros and the other operating revenue is 1.996 billion Euros. Then, the total operating revenue is computed to be 2.995 billion Euros and the operating cost is 2.96 billion Euros under the assumption of 30 per cent profit margin.

Besides the operating revenue and cost, I need to consider the bid conditions that also generate some revenue and cost to the consortium. Firstly, the Treasury gives a guarantee on the number of passengers such that it will pay the consortium 6.3 billion Euros for the first 12 years covering the international and transit passengers. This means that if the consortium obtains less than 525 million Euros of passenger revenue from international and transit passengers, the Treasury will transfer the difference to the consortium. If the consortium gathers more than 525 million Euros, it will transfer the difference to the Treasury. For example, in 2019, as the revenue from total international passengers is 432.9 million Euros, which is less than the guarantee, the Treasury will transfer 92.5 million Euros to the consortium in the first scenario.

Secondly, the consortium promised to pay approximately 26.1 billion Euros (including VAT) for 25 years, starting from 2019 and ending in 2043. Hence, the rent paid by the consortium will be 1.45 billion Euros per year. Thirdly, the consortium is planning to take a loan of 6 billion Euros for construction cost of about 7.5 billion Euros. Nihat Ozdemir, CEO of LIMAK, mentioned that it would be possible to find a loan for 16 years without repayments for the first four years. Therefore, I assume that the consortium will have a loan for 16 years without repayments for the first four years at an interest rate of 4 per cent per year. I compute the interest rate by adding a half point of risk premium to the Eurobond interest rate of 3.5 per cent. This interest rate is the lowest rate that the consortium could find under the current economic conditions. Under these assumptions, the repayment of the loan will be 628.9 million Euros per year.

In Scenario 1, the consortium will have a loss of 683.5 million Euros. That is to say, the operating profit of airport will not be sufficient to pay the rent and the loan repayments. The situation will be even worse in the case of low economic growth (Scenario 2) and the loss will be equal to 749.7 million Euros when the airport starts to operate.

In these computations, I only consider the operating revenue (that is, predicted aeronautical and commercial revenues), operating cost and the bid conditions. However, it is well known that the operating services are not the only revenue resource for airports. There are non-operating activities (passenger facilities, real estate, sponsorship, etc.) that generate extra revenue for airports. For instance, the new airport can charge an extra fee to passengers through passenger facility fees, which are collected to finance certain projects at the airport.

Predicted Return of the Consortium

Table 2 presents the revenue and cost of the new airport for the entire contract period. Recall that I have considered the prices charged to passenger by the airport to be constant for the period 2019–2043. However, the tariff may change for the following years.

Under the constant price assumption, the new airport is expected to post losses until 2030, when the loans are repaid. The accumulative loss would reach 5.7 billion Euros in Scenario 1 and 7.7 billion Euros in Scenario 2 by 2030. However, the planned airport could accumulate profit of

	Scenario 1			Scenario 2		
Year	Total Operating Revenue	Total Cost	Net Profit/Loss	Total Operating Revenue	Total Cost	Net Profit/Loss
2019	3.0	3.8	-0.7	2.6	3.5	-0.7
2030	5.9	5.8	-0.2	4	4.5	-0.5
2043	7.5	6.3	1.2	4.4	4.1	0.3
2019–2030 total	52.0	56.5	-5.7	39	47.4	-7.7
2031–2043 total	88.6	75.6	13.0	55	52.1	2.9
2019–2043 total	140.6	132.1	7.3	94	99.5	-4.8

Table 2. Revenue and Cost, 2019–2043 (billion Euros)

Source: Author's own computations

7.2 billion Euros by the end of 2043 in the first scenario, but the new airport would suffer a loss of 4.8 billion Euros by 2043 in the second scenario.

The results show that the operating revenue of the new airport will not be sufficient to cover operating cost, rent and loan repayments. Unless the non-operating revenues are high enough, the new Istanbul airport as a business will not be profitable under the existing rental conditions and predicted revenues.

Conclusion

The Istanbul Airport will only reach its potential of 150 million passengers in the 2030s if Turkey as a country achieves sustainable growth; otherwise, the airport may only reach a capacity of 120 million passengers by the 2050s. Hence, the expected number of passenger traffic will not be attained during the contract period if economic growth remains below its potential. Particularly, if the economic growth remains below its potential due to a failure to implement key structural reforms, passenger traffic will remain below 120 million in 2043. Therefore, the requirement for a mega-airport in Istanbul depends crucially on the future growth performance of the Turkish economy.

The results show that, in Scenario 1, cumulative losses of 5.7 billion Euros appear until 2030 because of rent and loan instalments. However, these losses are largely compensated by large profits and the cumulative profit is estimated to reach 7.2 billion Euros by the end of the end of the tender period. Nevertheless, in Scenario 2, the cumulative losses are estimated to be 4.8 billion Euros. The profitability of the mega-airport might be problematic unless the consortium succeeds in raising enough non-operational revenue from real estate developments in the extensive area (7400 hectares) provided to the new airport. As the consortium could not undertake such losses, there would be two possibilities: the loss would most probably be compensated by extra charges on passengers or the consortium would try to get some non-operational incomes on the land.

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Problems Regarding Legal Infrastructure of Unlicensed Electricity Generation in Turkey

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Turkey has been seeking to increase electricity production capacity from renewable energy resources for years, and many rules and regulations have been introduced for this purpose. Even though the efforts resulted with increased renewable electricity capacity, the initiatives have had some negative effects on both the industry and consumers.

Introduction

Like many other countries, Turkey has been aiming to increase its electricity production capacity from renewable resources. Because renewable electricity production is a part of the whole electricity network system, renewable production must be in harmony with the electricity network, and regulations regarding renewable energy should consider these aspects. Turkey has a liberal electricity market thanks to the de-regulation and re-regulation process that has occurred over the last 20 years. However, the electricity market is still heavily regulated by acts and by by-laws introduced by the Energy Market Regulatory Authority (EMRA). The EMRA determines the rules applied to network operators and other actors, such as generators and traders. For example, every company must obtain a licence in order to conduct business in the electricity market. On the other hand, even though there are still profound interferences to the market, trade amongst market participants and between traders and customers are principally based on private law contracts.

In order to increase capacity in renewable electricity, Turkey has complex rules and regulations in order to support electricity production from renewable resources. As a rule, renewable production facilities must obtain a production licence. The law provides purchase guarantee from renewable resources for 10 years from the start of production and the price is established by the Law No. 5346 on the Use of Renewable Energy Resources for Generating Electricity. In 2013 Turkey introduced a new model for electricity production from renewable sources, which allowed electricity production without a licence (The Regulation on Electricity Generation without a License enacted on 2 October 2013). According to the new regulation, producers up to a certain threshold capacity (originally 1000 kWh, increased to 5000 kWh on 10 May 2019) are exempted from the obligation to obtain a licence. The reason behind this regulation is to encourage small scale production by market participants for self-use purposes and increase capacity in renewable electricity. The expectation was to support participants to produce their own electricity without the burden of obtaining licence. However, there have been many problems regarding the new regulation and it has created enormous bureaucracy rather than reducing it. The problems came from various perspectives, such as network access, a lack of capacity in networks, competition law infringements, access to incentive schemes and many private law problems during the installation process.

Due to these problems, there should be an analysis of whether it is possible to achieve increasing renewable energy production without incentives and excessive regulation. I will discuss whether there is still a need for incentives for electricity production from renewable sources or whether free-market rules should apply. I examine unlicensed electricity regulation as an example.

Electricity Generation and Renewable Regulation in Turkey

In Turkey, Electricity Market Law (EML) requires any production company to obtain a licence, with the exception of renewable energy producers with capacity of up to

Type of generation facility producing renewable energy	Prices to be applied (USD Cent/kW)
Hydroelectric Power Plants	7.3
Wind Power Plants	7.3
Geothermal Power Plants	10.5
Biomass Power Plants	13.3
Solar Power Plants	13.3
Source: Renewables Law Schedule 1	

Table 1. Incentives for Renewable Energy

Source: Renewable Law Schedule 1

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1 MW (recently increased to 5 MW) (see Gedik & Eraksoy 2017). However, due to requirements of network access and other technical issues, there are a heavy set of rules and procedures that unlicensed producers are required to follow in order to operate (see EMRA 2018). As a rule, small producers are required to produce electricity for their own consumption but are allowed to sell access production to last resource traders, which are legally forced to buy access production (Table 1). The incentives apply for 10 years from the commencement of the production. The tariff for all renewable electricity purchasing is determined by the renewable electricity legislation.

Energy Resource	Established Power (MW)	Rate (%)
Sun	5109.45	94.26
Natural Gas	166.80	3.08
Bio-Mass	79.18	1.46
Wind	55.9114	1.03
Hydro	8.90932	0.16
Sun (Concentrated)	0.50	0.01
Total	5420.76	100.00

Table 2. Unlicensed Energy Capacity as February 2019

Source: EMRA 2019

As a result, even though the system called unlicensed production, there are many regulations that actually bring them closer to production with a licence. In fact, there is not even free access to the market as there are many capacity restrictions determined by the EMRA, which means that only a small proportion of willing entrepreneurs can find the capacity to establish an unlicensed production facility.

The main purpose of unlicensed electricity regulation was to promote renewable energy capacity, which is considered good for the environment *as it keeps carbon emission levels relatively stable. In addition, renewable energy is* important for controlling *the current account deficit.* With this belief, Turkey introduced a renewable energy law in 2005 and allowed unlicensed renewable from 2013. Productions with and without licence regulations overlap, but also have many different aspects. The biggest difference is that up to a certain capacity generations are exempted from licensing and the requirement of establishing limited liability companies. Moreover, unlicensed plants are connected to distribution while plants with a licence are connected transmission networks (Table 2).

Renewable Electricity and Incentives

There have been immense technological developments regarding renewable energy in recent years. According to many reports, renewable energy is much cheaper to produce than electricity from fossil fuel (IRENA 2019). The installation process has become plain and the power plants have become more efficient. The economic explanation of incentives must be based on a cost and benefit analysis. Liberalisation of the electricity market requires companies to produce at a low cost and sell at a profit. In this model, price will be determined by free trade principles amongst market actors. However, in renewable energy production, the regulation introduces purchase guarantees at a fixed price. The reason behind these guarantees is the belief that the renewable production is expensive and requires incentives for companies to invest in renewable energy. However, the time of high cost has already passed as renewable energy production is much cheaper than electricity from fossil fuels.

There is a common belief that there is public good for giving incentives to renewable energy, and thus must be supported even though it creates extra cost for last users. However, this set of rules interferes with the basic principles of a liberal market and a liberal pricing system. The ultimate financial burden of incentives is eventually carried by the last users of electricity. Table 3 below shows how

Years	Incentives Paid for Renewable Energy (TL)	Average Price (TL/MWh)	Renewable Additional Cost (TL/MWh)	Renewable Production (MWh)	Licensed Production (MWh)	Percentage of Renewable to Total Production (%)
2018 February	1,292,952,047.93	281.18	25.52	4,598,325.47	23,124,311.87	19.88
2019 February	2,833,459,226.49	446.03	66.18	6,352,641.00	22,901,148.20	27.74

Table 3. Incentives Paid for Renewable Energy and Average Cost

Source: EMRA 2019

much support is provided for renewable and unlicensed renewable energy.

On the other hand, in February 2019, there were 584.812 MWh productions from unlicensed renewable and almost all of them were sold excess capacity (567.022 MWh) and producers were paid TL 392.826.163. Most of the capacity (91,50 %) comes from the sun (EMRA 2019).

Problems Regarding Unlicensed Production

There are several problems regarding unlicensed renewable production.

Problems regarding how to determine self-use and excess production: The regulation did not require producers to have any percentage of self-use. In this case, most of the capacity established (around 98 per cent) is intended to benefit from incentives rather than self-use. Moreover, multiple site ownership adjacent to each other was allowed, which is similar to licensed production. This creates double standards between licensed and unlicensed producers; even though they have the same conditions, unlicensed producers are given unfair advantages.

Problems regarding incentives: There is a big problem with economic regulations when the regulation is used as a market maker in a liberal economy. Renewable incentive regulation actually standardises the future incentives with fixed price purchase guarantees. The incentives are determined by the law and in US dollars. However, exchange rates are unpredictable in Turkey. During the economic slow-down in Turkey in 2018–2019, the dollar was up by almost 50 per cent against the Turkish lira (See XE 2019). As an example, in April 2019 the average price of market exchange was around TL 262 and the last resource tariff was around TL 300, while average support for whole renewable sources in Turkey in February was TL 450. However, renewable energy from the sun, which holds almost the whole unlicensed renewable capacity, cost more than TL 600. Currently, production from the sun might sell without incentives at as little as USD 0.02 (Energysage 2019). As a result, this law creates a wealth transfer from consumers to producers as renewable electricity production is competitive even without incentives.

The problem of excess regulation: Electricity market is already heavily regulated due to its nature. In addition to general regulation there is a separate set of regulations for renewable productions. Moreover, unlicensed productions created regulation within the regulations. Creating more and more regulations does not help efficient operation and this complex structure creates unpredictable market conditions. In my opinion, liberalisation process should take a short time and once a market has been liberalised, the specific economic regulation should discontinue and general laws and regulations should prevail. However, with unlicensed electricity regulations the state created another complex rule. In this case, the market cannot self-correct. There has been much regulatory interference to reduce the negative effects on the market (see Yeşil Ekonomi 2019). For example, the law was changed just before this paper was submitted , increasing the minimum capacity for unlicensed production by 5 MW. However, purchase guarantee was determined as last-resource trade tariffs determined by the EMRA, which actually reduces the cost by around 30 per cent. However, these constant interferences to legislation create an excessive and unpredictable regulatory environment for market participants.

Private law problems: Many of the unlicensed producers were small companies with no market experience. They have experienced many problems regarding their operations from private law perspectives such as partnership agreements, land use, project financing, insurance, purchase and maintenance of products. As a result, much of the production capacity has been transferred to proficient electricity producers. This valuable capacity gives these producers unfair competitive advantages over other electricity producers.

Conclusion

Constant regulatory interference to liberal markets with the intention of supporting renewable energy production creates excessive regulation. As a result, regulation regarding economic issues through renewable incentive schemes that interferes with liberal market creates more problems than public interest. The regulation of economic aspects of electricity production should be left to contract law, commercial law and competition law. General laws and regulations will be sufficient to create a fair market model as the incentive-based model creates unfair competition and unfair wealth transfer. In my opinion, the time has come to create simpler regulation for electricity production. The regulation should cover technical issues while trade issues should be left to general regulation. Incentives must be abandoned as they create more complex system in which last users bear the ultimate cost. It is better to leave it to professional energy companies to produce electricity for profit purposes, regardless of whether it is renewable or not.

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Network Industries Quarterly, Vol. 21, issue 3, 2019 (September)

"Digital Platforms – The New Network Industries? How to regulate them?"

Presentation of the next issue

Digitalisation is transforming all industries, including the network industries. It is creating a new model of industrial organisation using online platform as intermediaries for multisided markets. As a matter of fact, digital platforms display all characteristics of the traditional network industries: network effects, efficiency, scale, concentration, market power, etc.

The involvement of online platforms in the network industries benefits consumers by fulfilling unmet needs, often efficiently and at low cost. Platforms do this partly by exploiting access to existing network infrastructures that are often vital for national economic growth and wellbeing. However, if online platforms are allowed to sideline traditional network operators, it may mean that vital investment in building and maintaining the infrastructures on which these markets are founded becomes unsustainable in the long-term.

Another pertinent issue concerns the regulatory approach to platforms, as the success of online platforms is achieved, in part, by exploiting regulatory environments that place incumbent firms at a disadvantage. There is a debate as to whether platforms should be subject to the same regulatory obligations as traditional network players, and whether platforms should have access to network services under regulated terms.

The next issue of the Network Industries Quarterly (NIQ) will be dedicated to some of the best papers presented at the **8th Conference on the Regulation of Infrastructures**, which is organised by the Florence School of Regulation in June 2019. Selected academics and practitioners have been invited to Florence to discuss the latest developments in the regulation of different network industries, namely transport, energy, telecoms and water distribution. Both the Conference and the next issue of the NIQ have a special focus on key challenges of digitalisation for traditional network industries, various regulatory approaches to platforms and benefit scenarios for consumers and to the platforms itself.

More information

If you are interested in learning more about the "8th Conference on the Regulation of Infrastructures. Digital Platforms – The New Network Industries? How to regulate them?" and the next issue of the Network Industries Quarterly, please send an email to Ms. Irina Lapenkova at FSR.Transport@eui.eu.

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Open Call For Papers

Implementation of the liberalization process has brought various challenges to incumbent firms operating in sectors such as air transport, telecommunications, energy, postal services, water and railways, as well as to new entrants, to regulators and to the public authorities.
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The Network Industries Quarterly is a multidisciplinary international publication. Each issue is coordinated by a guest editor, who chooses four to six different articles all related to the topic chosen. Articles must be high-quality, written in clear, plain language. They should be original papers that will contribute to furthering the knowledge base of network industries policy matters. Articles can refer to theories and, when appropriate, deduce practical applications. Additionally, they can make policy recommendations and deduce management implications.
Detailed guidelines on how to submit the articles and coordinate the issue will be provided to the selected guest editor.

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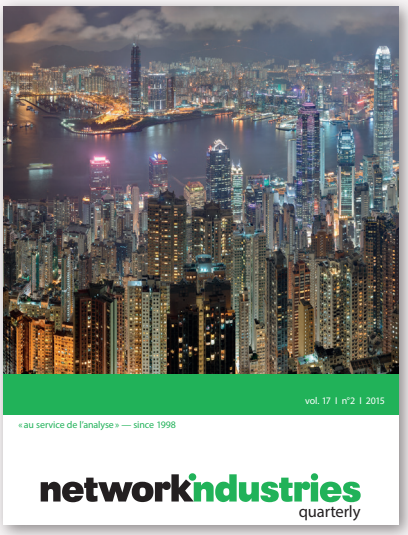

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