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Can law impose competition? A critical discussion and evidence from the Turkish electricity generation market

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ABSTRACT

Electricity markets have undergone regulatory reforms since the early 1980s around the world. Technical analyses of these reforms usually pay lip service to the influence of politics over regulatory processes. Existing studies examine certain aspects of the market such as demand, pricing, and efficiency, and they touch upon political issues only passingly when economic models cannot provide sufficient explanation. This approach problematically takes politics as an *ad hoc* variable. This study shows that electricity is intrinsically a 'political good' and argues that any meaningful reform effort should take institutions as the starting point rather than a residual. The argument that politics has to be an endogenous variable in any model aspiring to explain behavior in electricity markets is demonstrated in the paper. The evidence for the political good character of electricity is found by examining the Turkish regulatory reform, for which it is argued that there is not a satisfactory relationship between expected and realized gains.

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1. Introduction

Electricity markets have been organized as public monopoly for a long time due to the perception that electricity has the characteristics of natural monopoly. However, with the turn of the tide towards liberalization of the markets in both the developed and the developing world, since the 1980s, many countries have undertaken regulatory reforms in electricity markets to enhance competition and efficiency. These reforms aimed to

achieve these targets by institutional restructuring in the market by introducing various ownership schemes including privatization and transfer of operating rights to the private sector. Electricity market reforms in many countries have been subject to a myriad of economic studies.

Technical analyses of electricity market reforms usually pay only lip service to the influence of politics over the regulatory processes. A typical study looks into some aspects of the market such as market demand, pricing, concentration ratios and industrial performance parameters. They refer to political issues, but only passingly in order to show that there is more to the process than economic models. However, these approaches have a basic predicament. They take politics as an *ad hoc* variable. However, electricity is intrinsically a political good [24]. Politics has to be an

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endogenous variable of any model that aspires to explain behavior in electricity markets.²

Following Spiller and Tommasi [29], the present paper argues that the combination of three features makes electricity a political good: to begin with, electricity supply requires large specific and sunk investments; second, economies of scale and scope shape production processes; and finally, the product is consumed by the society.³ Spiller and his coauthors usually describe this as an example of government expropriation of private firms. As an interesting case, the paper argues that rent transfer takes another direction in Turkey; rents are transferred from consumers to producers and the government as the intermediary.

The early history of the electricity industry is full of examples where some kind of state involvement was deemed necessary (e.g., [23,27]). It was widely accepted that electricity markets could not be left to supply and demand forces for economic reasons such as natural monopoly. Another major issue originates from the information asymmetries between the regulator and the industry. Regulators get their data from producers, and there is plenty of room to maneuver and manipulate what goes from the industry to the regulator. Furthermore, continuous interaction between the regulator and the industry reduces the cost of rent-seeking. The likelihood of political rent seeking and regulatory capture reduces the costs of asymmetric information for the industry but increases social welfare costs.

The traditional understanding of the state as an entity that supplies public services for the public benefit went hand in hand with the market failure arguments that showed strongly that electricity could never be a competitive industry if left alone. The change of the thinking on electricity markets happened during the 1970s and 1980s. As a result of political, economic and technological changes, competitive markets in electricity became more viable [27].⁴ The first radical restructuring program started in Chile and many others followed the trend [21]. Even though reforms differ across countries, two main themes dominate agenda: increasing the level of private enterprises and reducing the role of state-owned ones.

The level of success of these reform efforts differed considerably. A few countries were successful in reaching the goals of the reform. Many, on the other hand, could not attract private investments and the state remained as a major player ([17], p. 463).

In the literature there are not many empirical studies on the connection between political environment and theoretical findings of economic models. Among those existing few studies incorporating political aspects such as Bergara et al. [6], Ando and Palmer [3], and Buckland and Fraser [9] tend to quantify the political influence on the market using proxy variables such as indices developed to measure the quality of political and judicial institutional environment and dummy variables representing the political tendencies of the states or countries. An important finding of the aforementioned studies is that the political institutions have been generous in providing excess returns to private electricity utilities. However, to explain behavioral patterns of electricity markets, the connection between political and economic factors has to be taken together. The experience of

liberalization in many countries shows the absence of strong link between economic reform proposal and the realized market structure. Pure economic and political models usually disregard key findings of the other.

This paper aims to draw attention to this gap in interdisciplinary studies and focuses on the connections and tensions between political institutions and the logic of economic reforms.⁵ The paper looks into the recent Turkish experience of regulatory reform in the electricity industry. Regulatory reform in the Turkish electricity market has been under way for about a decade and political factors have a strong influence on the reform process despite the existence of an independent regulatory agency in the energy market. In what follows, the Turkish experience is examined and it is shown that the argument that the economic foundation of the regulatory reform is rather weak and political considerations are more decisive, which provides evidence for the above-mentioned argument that electricity is a 'political good.' The political nature of decision-making is particularly strong in economies where the legal structure of the regulation is not well-defined and established (e.g., [14]). Nonetheless, the argument in this paper is not limited to the recently liberalized economies. By nature, economic tariff and structure of electricity industry cannot explain trends in the behavioral patterns in these markets [24,28].

In reality, a satisfactory relationship between expected and realized gains from the reform is not easy to establish. Any meaningful reform effort has to take institutions as the starting point, rather than a residual explanation as is usually done in technical studies. The evidence on the existence of the connection between political and economic factors in Turkey's recent restructuring effort in the electricity market is demonstrated.

The paper proceeds as follows. In the next section, an outline of the current regulatory environment is provided; the third section discusses the effects of the restructuring efforts in the Turkish electricity industry; finally, the fourth section wraps up and evaluates the long-term effects.

2. The basic regulatory framework in the Turkish electricity market

A number of factors initiated the restructuring of the Turkish electricity markets. To begin with, there were domestic issues such as the lack of investments in the industry and inefficiency of state enterprises. Secondly, there were foreign pressures for a regulatory reform. The European Union had started to liberalize its electricity markets in the 1990s with a series of reforms. Following many developed and developing countries, Turkey began its restructuring effort in 2001 with a new electricity market law (EML). It aimed to improve the efficiency and financial viability of the electricity market.⁶ An independent regulatory agency, the Energy Markets Regulatory Agency (EMRA), was founded to oversee the market.

The law had a timetable for the introduction of competition in the industry. The first article of EML limits the role of the market to the 'delivery of sufficient, good quality, low cost and environment-friendly electricity to consumers'. This goal gives the regulator authority and will to intervene the market where and when it deems prices are out of proportion with these characteristics.

² The new institutional economics sees this as the basic characteristic of utilities in general. However, the change in technology and institutional environment helped to create a relatively competitive market structure in some industries such as mobile phone services.

³ See also Holburn and Spiller [17]. They do not call it 'a political good'. This definition is preferred in this paper, as decision-making processes in this industry are shaped by political considerations rather than economic preferences.

⁴ Recent experimental literature also provides some ground for liberal electricity markets. See, for example, Rassenti and Smith (2008).

⁵ OECD's regulatory reform proposals and studies in this connection can be given as a major example of this attitude. See http://www.oecd.org/topic/0,3699,en_2649_34323_1_1_1_1_37421,00.html. For a general discussion on Turkish regulatory reform, see Çetin and Oğuz [12].

⁶ For general discussions of the Turkish electricity market, see Bağdadioglu [4], Çetin and Oğuz [11], Güney [16], and Oğuz [24].

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