

COMPETITION AND GREENING OF THE FRENCH RETAIL ELECTRICITY MARKET: THE EFFECTS ON HOUSEHOLD ELECTRICITY PRICES

Sandra Moreno, ART-Dev - University of Perpignan Via Domitia, sandra.moreno@univ-perp.fr
Sophie Masson, ART-Dev – University of Perpignan Via Domitia, sophie.masson@univ-perp.fr

Overview

Following the liberalisation of the European energy markets that started in the 1990's, the French retail electricity market was fully opened in July 2007. The liberalisation aimed to increase competition, which theoretically should lead to gains in efficiency and consequently, to decreasing prices for consumers. However, the need for retail competition and the real benefits for consumers have been subject to debate since the liberalisation process started.

Furthermore, in a context of international commitments against climate change, European climate and energy targets have been set to reduce GHG (greenhouse gases) emissions. Among these, the increase of the share of renewable energy sources in final energy consumption up to 20% by 2020 (which has already been reached, according to data from Eurostat) and up to 32% by 2030. In line with this, and according to the French Energy Code, the national energy targets aim to increase the share of renewable energy sources up to 40% of the French electricity generation by 2030.

In this context, several empirical studies have analysed the effects of liberalisation and regulatory market reforms on electricity prices. Most of them, providing analyses for a panel of European countries, while only a few analyse the case of particular countries. Moreover, numerous empirical analyses have demonstrated that the increasing share of renewable energy sources in electricity generation leads to decreasing wholesale electricity prices. With regard to household prices, however, the effect is still ambiguous and has not been largely analysed in the French case.

This paper examines the market structure, competition, as well as the green retailing development in the French electricity market. It aims to assess the development of the market and to provide quantitative evidence of the effect on household prices of retail competition and the *greening* of the market. In other words, we investigate the relationship between household electricity prices and variables related, on the one hand, to the intensity and type of competition in the market. On the other hand, to the *greening* of the market: increased electricity generation from renewable energy sources, and increased number of green retailers and green electricity contracts, which supply only electricity generated from renewable sources.

Methods

We used data provided by the French Commission of Energy Regulation and by the Data and Statistics' Studies Service (SDES), for the period 2011-2021. Through several statistical indicators, we provide an insight of the French retail electricity market with regard to market structure, competition and its green retailing development. Furthermore, we develop an econometric model to study the relationship between household electricity prices and the competition and greening indicators.

Results

Although the French retail electricity market remains highly concentrated, in this paper, we show that competition is characterised by product innovation with regard to sustainability, in the form of an increasing number of green electricity contracts (green retailing).

With regard to household prices, our statistical analysis suggests a significant price difference between green and conventional electricity contracts for the fourth trimester of 2016. Green electricity contracts being in average significantly more expensive than conventional electricity contracts. However, when analysing for the second trimester of 2021, the price difference between both types of contracts is not statistically significant.

Finally, some preliminary results suggest also that household electricity prices increase with the increasing number of electricity contracts available for consumers and with the increasing share of renewable energy sources in final electricity consumption.

Conclusions

Fifteen years after its creation, the French retail electricity market remains highly concentrated despite the increasing number of retailers entering the market. According to the French Commission of Energy Regulation, the four largest retailers captured a 97% share of contracts for final consumers in 2019.

Competition is mainly characterised by product differentiation, which is mostly represented by green electricity retailing. With regard to household prices, we found significant evidence of price differences between green and conventional electricity contracts at the earliest stages of the market, with green contracts being in average more expensive than conventional contracts. However, in recent years, this price difference seems to be no longer significant.

Our research is currently going through the analysis of the relationship between household prices and the variables related to competition and the greening state of the market.

References

- Defeuilly, C. (2009) "Retail Competition in Electricity Markets", *Energy Policy*, 37, 377-386.
- Fiorio, C.V. and Florio, M. (2013) "Electricity prices and public ownership: Evidence from the EU15 over thirty years", *Energy Economics*, 39, 222-232.
- Joskow, P. (2000) "Why do We Need Electricity Retailers? or Can You Get It Cheaper Wholesale?", Working paper, MIT Center for Energy and Environmental Policy Research.
- Littlechild, S. (2000) "Why We Need Electricity Retailers: A Reply to Joskow on Wholesale Spot Price Pass-Through", *Cambridge Working Papers in Economics*.
- Moreno, B., Lopez, A.J., Garcia-Alvarez, M.T. (2012) "The electricity prices in the European Union. The role of renewable energies and regulatory electric market reforms", *Energy*, 48, 307-313.
- Mulder, M. and Willems, B. (2019) "The Dutch retail electricity market", *Energy Policy*, 127, 228-239.