Energy Reforms and Consumer Prices in the EU over twenty Years

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Executive Summary

After more than two decades of energy reforms in the European Union, such as privatization, unbundling, liberalization of electricity and gas industries it seems interesting to look in retrospect and evaluate the welfare effects of reforms for households. Prices are the most important signal for consumers. While there may have been indirect benefits through general equilibrium effects, it seems important to focus on the direct impact of energy reforms on the consumers' bills. This paper summarizes some empirical findings of a team of researchers at the University of Milan (Italy) about the impact of the reforms on energy prices (1990-2007) for households in the EU-15.

There are several methodological issues to be solved for the evaluation of price impact of the reforms. First, a careful definition of the relevant prices is needed. The research summarized in the paper uses net-of tax EUROSTAT data in nominal terms, focuses on the median household, and exploits variability of prices across the EU-15 Member States and over more than 20 years. Second, reforms themselves are tracked by the OECD/ECTR indicators, built as ratings per year and per country about three main dimensions: extent of government-ownership of the incumbent, of vertical

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disintegration of networks, and of market regulation. Sub-indicators for each dimension are also available, and their marginal impact can be tested. Third, econometric testing requires to identify demand and supply drivers of prices that would act as confounding factors in a study of the impact of reforms on prices. Fourth, policy makers and regulators would also be interested to know the perception of price fairness by consumers. Appropriate testing can be performed by using Eurobarometer surveys to see whether consumers are happier in countries where energy reforms have been performed to a greater extent. This additional analysis would also work as a double check, as aggregate data on prices may conceal subtle micro-effects, while survey data on consumers, based on large samples, add to the picture evidence on the individual variability of conditions of energy customers.

The most important finding is that, at least for households, privatization has not delivered lower prices in the EU-15 and actually there is evidence in the opposite direction. In an evolutionary perspective, the fact that so many government-owned energy firms have survived waves of privatizations, in countries as different as Sweden, France, Germany, Italy and others, is indirect evidence of the fact that overall they are not less cost-effective than their private competitors. Moreover, the fact that government-owned suppliers offer somewhat lower prices to households makes them, to a certain degree, also more socially acceptable. This is reflected in findings about perceived price fairness of electricity and gas (Eurobarometer data), which is higher in countries where the incumbent is government-owned. This is an important new finding with some policy implications.

The European Union has never endorsed privatization as a necessary ingredient of energy reform, and the paper concludes that this neutrality about the ownership issue is wise, at least in the perspective of consumers. Interestingly, there is no correlation between government ownership and liberalization.

Turning to the other two pillars of the reform paradigm of the last twenty years, vertical disintegration of networks per se is found to have no statistically significant effect on prices or perceptions. In fact, it may be considered reassuring that there is no evidence in the opposite direction. *Ceteris paribus*, ownership separation does not push upwards prices for consumers. The EU energy policy, however, will force wider ownership unbundling in future (Third Package of reforms), where it has not yet been implemented. But if this costly process does not deliver actual competition, it is unclear that unbundling will deliver lower prices to consumers.

As for competition, clearly the core energy reform, there is limited evidence in the empirical analysis that more open markets, as featured by the OECD/ECTR reform indicators, have delivered lower prices to household as compared to less liberalized market. There is some evidence that consumers are more satisfied about the price they pay in countries where there is more choice for them in electricity, but there is no similar evidence for gas. It turns out that, given the magnitude and signs of the estimated coefficients in the econometric analysis of EU-15, the evidence does not reject the claim that a counterfactual history of well managed vertically integrated public monopoly, or even of a well regulated private industry, would have delivered lower prices to households than a privatized, vertically disintegrated, and liberalized industry, either in electricity or in gas supply. Alternatively, an arrangement with competition among state-owned firms, or in mixed (public and private) oligopoly, with or without unbundling, is also not rejected by data as welfare inferior for consumers relative to the 'paradigmatic' privatized-unbundled-liberalized organization of the industry. This 'relativistic' result tends to reject the view that a unique energy reform paradigm would welfare dominate the others in any countries.

One policy implication of the research is that in energy markets, residential consumers still need a specific regulatory environment to protect them. If, after two decades of reform, the effect of market opening on prices offered to households is limited, or even goes in the wrong direction, regulators should still carefully look into prices to end users and not just into access price for firms into the bottleneck facilities. The trade-offs facing governments and the regulators between ensuring investment sustainability in the long term, decarbonisation of the economy, and protecting the consumers from market power are still with us in Europe. Market mechanisms alone will not wipe away the need for clearly stated government objectives and appropriate public policies for energy in the next future, tailored to the careful consideration of concrete needs and constraints of households.