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POTENTIAL EURO-MASHREQ ENERGY MARKET INTEGRATION: POLICY REFORM AND WELFARE IMPLICATIONS

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Overview

Access to energy and particularly electricity can be considered a basic need that contributes greatly to human and economic development. Jordan, Lebanon and Syria are members of the Barcelona process and the Euro-Mediterranean partnership (ENPI, 2011). With respect to energy this partnership is aimed at fostering market integration within these countries and eventually between these countries and the EU.

Prices are the most important signals to guide market participants and efficient prices will allow for an allocation of resources that fosters GDP growth. Energy pricing policies are used by governments to reach a variety of sometimes conflicting goals that are financial, social, environmental or other, (for example activities can be either encouraged or discouraged) and the repercussions will generally be felt throughout the economy (deLucia & Lesser, 1985).

In the Mashreq energy prices are largely distorted due to strong government intervention in this sector that is reflected in inefficient pricing policies hindering investment in both conventional and renewable energies and burdening public finances. The poor management of the energy sector in Mashreq countries translates into various forms of energy poverty. For example, in Syria and Lebanon the lack in installed capacity in the electricity sector is mainly triggered by centralized, government owned public utilities and the failure to allow for private sector participation. This leads to blackouts throughout the year in Lebanon and during periods of high demand in Syria. Brownouts are also common in Jordan during peak months despite the participation of the private sector in electricity production. Consequently existing grid connections are mainly used in emergency situations.

Electricity prices are heavily subsidized in all three countries particularly with respect to residential customers. An overhaul of the electricity pricing scheme is however a politically very sensitive issue especially since around 1/3 of the populations in the Mashreq countries is considered to be poor. The social dimension on the one hand and the high public subsidies to the sector on the other hand make it of great interest to policy makers to find out about the overall welfare implications of energy/electricity pricing reforms. This paper thus presents an overview of current energy/electricity pricing policies in the Mashreq countries, discusses potential policy changes that would foster market integration, and analyzes the welfare implications of an electricity pricing reform in the residential sector.

Methods

A descriptive comparative analysis of the energy sector in all three countries highlights the challenges for energy market integration. We consider the current legal basis, private sector participation and the progress of the markets for energy efficiency and renewable energies. The lack of access to energy and/or uninterrupted electricity services and the social dimension are analyzed empirically. Based on household electricity demand characteristics, a demand function is estimated that takes a variety of factors into account (such as the price of electricity, price of substitutes, income, etc…). Furthermore demand elasticities are estimated and the welfare effects of price changes are analyzed. A cost benefit analysis of changes in the residential electricity pricing scheme is performed.

Results

Our results show that policy reforms can greatly improve the status quo. Energy/electricity sector pricing reforms can be greatly beneficial in terms of public expenditure reductions, achieving overall welfare gains, foster energy conservation and contribute positively to the environmental dimension of this sector.

Conclusions

The three Mashreq countries' energy sectors reveal very similar problems. The strong energy/electricity demand growth in this region calls for the careful development of energy sector strategies and reforms. The latter will allow fostering access to uninterrupted power, give better incentives for needed investments, foster energy conservation, and reduce or redirect public expenditures to higher valued uses. The urgent need for reforms in all three countries opens at the same time the opportunity for coordination in view of increased energy market cooperation and integration.

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