UNIVERSITY OF CAMBRIDGE
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Caught Between Theory and Practice: Government, Market and Regulatory Failures in Electricity Sector Reforms

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The world-wide electricity sector reforms of the early 1990s have revealed the complexities of introducing market driven reforms and making them work in network and infrastructure industries. Most notably, the UK, one of the pioneers of market-based reforms, has proposed a new electricity market reform signalling the desire for significant government intervention in order to meet the climate change objectives. As such, the UK reform experience has revealed the considerable complexities and difficulties in making market driven reforms work when the global trend towards electricity reforms is driven by orthodox ideologies and theoretical arguments in favour of market-oriented reforms since nearly two decades. The resulting regulatory failures in terms of investment inadequacy has been a concern in the liberalisation process in developed economies such as the UK even though the incentive regulation of the monopoly electricity networks has resulted in significant efficiency improvements. Likewise, the regulation of the electricity sector in developing and transition countries remain a major challenge in the transition to accelerating competition in the electricity sector as regulation suffers from weak institutional environment. This paper, therefore, reflects on the experience to date with the process and outcomes of market-based electricity reforms in less-developed, transition and developed economies.

We use case studies of three selected countries that in many respects represent the current state of the reform though they are rarely examined. Nepal, Belarus and Ireland are chosen as country-specific case studies for this purpose. Power sector reforms in these countries varied in terms of motives, context and system size. Nepal is a developing country in South Asia

and has a small electricity system and suffering from increasing electricity demand with growing political instability. The Nepalese electricity sector also initiated reforms in the electricity sector since the early 1990s, often due to direct lending pressures from international financial institutions. Belarus is a transition country that experienced electricity reforms in the context of overall macroeconomic reforms in the economy. Furthermore, the transition countries are of special interest in the context of analysing the electricity reform process because they include a diverse mix of countries belonging to different stages of economic development and at different stages of the reform process. Ireland is an island economy aiming to deepen competition in the wholesale market through increased interconnections. The wholesale market in Ireland can be considered a small system as compared to other wholesale electricity markets in Europe. Ireland initiated the reform process as a consequence of successful reform experience in the UK with the need to comply with the EU directives.

Evidence suggests similar problems facing the electricity sector of these countries though the contexts vary significantly. Many developing and developed economies continue to have investment inadequacy concerns and the need to balance economic efficiency, sustainability and social equity after more than two decades of experience with reforms. We conclude that successful electricity reforms require coordinated progress on all aspects of the development process, namely political, macro-economic, sectoral, and financial to be successful. The interplay and intricacies between the economic, social and political factors complicates the reform process. Further, new economic, political and technological challenges will evolve the sector as market based reforms continue to progress (or halt) across all countries, though at varying speed. As such, it is clear that electricity reforms are an evolving and changing process rather than a one-off event. These factors lead to a unanimous conclusion that electricity sector reform will remain a complex process in all economies.

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