Implications of electricity sector liberalization on marketing decisions

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Although the impact of marketing on consumption behavior has received sizeable attention in the literature, the marketing function of electricity has largely been neglected (Paladino & Pandit, 2012; Rowlands, Scott, & Parker, 2003). This may be understandable given that the sector was liberalized relatively recently. In this paper, the liberalization process (also referred to as reforms/reform) is reviewed in an effort to identify a conceptual basis for understanding how factors relating to the recent liberalization may affect household consumers’ perceptions and, correspondingly, how those perceptions can influence managerial marketing decisions. First, the paper will consider the history of liberalization in the electricity sector followed by a discussion of its effectiveness. Then the privatization aspect of liberalization is considered, followed by a discussion of what implications for marketing can be drawn from the liberalization of electricity.

History of liberalization in the electricity sector

During the past four decades, reforms have spread to most facets of modern economic activity. Reformers have wanted to liberalize various sectors, such as air transportation, banking, ports, railroads, food service, and telecommunications, by replacing government control with free markets. Prior to the liberalization of electricity markets, the major liberalization phase was that of the telecom markets. There, technological novelties, such as wireless telephones and electronic communication, have made it easier for competing companies to carve out a niche, which can be of prime importance in a competitive market. It may be argued that state-owned telecommunications firms would not have been as efficient in exploiting those technological advancements for their own benefit and that of their customers. Technological transformations which can revolutionize the underlying business of distributing electricity to users, are non-existent in the electricity business, however. This is particularly true since the nature of the electricity business requires it to be centrally managed due to the exorbitant cost of storing electricity. Nevertheless, many people feel liberalization can bring about considerable benefits, although there is no consensus on the issue.

The arguments for public involvement in the electricity sector are both economic and political. The economic arguments are that electricity is a fundamental product which 1) is hard to substitute by other sources of energy. For this reason, there is legitimate interest in safeguarding a continuous, safe supply of electricity for individual countries without monopolistic pricing and investment. 2) The transport and distribution of electricity are presumed to be natural monopolies and thus a cost advantage is brought about by allowing national utilities to transport electricity, thus avoiding expensive investments which may entail a negative effect on public welfare. 3) The supply of electricity is contingent on a decidedly specific infrastructure (the transport and distribution grid) whose development incurs massive capital expenditure. Vast investments need to be made before any delivery is realized and thus before any money can be made. 4) Electricity cannot be easily stored which means that demand
and supply need to be continually balanced in every circumstance. The political arguments include self-sufficiency as a prerequisite for stable and economic development, thereby avoiding reliance upon foreign energy sources, ensuring environmental safeguarding, and consumer protection by providing electricity at a reasonable price in a safe and efficient way (Arentsen & Künneke, 1996).

Viewed from a united European perspective, similar arguments apply, although the long-term goal of liberalizing national electricity markets was a single European internal energy market (Jamasb & Pollitt, 2005) and the wish to bring the supply of electricity into the European Common Market. This led to two EU-directives, committing member states to opening up national grids for third parties and removing restrictions on electricity trading (Fuchs & Arentsen, 2002). A covenant on the Directive agreeing the rules for liberalization of the EU electricity markets was reached in December 1996 by the Council of Ministers (European Communities, 1997). The aim of the Directive was to attain increased proficiency and lower electricity prices to consumers by initiating conditions of increased commercial competition. The common reform model involved the development from a vertically integrated state-owned monopoly towards an unbundled competitive market (Nepal & Jamasb, 2013). The reforms were considered to be successful despite certain setbacks related to the Californian electricity catastrophe at the millennium and the 2003 blackouts in New York which slowed down political enthusiasm for the restructuring process in portions of Europe. Moreover, the positive achievement of the reforms in the first countries that attempted them was not the only factor that spurred reform around Europe. A further incentive was that electricity sectors in the developed countries were considered to have excess capacity with electricity being ineffectually produced by costly generation technologies where end-consumers had to pay for the inefficiencies (Jamasb & Pollitt, 2005).

By early 1990s most major economies had plans to initiate market reforms in the electric sector. Reforms were mostly based on what has been called the “standard textbook model” and comprises three major elements (Heller & Victor, 2004; Joskow, 2008; Nepal & Jamasb, 2013). Chile was the first country to apply the model in 1982, followed by the UK in 1990, Norway in 1991 Sweden in 1994 and Finland in 1996 (Meyer, 2003; Nepal & Jamasb, 2013). First, the functions of generating, transmitting, distributing and marketing electricity were unbundled as the model assumed that neither generation nor sales to final consumers were intrinsically monopolistic and could therefore be successfully conducted by firms on a competitive basis instead of by the state. Dividing these separate activities was thought to safeguard against cross-subsidization amongst competitive and regulated businesses as well as against iniquitous business practices like the denial of access to networks (Joskow, 2006).

Second, those firms could be privatized, as it was believed that private companies were better equipped to use their capital more efficiently and guarantee a capable management of the system. Furthermore, it was seen as desirable to keep the electricity industry away from inflated political agendas. Although the European reform model has stopped short of demanding private ownership and positive examples from Norway, Sweden and France show that government owned entities can also been successful in the electricity liberalization (Nepal & Jamasb, 2013), there was strong faith in the superiority of private management, even to the point that some countries allowed private companies to run portions of the monopolistic system albeit under strict regulations.

Third, authoritative institutions were established where independent regulators would oversee the operations of players on the market, as well as protecting the public interest. As the provision of electricity is a continuum in which many actors take part, and is of extreme importance for a modern economy, an authority is required to administer rules of conduct in the industry. Here the objective is not least to regulate
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the monopoly-prone parts of the business by setting fair prices, ensuring network access and making sure that a steady flow of electricity is provided (Heller & Victor, 2004; Joskow, 2008; Nepal & Jamasb, 2013).

The history of the liberalization of electricity markets is already relatively long standing. Best practice examples have shown that successful liberalization is generally structured in accordance with the standard textbook model where it entails the application of one or more of the subsequent interconnected stages: sector reorganization, institution of competition in wholesale generation and retail supply, incentive regulation of transmission and distribution networks, creating an independent regulator, and privatization (Jamasb & Pollitt, 2005; Joskow, 2; Newbery, 2002), see Table 1 for steps included in each stage.

Table 1. Main Steps in Electricity Reform

<table>
<thead>
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<th>Reorganization</th>
<th>Vertical unbundling of operational phases (generation, transmission, distribution and sales)</th>
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<td>Horizontal separation of generation and supply.</td>
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<td>Competition and Markets</td>
<td>Competitive wholesale and retail markets.</td>
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(Adopted from Jamasb & Pollitt, 2005)

Establishing wholesale and retail electricity markets is vital for liberalizing the electricity sector (Jamasb & Pollitt, 2005). However, there is no one correct method as reforming countries have implemented diverse market models that have advanced in stages reflecting a learning process (Joskow, 2003; Wolak, 2000) on a country specific basis (Jamasb & Pollitt, 2005). The liberalization of electricity markets is a challenging task and has central characteristics that affect its ideal regulatory design. Those involve hefty sunk costs that constrain access potential, vertical operational phases (generation, transmission, distribution and sales) that do not all share the same optimum scales, and a non-storable goods distribution through a network that requires immediate physical balance of supply and demand. Liberalization then entails an amalgamation of competitive retail markets, regulated transmission and distribution activities, as well as related adjuvant services whereby a healthy market competition is balanced with appropriate regulation of monopoly power (Jamasb & Pollitt, 2005).

As already mentioned, a supervisory body is essential to regulate conduct in the industry. In fact, an efficient electricity sector liberalization program and the proper performance of the competitive section depends on the appropriate administration of the regulated network segments. Here, rigorous regulatory mechanisms should be ensured with regard to the terms and conditions of network connections as well as network delivery, investment and service quality (Joskow, 2008). The main objective of regulation is safeguarding public interest by stimulating the regulated firm to produce resourcefully and to price associated services reasonably. In attaining these aims, the firm should obtain satisfactory financial outcomes, which allow it to cover the cost of providing its services while restraining it from exercising its market power to exploit consumers by charging disproportionate prices. This can create an ethical
peril, which regulatory mechanism design must address, which may involve managers only making a limited effort leading to excessive costs, or that prices becoming too high relative to production costs (Joskow, 2008).

Liberalization effectiveness

There has been a strong universal trend in favor of market-oriented reforms for the past two decades (Joskow, 2009). Investigating electricity sector reforms can be separated into three key categories: econometric studies, efficiency and productivity analysis and individual and comparative case studies. Econometric studies can appropriately evaluate precise problems and test hypotheses through statistical analysis of reform issues and performance, providing a stable data source. Efficiency and productivity studies are appropriate for evaluating how successfully inputs are converted into outputs in relation to best practices. Studies from one or more countries are appropriate when in-depth understanding or qualitative analysis is needed (Jamasb & Pollitt, 2005). Successful electricity reforms should improve efficiency, quality of service, access and consistency in the sector and, at the same time, adjust the price-cost gap to achieve cost-reflective pricing. Lastly, electricity reforms should encourage investments (Sen & Jamasb, 2012). However, assessing the impact of reforms can be problematic due to the complicated, vibrant nature of the reform process which comprises several interrelated and diverse steps (Pollitt, 2009). Further, considerable heterogeneity is manifested when reviewing the outcomes of market-driven reforms of the electricity sector, as their progression cannot be regarded as a global success considering the past twenty years of reforms and restructuring. Academics, policymakers and practitioners who favor market-based reforms can universalize positive results from the leadin reforming countries, such as those taking part in NordPool, the UK, Chile and certain Latin-American countries, thus concluding that well implemented reforms can achieve prosperity. Conversely, Eastern Europe, Asia and Africa may be used as cases in point to universalize slow and unsound market-based reforms (Nepal & Jamasb, 2013). Similarly, the US may exemplify discouraging reforms, although certain noteworthy advancement has been made there. Furthermore, there are discouraging signs from the UK market as well, where there have been complications and strains in implementing market driven reforms (Joskow, 2009). Moreover, the application of market-driven reform models in less-developed countries appears to be unsuccessful after more than two decades of reforms (Besant-Jones, 2006; Kessides, 2012). In addition, various unpredictable programs marred by political reluctance have slackened reform implementation in transition economies (Williams & Ghanadan, 2006).

Those cases underscore that market-based reforms have been pricy, ineffective and uneconomical and, furthermore, that the reform process seems slow, arduous and lacking in clear theoretical and empirical agreement as to what gains the reforms have brought (Jamasb & Pollitt, 2005; Nepal & Jamasb, 2013). It may, therefore, be stated that a certain bias exists against reforms and that they must be supported by a strong institutional environment for them to work efficiently (Joskow, 2008). Thus, not all agree on how beneficial liberalization has been, which is not surprising given the evidence showing that reforms have not been an unqualified success (Heller & Victor, 2004).

What further complicates the reform process is the interconnectedness of economic, social and political factors. For this reason, it is hard to evaluate the outcome of the reform process and any quantitative or qualitative evaluation is a challenge, regardless of whether the evaluation being used is an empirical test or a theoretical debate (Heller & Victor, 2004). It may even be stated, when it comes to evaluating electricity reforms, that a personal perception and belief in the reforms
plays a role. Those who oppose liberalization have contended that vertically integrated franchise monopolies with regulated final prices are the best option to provide a politically sustainable structure; that is, necessary to safeguard adequate supply to prevent shortages and/or high prices. See for example Newbery (2002) and the pseudonymous Watts (2001). The latter, however, further states that “ideology has proved to be a poor substitute for careful thought and analysis” (Watts, 2001). Still, plentiful funds and efforts have been allocated towards reforming the electricity sector across economies, ranging from less-developed to developed in the time that has passed since reforms were agreed on among policymakers, academics and practitioners.

The debate on the potential benefit of reforms is not purely academic as consumers’ attitudes towards the electricity sector are affected by their own perceptions. It is understandable that consumers’ perceptions of liberalization may differ due to the evidence of its negative impact, e.g. high prices and economic problems in the event of power outages, as well as their own belief as to whether the markets should be liberalized at all. Research has shown that a portion of consumers do not trust deregulated electricity providers (Larsen, 2012; Paladino & Pandit, 2012) although the distrust may be counteracted by well orchestrated marketing via an effective branding strategy (Paladino & Pandit, 2012). Adding further to many consumers’ skepticism, evidence from consumer markets shows that electricity consumers are rather ill-informed about the operation of the networks and infrastructures which are responsible for supplying them with electricity (Shove & Chappells, 2001). This is not surprising, given the complexity of the reforms as has been explained before. It is not clear among the transition countries that those with the most advanced electricity sector reforms have benefited more from market-driven electricity sector reforms than the slow reformers or non-reformers (Nepal & Jamasb, 2013). Thus, given the abstruseness of how effective the reforms have been, it is not surprising that individual consumers are skeptical towards the sector as many feel that electricity is a necessity (Larsen, 2012) whose provision should not be jeopardized in reform experiments where they do not know whether the outcome will be positive or negative for them. The main focus should rather be on the fact that electricity is a fundamental infrastructure which should be made accessible at affordable prices (Morrison, 2001).

The role of privatization in liberalization

It is important to distinguish between liberalization and privatization as privatization is not a prerequisite for liberalization. In theory, competition and incentive regulation can also be employed in the case of publicly owned companies. Evidence suggests, however, that privatization delivers more benefits, particularly when joined with effectual restructuring, competition, and regulation (Newbery, 2002). Furthermore, the rising indications of the positive results of liberalization, first in telecoms, and afterwards in electricity, suggest that market forces are better prepared to use resources effectively and be more efficient in supplying service (Newbery, 2002). Privatization in the electricity sector was especially strong among the transition countries. Many sectors, since the early 1990s, of the Eastern European markets experienced structural change on many levels including price liberalization and the elimination of the institutions of communist systems (Svejnar, 2002).

The primary perceived outcome of privatization is that private owners’ quest for profit leads to increased effectiveness and cost saving (Vickers & Yarrow, 1988), as well as providing a potential for governments to diminish their future liabilities, thus furnishing the governments with substantial proceeds (Newbery & Pollitt, 1997).
However, in some countries, like Australia, for example, it was predicted that privatization would engender improved productivity and cost savings, but instead it led to unstable and rising prices, reduced funds allocated to maintenance, diminished reliability and quality (measured in occurrences of black-outs) and economic mismanagement (Beder, 2003; Stanton, Cummings, Molesworth, & Sewell, 2001), resulting in increasingly price conscious consumers (Paladino & Pandit, 2012). Furthermore, it has been claimed that privatized firms operating in regulated markets are inefficient; many case studies, for example, show how regulated firms pad their costs (Bougieas & Worrall, 2012) and have done so for a long time as earlier evidence suggests (e.g. Berliner, 1957; Schiff & Lewin, 1968). Firms can use various methods of padding, for example raising wages and expenditure claims, “gold-plating” expenses, adding equipment to project costs, promoting their own image, charging for depreciated assets, and not reporting cost reducing improvements (Bougieas & Worrall, 2012).

Implications

The challenge of the liberalization process has been to enable the industry to achieve optimum performance, but at the same time to find successful and effectual means of harmonizing the public tasks of the industry with the workings of the market. However, despite good intentions, not all agree on the appropriateness of liberalization, including household consumers. To some, it might seem as if liberalization is a thing of the past whose effects on consumer perceptions are minimal as it is already in place and decades since the liberalization process started in the first European countries. Nevertheless, the reform process is still ongoing in Europe with the latest electricity market, Estonia, having been liberalized in January of this year. Furthermore, implementing liberalization can take a long time. For example, the process of introducing competition into electricity generation in England took almost 10 years and it took 18 years to separate transmission and generation in Chile (Jamash & Pollitt, 2005). By no means then, is the process over which justifies reviewing historical impact on electricity markets and its potential impact on consumers’ attitudes. Influenced by the conceptualization in this paper, the author offers several motives that may affect the marketing strategies of electricity providers.

Politics, ideology and necessity. Joskow (2008), has offered numerous explanations as to why there has been a trend towards the liberalization of electricity industries, including wider ideological shifts approving regulated private companies over state-owned enterprises, supported by a below average performance displayed by several regulated industries. Furthermore, there have been shifts in the political economy of regulation along with factors such as changed technology. It is essentially a question of ideological personal stance whether the provision of electricity should strictly be operated by the state or not. This personal stance may further be affected by how necessary electricity is. Similarly, the ideology reflects a political viewpoint, and still further, a personal stance on the idea of privatization; that is, whether the necessary domestic lifelines to a modern way of living should be in the hands of governments or, alternatively, private companies which may face an ethical peril, despite being heavily regulated, in whether to exert their domination over consumers and conduct themselves monopolistically with associated discomfort for consumers.

Complexity of markets. The four-part division of electricity markets into production, transmission, distribution and sales, and the interplay of those, is not easily understood by the layperson. Those are not necessarily complex concepts, but due to the relative short time that has passed from liberalization in many countries, the understanding of those concepts is not commonplace. Furthermore, it was a common belief
that opening markets to competition would lead to lower prices and better services (Jamasb & Pollitt, 2005; e.g. Strong, 1993). Liberalization reforms have been slow, however, and many consumers have not seen their lives becoming any better since the reforms. Their existence may even be more complex in that now a more basic understanding may be required of electricity consumers who wish to be conversant about the workings of the electricity market in order to make an informed purchasing decision.

**Intangible nature.** What further adds to the complexity of choosing an electrical supplier is the intangible nature of electricity. Electricity was obviously also intangible prior to the markets being liberalized, but when it comes to choosing between several suppliers, consumers cannot assess the quality of the product from each one. As opposed to consumers in developing countries, many of whom have continually confronted difficulties of meeting electricity demand during economic progress and rising population, resulting in recurrent power outages under tight electricity demand and supply conditions (Kessides, 2012), consumers in developed countries have hardly experienced quality differences amongst energy providers. For the average electricity consumers, a quality electricity product is one that arrives since they do not dwell on formal definitions of the quality of electricity as defined by Morrison and Nalder (2009) in terms of factors such as blackouts and power surges. Given that scenario, both political and ideological aspects which build up trust or distrust towards the companies in the industry may play a larger role.

**Interconnectedness.** Attitudes to both politics and ideology are based on a subjective estimate of the individual. What further induces subjective decision-making is how complicated the liberalization progress is for the layperson in its interconnectedness to political as well as economic and social factors. Although some individuals might oppose the reforms of the electricity markets on a basis of a personal principle, some might also oppose them for practical reasons as well, since household consumers’ profits from the competition following reforms are lower than those of the larger buyers (Joskow & Tirole, 2006; Joskow, 2003; Salies & Price, 2004).

Despite electricity being sold on free markets in most European countries, it is an overgeneralization to state that the generation of electricity is merely an issue of the private sector. The issue is more complex which in fact is the reason why companies operating within the electricity sector are subject to hefty regulation. Electricity’s importance in a modern day economy cannot be overemphasized and consequently opinions differ as to its preferred form of generation and distribution to households and businesses. Contrasting sales of electricity to, for example, soft drinks or shampoo, therefore, brings up a sharp picture focusing on how much electricity differs from general consumer goods and how regulated the industry is. Thus, the fact that some consumers, in principle, oppose its liberalization, makes marketing electricity a challenge. In taking on that challenge, the energy companies need to acknowledge whatever perceptions consumers hold, which may be traced back to recent liberalization experiences, and resolve how those might be addressed.

Looking ahead, empirical data need to be analyzed in order to assess to what extent the above motives relating to the recent liberalization do in fact influence consumer attitudes; a task which the author of this paper has already started by conducting eleven focus groups in five European countries. Findings are forthcoming and will add insight to the conceptualization offered in this paper.
References


