

Price discrimination and the modes of failure in deregulated retail electricity markets

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Under a regulated monopoly supply of electricity, households face a uniform (two-part) tariff that is common to all households. Once competition is introduced, prices commence a natural drift from a single product and price, to many products and prices. Rival and new entrant retailers entering a franchise service area will offer *discounts off* an incumbent's Standing Offer tariff in order to poach customers. Incumbents are forced to construct their own discounted matching-products in response. Discounts off a Standing Offer tariff and associated price dispersion are thus a central design feature of a fully contestable retail electricity market. Greater product complexity and *price discrimination* are common features of former regulated capital-intensive monopoly industries such as telecommunications, airlines and energy (see for example Borenstein & Rose, 1994; Dana, 1998 & 1999b; Levine, 2002; Baumol & Swanson, 2003; Littlechild, 2014; and Simshauser & Whish-Wilson, 2017).

To the non-economist, the term “price discrimination” can conjure negative sentiment. In the context of electricity supply, some argue the practice produces *unfair* prices, creates confusion amongst consumers, and presents the opportunity for large incumbent retailers to exercise market power and price-gouge inactive customers. But price discrimination is unremarkable in economics, is a predictable outcome of rising competition, and is frequently welfare enhancing. Setting uniform prices to average cost is known to produce deadweight losses whereas to the extent that price discrimination produces marginal prices below average cost and close to, or at marginal cost, then the resulting welfare outcomes can be expected to be improved. Price discrimination is pervasive throughout the economy and forms a vital means by which non-trivial joint fixed and sunk costs are efficiently recovered by firms, especially in capital-intensive industries.

The State of Queensland, Australia, introduced Full Retail Contestability in 2007 in the Southeast region but maintained a regulated price cap as a transitional measure – yet the transitional measure remained in force from 2007-2016. When the Queensland Government finally deregulated prices in the competitive Southeast region, almost simultaneously the two jurisdictions that pioneered retail price deregulation, Great Britain and Victoria, were questioning their prior policy decision. Was the decision to deregulate sound?

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Queensland makes for a fascinating case study because Southeast Queensland comprises a fully deregulated retail market while Regional Queensland is a regulated monopoly – with common input costs across both zones. Consequently, a regulated monopoly with a uniform tariff and 640,000 customers forms a very large control group, which can be directly compared to the competitive market of more than 1.3 million customers in the Southeast – making such analysis globally unique.

Analysis of Southeast Queensland conditions concludes the policy is welfare enhancing, and the market is evolving in a manner consistent with the literature; as price controls were removed the number of rivals increased from 12 to 20, products and tariff structures proliferated, routine discounts deepened, customer switching rates increased sharply and price dispersion increased materially by comparison to the pre-deregulated contestable market, let alone the uniform-priced regulated regional market.

Above all, the deregulated Southeast Queensland competitive market is, perhaps unsurprisingly, better at regulating the overall average tariff and consumer welfare has been enhanced by \$184 million per annum – with some consumer segments very materially better off. Quantitative analysis found a majority (78.9%) of Southeast Queensland electricity consumers have benefited from deregulation, some significantly, and consumers as a whole are substantially better off.

However, many Standing Offers have risen above a counterfactual regulated Benchmark, and this means two key issues require ongoing monitoring; 1). the inter-consumer misallocation problem (i.e. vulnerable customers *rusted-on* to a Standing Offer tariff designed for strong-segment consumers), and 2). the “discounts off what?” problem. That is, if a retailer offers an 18% discounted product immediately after increasing their Standing Offer by 18%, what discount is the customer actually receiving?

Resolving the inter-consumer misallocation problem is relatively straight forward via ensuring energy retailers (voluntarily) move vulnerable customers onto a Benchmark-equivalent or suitably discounted tariff. Due to the non-linearity of tariffs and the rising mix of discrete metered loads, the latter can be best solved by producing a weighted average of Standing Offers, and using this as the benchmark.

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