

Citation for published version:

Chrysovalantis Amountzias, Hulya Dagdeviren, Tassos Patokos, 'A waste of energy? A critical assessment of the investigation of the UK energy market by the Competition and Markets Authority', *Competition & Change*, Vol. 21 (1): 45-60, February 2017.

DOI:

<https://doi.org/10.1177/1024529416678070>

Document Version:

This is the Accepted Manuscript version.

The version in the University of Hertfordshire Research Archive may differ from the final published version.

Copyright and Reuse:

© 2016 the Author(s). Published by SAGE.

This manuscript version is made available under the terms of the Creative Commons Attribution licence CC BY 4.0 (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted re-use, distribution, and reproduction in any medium, provided the original work is properly cited.

Enquiries

If you believe this document infringes copyright, please contact Research & Scholarly Communications at rsc@herts.ac.uk

‘A Waste of Energy? A Critical Assessment of the Investigation of the UK Energy Market by the Competition and Markets Authority’

Chrysovalantis Amountzias, Hulya Dagdeviren and Tassos Patokos

University of Hertfordshire

Abstract: In this paper, we assess the findings of the UK energy market investigation by the Competition and Markets Authority (CMA), conducted during June 2014-June 2016. We argue that the results of the investigation have been advantageous for the large energy companies and they risk failing to bring any significant and positive change to the energy industry. We highlight three major aspects of the CMA's assessment. First, the panel examined retail and wholesale segments of the energy industry in isolation which can be misleading in the assessment of vertical integration. It also considered new entries to the sector as a sign of competitive strength when many were due to favourable government policies in the form of exemptions from various obligations. Second, its conclusion that a position of unilateral market power by the large energy companies arises from weak customer engagement (i.e. low switching rates) shifts the focus and responsibility for the problems of the energy markets away from the conduct of the companies onto customers. Finally, the investigation placed an overemphasis on competition without due reference to its consequences for consumers' welfare.

Introduction

Privatization has been part of the neo-liberal economic transformation of many countries since the late 1970s. It emerged as a policy direction against the background of the crisis in the 1970s and the ensuing downturn in the 1980s, which had knock-on effects on the performance of public utilities, creating the perfect conditions for arguments in favour of privatization. Thus, privatization was justified on the basis of a rhetoric that the ownership and control of productive assets by the state caused economy-wide and firm level inefficiencies because of impeded competition and distorted incentives, asset values, resource allocation - as well as rent-seeking by bureaucrats and civil servants. Privatization was supposed to increase efficiency through the interplay of self-interest and competition (Florio 2004) and force the respective sectors to deliver better value for customers. The energy sector was deeply affected by these trends. Up until the 1980s vertical integration under public ownership was favoured because of sunk costs, inelastic demand and coordination problems in the

generation, transmission and distribution of energy, but with the rise of neo-liberal paradigm, this model was criticized for its inefficiency and tendency to create excess capacity.

As with many other sectors, the UK has played a leading role in the restructuring and privatization of the energy industry. While energy prices declined in earlier years, partly because of falling gas prices, these gains were not maintained in the long term. In power supply, high wholesale prices and the possibility of market manipulation under the former system (what was known as ‘the pool’) led to the introduction of the New Electricity Trading Agreements (NETA) in 2001.¹ In the last decade, concerns have shifted from the wholesale to the retail segment of the energy market as prices for the end users continued to rise, eventually instigating a probe by the regulator, Ofgem, in 2008.

The regulator’s own findings confirmed that there were some potential problems in the retail pricing strategy of the big energy companies, known as the big six (British Gas, EDF Energy, E.ON UK, NPower, Scottish Power and SSE). For example, in one of its reports Ofgem mentioned that the earnings of the large energy companies, before interest and taxes, in the domestic supply market had increased by 74.7 per cent from 2011 to 2012 when the wholesale cost for the average domestic customer had risen by a mere 2.3 per cent (Ofgem, 2013b).² Lack of change in energy market operations following the 2008 probe led Ofgem to initiate a review of the retail segment of the energy market in 2010 and subsequently to introduce a number of regulatory measures, which aimed to achieve ‘simpler, clearer and fairer’ conduct in pricing energy.

Despite these interventions, retail prices continued to increase. Eventually, Ofgem referred the energy markets for full investigation to the Competition and Market Authority (CMA) in June 2014. The CMA published its findings a day after the referendum for the EU membership on 24 June 2016, effectively turning the spotlight off a major political issue. In this paper, we critically analyse CMA’s *Energy Market Investigation* Report, firstly, on the basis of its assessment with respect to adverse effects on competition in the energy sector and secondly from a longer term perspective, drawing conclusions about the effectiveness of competition since the privatization of the sector.

It is worthwhile summarizing the highlights of our arguments here. First, the CMA’s finding on vertical integration in the energy sector not being an issue of concern for competition is premature. Secondly, identifying ‘weak customer response’ as the main factor with adverse impact on competition in the energy sector is equivalent to shifting the responsibility of making competition work to customers and taking the burden off the companies. Thirdly, attributing the problems of competition in the energy

¹ Initially in England and Wales, and later including Scotland with the move to British Electricity Trading and Transmission Agreement (BETTA) in 2005.

² The big six energy suppliers unanimously disputed Ofgem’s findings, claiming that the methodology Ofgem uses to derive its estimates is flawed. Because the energy companies are not transparent and do not disclose their wholesale costs in detail, Ofgem assumes a ‘representative supplier’ whose hedging strategy is to buy energy 18 months ahead of time (Ofgem, 2013c), but the companies argue that hedging strategies vary across suppliers, so do the costs (Financial Times, 2013).

market to the Retail Market Review Reforms would be to disregard the problems that preceded these changes. Finally, the findings of this investigation, when considered together with past changes, show once again the prevalence of highly imperfect competition in the energy sector and the limitations of public authorities in effectively responding to emerging issues due to lack of information; time lags involved in the identification of problems; counteractive policies and their implementation; and the potential contradictions between different goals and remedies. Note that these issues have been discussed in this paper mostly in connection to the domestic energy users rather than small and micro businesses which are also covered in the CMA's report.

A summary of the CMA's findings with respect to the UK energy market investigation

The main thrust of the CMA's investigation is based on trends in energy prices and the profitability of the six large energy firms (CMA 2016). In particular, considerable attention was given to the prices for domestic customers that had increased in real terms by 75 per cent for electricity and 125 per cent for gas during 2004-2014. The panel acknowledged the contribution of social and environmental levies and the network cost for energy prices. Nonetheless, its analysis with reference to the profitability of the big six raises serious questions about the competitiveness of the retail energy prices - even after taking into account various cost. Gross margins in relation to the retail costs were found to be very high during 2009-2013 (around 18 per cent for electricity and 19 per cent for gas across the big six). In the same period, their rate of return on capital for combined retail business (gas and electricity) was 28 per cent on average and four of them had an average return of 44 per cent. Benchmarking the prices of the big six against two mid-tier independent suppliers, it was found that the domestic customers spent an estimated 1.4 billion pounds extra per year during 2009-2013. This harm to the households rose to 2 billion pounds in 2015.

On the basis of these findings the CMA moved on to consider the factors that may be giving rise to adverse effects in competition (AEC). Overall, wholesale markets have been considered to be less of a problem. The concentration in the wholesale gas market was found to be low despite some vertical integration; in the wholesale electricity market prices were found to be competitive and returns to investment were in line with what would be expected.³ Significant vertical integration in the electricity sector was not considered to be detrimental for competition.

The CMA identified a number of areas in the supply of retail electricity and gas where the real problems lie. Firstly, the lack of switching or what it termed as 'weak customer engagement' was highlighted as the most significant shortcoming, putting the big six in a position of having unilateral market power. Secondly, the reforms introduced under the Retail Market Review by Ofgem after 2011

³ The report highlights the use of Contracts for Difference (to protect low carbon generators against price fluctuations in the wholesale market with aim to improve incentives for investment in low carbon generation) as an area with potential AEC. Absence of locations pricing is also considered to be constituting AEC.

were considered to have weakened competition in the sector. Thirdly, the limited use of smart meters and lack of a settlement system, based on more frequent readings, were regarded as having adverse effects on competition in the sector. Finally, the existing financial reporting systems in the energy sector as a whole were found to be non-transparent which constrained regulators and policymakers in making decisions. The CMA also examined the price announcements of the big six to detect potential patterns, signalling tacit coordination but found no supporting evidence. Profitability in the wholesale energy markets was not found to be a problem for the CMA (with earnings before interest and tax, EBIT, 4.5 and 2.5 per cent for gas and electricity respectively during 2009-2013).

In the next section, our discussion focuses on three major conclusions of the energy investigation panel: first, that vertical integration has no adverse impact on competition; second, that the lack of customer engagement has an adverse effect, and third, that the retail market reforms of the late 2013 had an adverse effect on competition.

A critical assessment of the CMA'S Findings about the Adverse Effects on Competition (AEC)

Vertical integration does not have AEC

The most critical aspect of the energy market investigation was focused on the market power of the six big energy companies, possibly resulting from their size and vertical integration. Any verdict confirming the market power of companies and its adverse use would have potentially resulted in the break-up of the big six. Fortunately for them, after two year of investigation, the CMA concluded that vertical integration has not constituted an adverse impact on competition in the energy markets. This favourable judgement for the big six is based on an assessment of the potential benefits and harms of vertical integration. Its possible adverse consequences are dismissed on the basis of an emphasis on three aspects of market structure and operations. These are that;

- There is no unilateral market power in the wholesale energy markets, especially because of the low returns. The CMA considered this as an indication that the big six does not discriminate against the non-integrated sector by refusing to buy from or sell to them at a higher price than the prevailing market price.
- Liquidity in the market is high indicating that the big six buy and sell energy rather than relying on own sources or generation.
- New entrants to the retail sector and new investment in generation by independent companies dispel concerns about potential entry barriers for the industry.

There are a number of problems with these conclusions. Firstly, there are concerns about the quality of the data used. Elementary teaching in economics suggests that one of the best ways of evaluating market power in oligopolistic markets is through analysing price-cost margins. However, it is well

established that there are serious data inadequacies in the energy market. The lack of transparency in financial reporting by the big six has already been noted by the CMA in its final report (p. 72). Ofgem attempted to generate cost data through modelling, but these have been subject to challenge by the big six. Credibility of any market power investigation is limited without adequate data on costs.

In an industry where imbalance prices⁴ (which are subject to greater spikes) are settled daily for gas and half hourly for electricity, using highly aggregated estimates of costs (the fuel costs are indicated to be around 50 per cent of the total costs) is clearly not satisfactory. The possibility that price-cost margins are not excessive on average but may be excessive in some periods is an important consideration and could have serious implications for the outcomes of investigation. Moreover, the available average price-cost spreads and some other essential data were concealed in the CMA Report (see p. 172). When we asked for the reason by email, it was justified on the grounds of commercial sensitivity and the guidance on Disclosure of Information by former Competition Commission.⁵ The consequence of withholding essential data is that independent stakeholders have been unable to scrutinise the findings of the CMA with respect to the advantages and disadvantages of vertical integration in the energy sector.

Secondly, the wholesale and retail functions in the energy market investigation are assessed in isolation from each other, possibly reflecting the inadequacies of the data provided by the big six. The problem with this is that both the retail and wholesale elements of a vertically integrated company is owned by the same corporation. Therefore examining these functions in isolation can be quite misleading. The possibility that vertical integration provides firms with the opportunity to rebalance their revenues, costs and profitability in different segments of the energy markets was raised by Guilietti *et al.* (2010a). Using price-cost margins, they suggested that lower prices in the whole electricity market (after NETA) were counterbalanced by rising end user prices and profit margins in the retail sector. Similarly, a recent report by Ofgem (2013a) hinted at the possibility that rising bills for consumers might be a way for the suppliers to compensate for the dramatic decrease of the average margin (by about 50 per cent) in the non-domestic market. Both of these suggestions point to a pricing strategy common within monopolistic or oligopolistic markets, which is offering lower prices to a smaller number of bulk buyers at the cost to the majority with low consumption such as domestic users.

The concerns discussed above have not been adequately tackled by the CMA. Instead, the CMA uses the concept of 'natural hedging' and presents the advantage of trading off low revenues in one market

⁴ The prices paid / received for having an imbalance between contracted generation/supply and actual generation/supply

⁵ This has been the position of the DECC and Ofgem as well in that the basic data for the individual large companies have not been made public. Requests of such data under the Freedom of Information Act is usually rejected with reference to 'commercial sensitivity'.

segment with higher revenues in another as a risk management strategy rather than as a market power issue.

It is often claimed that the 'natural hedge' is an important feature of vertical integration in electricity. In short, the concept is that the returns from generation are negatively correlated with the returns from supply, and so a vertically integrated company is less exposed to certain risks [defined as price and volume risks] than an independent supplier or generator. (p. 326)

Thirdly, the absence of price discrimination or presence of trading with independent generators and suppliers (i.e. not refusing to buy from or supply to them) by the big six, does not rule out the possibility of excessive wholesale prices since they are passed on customers. Fourthly, the increase in the number of new entrants to the market has not reduced market concentration significantly. The six large firms still control a substantial proportion of the energy market (90 per cent). Of the 46 companies operating in the British energy markets in 2016, three had over 50 per cent of the share of the domestic market (British Gas, SSE and EoN) in terms of customers (CMA 2016, p. 387) and over half of the electricity generation capacity (EoN, EdF and RWE Npower) (p. 160).

More importantly, it is necessary to pay attention to the dynamics of entry and exit in the sector and the sustainability of new entrants. There have been some new entrants to the energy sector in the past but they have disappeared over time. For example, Finon and Boroumand (2011) indicate that twenty new entrants have left the UK retail market since 2000, drawing attention to potential instabilities with respect to the patterns of entry and exit. While independents (i.e. companies other than the big six) accounted for less than 2 per cent of the retail market until 2014, their share increased to 10 per cent in 2015. In other words, most of the new entries took place after the energy market investigation started. Representatives of these new energy companies (ECC, 2016) indicated that they were motivated by the government policy, involving exemptions with respect to social and environmental obligations. Indeed, Oxera (2016) indicates that the implied subsidy the new entrants receive by being exempt from some or all social and environmental levies is equivalent to the excess revenues generated through the Standard Variable Tarriffs (SVTs) (amounting to 1.4 billion per year). In other words, the flow of new entrants to the sector is not because the big six are operating competitively, but rather because of the government intervention.

Finally, the CMA acknowledged the potential benefits of being vertically integrated in terms of economies of scale, efficiency gains and improvement in credit ratings, but stated that it is unsure whether gains have been passed on to customers.

Overall, given the issues raised above, the investigation gave a favourable verdict to the big six with respect to the consequences of vertical integration.

Customers as the main culprit for AEC: low switching rates and weak customer response

Having decided that the vertical integration and concentration by the big six do not cause adverse effects on competition in the energy sector and that there is no unilateral market power in the wholesale market, the CMA moves on to discuss other evidence for adverse effects on competition (AEC) in the retail sector.

However, we also note that other evidence (including evidence on profitability, cost inefficiency and the prices offered by the mid-tier suppliers) suggests that the average prices offered by the Six Large Energy firms have been above those that we would expect to prevail in a well-functioning competitive market (CMA 2016: 38).

The anomalies with respect to costs, price differentials and profitability (gross margins, returns to capital and EBIT (earnings before interest and tax) are discussed in the context of two questions. First, what is the role of demand side (switching by customers) for limiting the market power of large suppliers? Second, has the retail sector become less competitive after the introduction of Ofgem's Retail Market Review (RMR) reforms, following the 2008 Probe? In this section, we discuss the first question, leaving the second to the next section.

The CMA placed strongest emphasis on 'weak customer response' in the domestic market in explaining the problems in the energy market. It argued that low engagement on the demand side bestows retail energy companies with a *position of* unilateral market power which they exploit through their pricing policies. Low levels of switching⁶ by customers reflect inertia or lack of activity in the domestic market. According to a survey commissioned by the CMA, more than half of the customers never switched:

- a) 36 per cent of respondents did not think it was possible...to change, tariff, payment method or supplier...
- c) 56 per cent of customers had never switched supplier...
- d) 72 per cent had never switched tariff with an existing supplier (CMA 2016: 371)

It is reported that potential savings from switching were as high as 330 pounds as of the second quarter of 2015 when a competitive benchmark⁷ is used (p. 647). The report highlights two key factors

⁶ This includes switching to the supplier with the lowest tariffs, or switching to the lowest tariff with the same supplier or switching the payment method from standard credit to direct debit (changing from prepayment method is difficult as this is arranged for customers with poor payment history)

⁷ The average prices charged by the six large energy firms are compared against the prices of the most competitive suppliers (Ovo Energy and First Utility) during the assessment period, allowing for 'a normal return' and taking into account the differences in suppliers' size, costs etc.

in explaining weak customer engagement, the most important of which is the socio-economic characteristics of the customers. The survey found that a greater proportion of non-switching customers are on low income, with low qualifications, living in rented accommodation or over the age 65. Moreover, lack of access to or confidence in using the internet is reported as potential barrier to engagement. As would be expected from a user group with these socio-economic characteristics, the results indicate that the perception of the complexity and burden of searching and switching is greater than the reality.

High standard variable tariffs (SVTs) are the route through which suppliers exploit their unilateral market power. SVTs rose from around £400 to £1200 during 2004-2015 for the median consumers on dual fuel (p. 398). 70 per cent of the six large energy firms' customers are on SVT. Average revenues from SVTs were around 11 per cent higher for electricity and 15 per cent for gas in comparison to non-SVT tariffs during 2011-2015 (p. 6). The conclusion that the SVTs are excessive is based on the rationale that the cost of supply for SVT customers are unlikely to be different from the cost of supply for customers on non-SVT tariffs.⁸ This is further supported with reference to the high gross retail margins of the six large suppliers (18 per cent for electricity and 19 per cent for gas during 2009-2013).

All these factual data and information are helpful. However, the CMA's arguments regarding lack of 'customer engagement' is not based on some unknown facts or new findings. Rather, they confirm the results of the research by Catherine Waddams and her associates since the early 2000s. These studies investigated the differences in customer behaviour with respect to the tariffs paid by an average customer in different regions, on different payment methods and with different suppliers (incumbents or non-incumbents).

Much of the incumbent's market power arises from consumers not bothering to switch because they incorrectly expect the incumbent to match. Over time we might expect consumers to become wise[r]...but in fact we find that eighteen months later, a higher proportion of the group of consumers who had not switched by that time believed that the incumbent would match...Awareness of choice in the market had also declined. Both of these trends suggest that the market power of the incumbents is increasing over time. This continuing market power raises concerns for the future... (Waddams 2004: 14)

In short, the key finding of the CMA's report confirmed the established view about the limited customer mobility across alternative providers and tariffs. The CMA's emphasis on weak customer engagement has been criticised various parties. For example, Helm (2015, p. 5) rightly considered low switching rates as an ongoing problem and commented 'it remains to be seen if large scale switching will ever work', while the former regulators (Littlechild et al, 2015a) argued that weak customer

⁸ This is based on the view that the supply for the SVT and non-SVT customers has the same direct costs, obligation and network costs and lack of evidence that energy costs are 'systematically' higher for SVTs.

response is not necessarily a competition issue as a wide range of other markets have inactive customers without this being a problem.

While all these contributions are useful, there are a number of more fundamental problems with the CMA's assessment. Firstly, the gist of the problem is that the CMA assumes that had the customers been more mobile between tariffs and/or suppliers, competition in the energy markets would have worked better. Hence, the remedies should focus on increasing the switching rates through improving competition among price comparison sites or rolling out smart meters⁹ as early as possible. The issue with this view is that it fails to tackle the central problem, that is, the big six are price makers not price takers. The lack of switching so far led them to use a particular pricing strategy (i.e. high standard variable tariffs for captive customers) but they can develop alternative pricing strategies to protect their margins if customers become more mobile.

Secondly, and related to the first point above, the CMA's assessment shifted the burden of responsibility for energy market competition away from the big six and on to the customers. By doing so, it let the large energy companies off the hook and encouraged the continuation of the status-quo in terms of pricing. Indeed, the wholesale energy costs declined by around 30 per cent since the energy market investigation started and yet the prices were hardly reduced by the big six as of the mid 2016.¹⁰

Recognising that the socio-economic profile of a significant proportion of non-switchers (i.e. those on low incomes, with low education, in rented housing, over 65 years of age) may be reflecting multitude of vulnerabilities, the CMA decided to introduce a protective measure by imposing a price cap on the tariffs. In contrast to the suggestions made by a range of civil society organisations such as the Citizens Advice during the consultation period, it decided to implement this regulatory measure for a very narrow group of customers on the pre-payment meters (PPM), who accounted for only 16 per cent of the total domestic customers, rather than for a wider customer group. As pointed out to the CMA panel during the consultations, neither are all vulnerable customers on pre-payment meters nor are all of those on PPM vulnerable (CMA 2015). As Martin Cave put it:¹¹

⁹ Smart meters are advocated by the CMA with the expectation that this would enable the transition to a more responsive demand by the households who are expected to adjust their consumption on the basis of time-of-day prices and the changes in them. Transmission of the real-time energy use data to the suppliers through smart meters is expected to trigger more dynamic pricing behaviour by the energy firms. The merits of smart meters and their potential role in facilitating dynamic pricing in the energy market have been discussed in detail by Joskow and Wolfram (2012). However, the obvious problem with this proposal is not addressed by the CMA. That is, in a market where the majority of the customers do not switch despite limited range of tariffs for prolonged periods of time, why is it expected that time-of-tariffs would change their behavior and how would that change come about?

¹⁰Energy firms' costs 'hit five-year low', BBC, 14 January 2016, URL: <http://www.bbc.co.uk/news/business-35308022>

¹¹ Martin Cave was the dissenting member of the CMA energy investigation panel who argued for wider regulation of energy prices.

Household engagement...is an intractable problem. Over the past three years or so quite a lot of effort has been thrown at it. There have been changes to the bills to encourage people to look around, lots of instructions in newspapers on how to switch and emphasis upon how much money you will make from switching, and even a television advertising campaign by DECC encouraging people to switch, but nonetheless those measures have generated only a trickle of reduction in the proportion of customers of the six large energy firms who are on a standard grade tariff...The market consists of a competitive segment and a non-competitive segment, but unfortunately the majority of people [70 per cent] are in the non-competitive segment and the CMA data suggests that they are overpaying, if I might put it that way, £300 a year (ECC, 2016, p.21).

In other words, the CMA decided to offer no protection for around 60 per cent of customers¹² on the grounds that a) interventions distort competition, b) significant number of customers may prefer not to switch because they care for some non-price variables (for example, supplier's reputation, service quality), c) customers may be avoiding searching and switching cost, reflecting the 'rational choice' they make.

There are several issues related to these justifications. The first is that the CMA panel could have applied the same reasoning to PPM customers as a price cap for this group would distort competition in the same way. In the absence of any evidence that PPM customers care less about non-price variables or service quality the question is raised as to why did the panel felt it necessary to apply a price cap for PPM but not the 70 per cent of customers on SVT. The likely reason is that the energy prices and the conduct of the big six in the UK has been a political issue in the past decade - so much so that a price freeze or breaking up the big six was discussed as alternative policy interventions¹³. The CMA's decision reflects an attempt to dampen such political undercurrents and contain the potential costs of investigation to the energy companies. Secondly, the CMA overemphasizes competition at the cost of the welfare of a majority of the energy users. Thirdly, even if customers are trying to avoid search and switching costs (e.g. spending hours they may not have to identify the best deal) this does not justify letting them pay what it considers to be excessive prices in the name of making competition work.

Reversal of regulatory interventions after the 2008 energy market probe

¹² Excluding, 30 per cent switchers and 16 per cent of PPM customers most of whom were on SVTs.

¹³ 'Ed Miliband: Labour would freeze energy prices' BBC news, 24 September 2013

'Ed Miliband outlines plan to break up Big Six gas and electricity companies' Independent, 29 November 2013

'Small firms urge break-up of Big Six energy giants' The Telegraph, 23 Mart 2014

The focus of the CMA on the effects of the Retail Market Review (RMR) and the associated reforms results from the former regulators' input to the consultation that the CMA initiated amongst stakeholders and experts in the process of its investigation. The former regulators strongly argued that Ofgem's interventions following the 2008 probe has distorted competition in the sector, particularly by:

- a) limiting the number of tariffs suppliers could offer (the four-tariff rule) which led the large firms to remove some 'innovative tariffs and discounts'.
- b) requiring the price comparison websites (PCWs) to make all tariffs available on their sites which reduced competition amongst the PCWs to attract customers by lowering commission.
- c) prohibition of regional price discrimination¹⁴ which removed the possibility for the non-incumbents to offer lower prices in new markets (trading these off with higher prices in their home market) (Littlechild et al 2015a and 2015b).

Our view is that these conclusions with respect to the RMR reforms are premature for the following reasons.

First, in its provisional report published in 2015, the investigation panel noted that it was too early to assess the consequences of the RMR reforms and yet decided at the end of the report that they would have adverse effects on competition. Indeed, most RMR recommendations had not come in force before the Autumn of 2013, less than a year before the investigation started (except for the item –c above). Despite this, the CMA's final assessment recommended the removal of the interventions listed above. In other words, the energy market investigation became a means to eliminate untested regulatory measures aiming to improve customers' experience with respect to the information available to them in the retail energy market.

Second, the four-tariff rule was introduced against the background of widespread dissatisfaction with the previous situation in which each supplier offered a large number of tariffs that many customers found complex and confusing. As already discussed, the survey commissioned by the CMA indicated that a range of socio-economic characteristics such as being on low income, having limited education and being over 65 explain a significant proportion of 'weak customer' engagement or low switching rate. Therefore the complexity of the tariffs adds to the burden on a customer group with socio-economic disadvantages. Research by Wilson and Waddams (2010) showed that not all switchers changed to the best alternative available at the time of switching, lending support to the view that pre-RMR tariffs were indeed confusing even for the 'savvy' well-informed consumer. Further, the four-tariff rule may have led to the disappearance of the so-called 'innovative' discounts in mostly variable tariffs, but it resulted in considerable price competition in fixed-term fixed-rate tariffs, offered

¹⁴ This came in force before the RMR in September 2009 but reconsidered in the process of the RMR.

at substantial discount to SVTs (CMA, 2015). However, given low levels of switching, clearly ‘the innovative tariffs’ did not benefit majority of customers.

Third, the argument of reduced competition amongst the price comparison websites (PCWs) as a result of the RMR is also untenable. Competition between the PCWs prior to the RMR involved the partial listing of price offers from commission paying suppliers in the market. The PCWs were also able to add their own promotions on selected offers, using variation in commission. After the RMR, the PCWs were required to provide the details of all available offers in the market. However, the argument of ‘reduced competition’ amongst PCWs is not supported by the evidence. Large energy suppliers have greater scope to outmanoeuvre small competitors by paying (higher) fees to PCWs. The market for energy price comparison has itself been dominated by two PCWs that account for the 70 per cent of switching in that market (CMA, 2015:263). Moreover, full disclosure of prices is likely to induce real price discounts rather than offers that afford higher visibility advantage through higher fees. There have been a number of other developments that are likely to prevent a return to the pre-RMR period with respect to the role of the PCWs. The first is that in January 2015 Ofgem tightened the confidence code for PCWs, which requires them to list all tariffs unless the customer requires a narrow range. More importantly, the Citizen Advice Bureau (CAB) started its own price comparison website, which provides full information about energy deals. This has the potential to counteract any potential misuse of information by PCWs. These factors together seem to have had a positive affect on the practices of other PCWs.

Finally, the prohibition of regional price discrimination¹⁵ which eliminated the ability of non-incumbents to offer lower prices in regions other than their home market, was also criticised by the former regulators for restricting competition and contributing to the problem of high SVTs for captive customers. In their assessment of the CMAs provisional findings, they disputed the investigation panel’s conclusions about unilateral market power or lack of customer engagement being the key problems. Instead, the real problem, they argued, is the prohibition of regional price discrimination which was ‘good for competition’ (Littlechild et al 2015a and 2015b). However, research prior to the implementation of regional price discrimination showed that incumbent firms continued to enjoy considerable advantage despite the competition posed by the non-incumbent firms. For example, estimations by Salies and Waddams (2004) reflected an average of 4 to 13 per cent higher charges by incumbent firms for credit and direct debit customers - despite greater level of competition for these customers from the non-incumbent firms due to low switching rates. Guilletti et al (2010b) also estimated that incumbent firms had a persistent advantage that allowed them to mark up their prices by about 10 per cent in comparison to non-incumbent firms largely because of the lack of search and switching by consumers. Similar findings were reported by Defeuilley (2009). These studies clearly

¹⁵ In 2009 following the RMR although it lapsed during the investigation and Ofgem indicated its intention not to extend it.

show that regional price discrimination was not an effective policy to reduce the advantages of incumbent firms.

Overall, the CMA's analysis privileges competition over social and consumer welfare: competition at any cost, be it through artificial complexity created via tariff proliferation or information withholding at the risk of disadvantaging customers.

Reconsidering energy market investigation from a broader perspective

As mentioned previously, the process leading up to the referral of the big six energy firms to the CMA started in 2008 with Ofgem's energy supply probe. This took about a year and the initial findings report concluded that

'...the Big 6 suppliers are acting competitively' and that '...no evidence of cartels' was found, although there are '...some important areas where the transition to competitive markets [...] needs to be accelerated' (Ofgem, 2008: p.1).

Several years later, Ofgem concluded that '[c]onsumers are at risk from a number of features in the market which reduce the effectiveness of competition' and published a Retail Market Review (RMR) (Ofgem 2011: p.1) to remedy these features. Nevertheless, despite the implementation of RMR measures, retail prices continued to rise. Hence, the regulator referred the issue to the CMA for investigation.

In the past there have been similar attempts to redesign markets, rules and regulations. For example, 'the Pool' in the wholesale electricity market had to be replaced in March 2001 by what is known as the New Electricity Trading Arrangements (NETA)¹⁶ as the former was considered to be open to strategic manipulation by generators.

'...flawed and much-criticised arrangements under the Electricity Pool meant that wholesale prices failed to reflect falling costs and increased competition' (Ofgem, 2002, p.4).

The results presented by Ofgem after NETA's first year of operation showed a decline of 20 per cent from 2001 to 2002 in prices and 40 per cent in wholesale electricity costs from 1998 to 2002 (Ofgem, 2002). However, reduced concerns about competition in the wholesale market were replaced by those regarding the retail market. Although NETA was successful in reducing margins at the wholesale level, it resulted in higher retail prices (Guilietti *et al.* 2010a). It is shown that suppliers' cost differences

¹⁶ British Electricity Trading Transmission Arrangements (BETTA) from 2005 with the incorporation of Scotland

could not explain the large price differentials amongst the incumbent firms (Davies et al 2014). These findings were confirmed by the CMA during the energy market investigation.

Figure 1 here

Since the privatization and restructuring of energy markets in the 1990s, major efforts have been put in place to get the sector to operate competitively, which would be reflected in lower prices and better investment decisions. Despite the relentless efforts of various institutions putting forward views and proposals on policy and regulation to make energy markets more competitive the sector has continued to fail to deliver on promises to domestic consumers in terms of lower prices and adequate and environmentally friendly investment decisions (except for a few years in the initial period). As shown in Figure 1, energy prices had already started declining a decade before privatization, a trend which continued until the early 2000s. However, since then the price trend pointed upwards both for gas and electricity.

Ofgem (2011) had already indicated that these price increases were not justified by changes in fuel costs or the cost of social and environmental obligations. In 2016 CMA (2016) found that the price hikes in the retail markets could not be explained entirely by input price increases or social and environmental levies. The rising retail prices in the last decade or so meant that British households spent over 80 per cent more for energy per week in 2013 in comparison to what they spent in 2005. This is despite the fact that overall energy consumption in terms of kilowatt hour used declined significantly for gas (around 30 per cent) and fairly for electricity (around 15 per cent) in the same period (Table 1).¹⁷

Table 1 here

All these highlight the limitations of competition in energy markets as discussed by many scholars (for example Finon and Boroumand 2011, Defeuilley 2009 and Dagdeviren 2009). In the context of the recent energy market investigation in the UK, Helm (2015) raised the same concern and asked 'whether this will ever be a competitive market' (p.8). The difficulty of making competition work in the energy markets have led some experts to point out the incompatibility of regulator's duties with respect to competition and social protection.¹⁸ For example, Yarrow (2015) argued that Ofgem should

¹⁷ Although some of the decline in gas consumption may be due to switching to electricity as prices converged, it is likely that much of this fall could largely be explained by energy efficiency measures as well as reduced consumption by households to manage household budgets given considerable fuel poverty in the country (over 2.3 million households in England has been fuel-poor since 2003 according to DECC 2015).

¹⁸ The regulator's duties in energy sector changed with the reforms introduced through the Utilities Act 2000. These required Ofgem to incorporate the needs of vulnerable and low income consumers into its regulatory oversight on the basis of the guidance provided by the relevant government department.

focus on competition and stop meddling with prices to make it affordable for low income consumers. Terminating the social duties of Ofgem is unlikely to solve two connected problems (competition and fair and affordable tariffs). Imperfect competition has prevailed in energy markets irrespective of whether the regulators have had social duties or not. It is worthwhile reasserting the argument made by Helm (2015) in the context of the Energy Market Investigation (as well as in other contexts) that: competition is a means to an end not an end in itself.

Moreover, in addition to the problems associated with oligopolistic market structure and making competition work, an enormous amount of complexity is created to govern the operation of the energy industry. These include the complexities faced by the customers in searching for and switching to the best suppliers; the licencing conditions and regulatory codes; additional mechanisms to ensure flow of investment such as capacity markets; and incentive systems to encourage renewable energy.

Another issue is the length of time involved identifying anti-competitive behaviour. The current round of investigations took eight years in total (if process includes the 2008 Ofgem investigation) to establish whether the conduct of the large energy companies had adverse impact on competition. It will take even longer considering the application of remedies. The long periods involved in such investigations clearly result in delays to agreeing and implementing arrangements that would be beneficial to consumers. This aspect of discussion is particularly noteworthy as it has often been the public sector that has conventionally been considered to have inertia and heavily bureaucratic procedures in decision making. More importantly, whether the suggested remedies put forward by the CMA will finally deliver the desired competitive outcomes to the consumers is another question. The outcomes of experiments in the past two decades including the change from the Pool to NETA; unbundling to re-integration of generation and supply; price caps to unregulated pricing, regional price discrimination and its abolition, offer little confidence.

Conclusions

The energy market investigation in the UK took two years and cost five million pounds. Its main conclusions with respect to the conduct of the big six energy firms have been favourable to the companies themselves. The CMA's assessment can be considered as an endorsement of their current practices. Indeed possibly because of the signal given by the CMA's provisional findings report earlier in 2015, energy prices did not come down despite significant falls in the price of fuels since the investigation started.

In this paper, we have critically evaluated the CMA's findings with respect to its three major conclusions. The first is related to its recommendation that vertical integration of the big six does not cause adverse effect on competition in the energy market. We argue that the CMA reached this conclusion because it analysed the generation (wholesale) and supply (retail) activities in isolation

from each other. Its finding with respect to the impact of the vertical integration in the sector is based on the absence of price discrimination by the big six against non-integrated companies. We argue that where wholesale costs have been passed through final prices, this should not be taken as evidence to dismiss concerns about vertical integration. The investigation panel also suggested that the new companies in the energy sector are a sign that vertical integration constitutes no barrier of entry. We noted that most of the new firms entering the sector during the period of investigation did so as a result of government intervention in the form of generous foregone levies to encourage new comers rather than the competitive conduct of the big six.

The second finding is that the big six hold a position of unilateral market power that arises from weak customer engagement reflected in low switching rates. This conclusion is based on the assumption that customer mobility between suppliers would force down prices significantly. We find this to be an optimistic view ignoring the fact that the big six are price makers not price takers. Greater customer mobility may lead them to reconsider their pricing strategy, which may not necessarily involve a significant reduction in overall retail price levels. More importantly, focusing on low switching rates shifts the responsibility for the problems of the energy markets onto customers rather than the conduct of the big six.

Finally, the conclusion that the 'simpler choices' element of the RMR constituted adverse effects on competition ignored the previous dissatisfaction with tariff proliferation which customers found complex and confusing. There is an overemphasis on the competition without due reference to its consequences for consumers' welfare.

Overall, we see this energy market investigation as the latest of a series attempts that aimed to make competition work in the energy industry in the last two decades. Despite all the efforts and experiments, the CMAs own estimates suggest that the customers paid two billion more in 2015 than what they would have in a competitive market. It is doubtful that the recommendations arising from the recent energy market investigation will change the circumstances in the UK energy markets in any significant way.

Our advice is that policy makers should now seriously consider alternative public energy systems. A publicly run energy sector would render needless the efforts and associated costs of promoting the objective of competition, which has proved to be illusive in last two decades. Rather government should focus directly on the ultimate goals of an affordable, clean and sustainable energy supply with a long-term vision for delivery. The cost of generation, transmission and distribution can be lower under a publicly owned energy system through several channels: a) lower transaction costs, b) lower financing costs for investment (due to usually lower interest rates for public sector), c) cost of fuels can be lower if 'large buyer effect' is present in national and international transactions for the fuels

used in generation and distribution. Such a system would benefit from administrative simplicity and eliminate the complexity created for customers in the name of 'choice'.

References

- CMA. 2016. *Energy Market Investigation: Final Report*, Competition and Markets Authority
- CMA 2014. Summary of hearing with Professor Stephen Littlechild, 11 December 2014
- CMA 2015. Notes of a hearing with advice organisations, 2 September 2015, URL: https://assets.publishing.service.gov.uk/media/5666fb55ed915d035c00001f/Consumer_bodies_hearing_transcript.pdf
- Dagdeviren, H. 2009. Limits to competition and regulation in privatized electricity markets, *Annals of Public and Cooperative Economics*, 80 (4): 641-664
- Davies, S; Waddams, C and Wilson, C. M. 2014. Nonlinear Pricing and Tariff Differentiation: Evidence from the British Electricity Market. *Energy Journal* 35 (1): 57-77
- DECC 2015. *Annual Fuel Poverty Statistics Report*, Department for Energy and Climate Change, London
- Defeuilley, C. 2009. Retail competition in electricity markets, *Energy Policy* 37: 377-86.
- ECC 2016. Oral evidence: Competition and Markets Authority's Proposals, Energy and Climate Change Committee, HC 315, Tuesday 5 July 2016
- Financial Times 2013. Big six energy groups dispute Ofgem analysis of wholesale prices, 27 October 2013
- Finon D., Boroumand R. H. 2011. Electricity retail competition: from survival strategies to oligopolistic behaviors. Colloquium on Regulation of energy industries, Center for economic regulation, City University.
- Florio, M. 2004. *The Great Divestiture: Evaluating the Welfare Impact of the British Privatizations: 1979-1997*, MIT Press
- Giulietti, M., Grossi, L. and Waterson, M. 2010a. Price transmission in the UK electricity market: Was NETA beneficial?, *Energy Economics* 32: 1165-74
- Giulietti, M; Otero J and Waterson, M. 2010b. Pricing behaviour under competition in the UK electricity supply industry, *Oxford Economic Papers*, 62 (3): 478-503
- Helm, D. 2015. Penalty tariffs, open-ended regulation and embedding overcharging – a critique of the CMA's provisional findings and remedies [https://assets.digital.cabinet-office.gov.uk/media/55e6bb8aed915d06a4000020/Dieter_Helm_resp_to_PFs.pdf]
- Joskow, P. L. and Wolfram, C. D. 2012. Dynamic Pricing of Electricity. *American Economic Review*, 102 (3): 381-85.
- Keay, M. 2016. Electricity markets are broken – can they be fixed? The Oxford Institute for Energy Studies Paper, EL 17
- Littlechild, S. 2009. Retail competition in electricity markets – expectations, outcomes and economics, *Energy Policy* 37: 759-63

- Littlechild, S; McCarthy, C; Marshall, E; Smith, S and Spottiswoode, C. 2015a. Submission on Summary of Provisional Findings Report and Notice of Possible Remedies, CMA Energy Market Investigation, 16 July 2015
- Littlechild, S; McCarthy, C; Marshall, E; Smith, S and Spottiswoode, C. 2015b. Submission on Supplemental Remedies, CMA Energy Market Investigation, 9 November 2015
- Ofgem 2002. New Electricity Trading Arrangements (NETA) – One year review, OFGEM: London
- Ofgem 2008. Energy supply probe – Initial findings report, OFGEM: London
- Ofgem 2011. The retail market review – Findings and initial proposals, Ofgem: London
- Ofgem 2013a. The revenues, costs and profits of the large energy companies in 2012, Ofgem: London
- Ofgem 2013b. Electricity and gas supply market indicators, Electricity graph, [available online]: <https://www.ofgem.gov.uk/gas/retail-market/monitoring-data-and-statistics/electricity-and-gas-supply-market-indicators#charts>
- Ofgem 2013c. Methodology for supply market indicators, Ofgem: London
- Oxera 2016. Energy market investigation: what next for the GB retail energy market? June 2016
- Salies, E and Waddams, C. 2004. Charges, Costs and Market Power: the Deregulated UK Electricity Retail Market, *The Energy Journal*, 25 (3): 19-36
- Waddams, C. 2004. Reforming Household Energy Markets: Some Welfare Effects in the UK, Centre for Competition and Regulation, University of East Anglia
- Waddams, C. 2005. The effect of liberalizing UK retail energy markets on consumers. *Oxford Review of Economic Policy*, 21 (1): 128-144
- Waddams, C. 2015. CMA Provisional Findings: does protecting the weak (even temporarily) make them stronger? [URL: <https://competitionpolicy.wordpress.com/2015/07/07/cma-provisional-energy-market-findings-does-protecting-the-weak-even-temporarily-make-them-stronger/>]
- Wilson, C. M., Waddams Price, C. 2010. Do consumers switch to the best supplier? *Oxford Economic Papers*, 62 (4): 647-668
- Yarrow, G. 2014. Response to the CMA's Statement of Issues [URL: https://assets.digital.cabinet-office.gov.uk/media/53f1c32fe5274a48c400000f/George_Yarrow_response_to_IS.pdf]
- Yarrow, G. 2015. Submission on the CMA's summary of provisional findings report and notice of possible remedies, Regulatory Policy Institute, [URL: http://www.rpieurope.org/News/Yarrow_Submission_CMA_Energy_Investigation_Aug_2015.pdf]