

# Regulation, Mergers and Cartels

**Director's Letter**  
**Catherine Waddams**

Welcome to this edition of CCP's newsletter, with articles covering policies on merger remedies and cartel fines, the role of children as consumers, regulatory reform in mobile phone markets, and, more locally, developments in the UK health and energy markets. Since our last regular newsletter

the Centre has completed our mid-term review by the ESRC, who have confirmed continued funding for 2009-2014. Our next newsletter in the autumn will celebrate CCP's fifth birthday with more details of our expanded research programme and membership.

## 'It's Not Fair' – Competition in Energy

**Catherine Waddams, Professor in Norwich Business School**

The energy regulator, Ofgem, intends to 'crack down on unfair pricing', because not all consumers benefit equally from the opportunities available from switching supplier. Many do not switch at all; and some of those who do so in response to 'cold calling' pay more as a result (confirming CCP's own research in this area). Those who are defined as vulnerable (individuals of pensionable age, those who are disabled or chronically sick, with low incomes or who live in rural areas) are less likely than average to switch, and, if they do switch, benefit less from doing so.

As the electricity market was opened in the late 1990s, the firms which were monopoly incumbents in each of the 14 regions entered all the other regions. With consolidation between these companies, this meant that each of the 'big 5' electricity companies was incumbent in two or three regions, and entrant in the other 11 or 12. Each supplier faces broadly similar costs, and entrants have little cost advantage over incumbents. While around half of households have changed energy provider, almost half have stayed loyal to their incumbent supplier. Each company supplies two or three times as much electricity in its home regions as it does in areas where it is an entrant. Companies typically charge more to their 'home' consumers than to those in areas where they are entrant and need to woo households away from the established supplier. It is these loyal 'home' consumers

whom Ofgem seeks to protect.

The new non-discrimination clauses will prevent suppliers from offering different prices to consumers in different areas, unless these variations can be justified by cost differences. This would essentially force a firm to set the same price in all markets in which it was active, either raising the prices it currently offers as an entrant, or lowering those which it charges where it was incumbent. There is no incentive to do the latter, because each firm knows that all its competitors are similarly hamstrung in the prices which they can offer as entrants. Unless one firm has a cost advantage over the others (in which case it will end up as dominant in all regions), firms will choose to raise the prices they offer in areas where they are entrants. As incumbents, freed from competitive pressure by entrants, they will be able to maintain or increase their prices 'at home', without fear that consumers will be tempted away, so their dominance will be further enhanced. The net result is that the general price level will be higher than with the current market structure, and the regulator might have to reintroduce *ex ante* price caps to prevent excessive pricing. From the consumers' point of view, there will be little to choose between the prices offered by different firms, and no benefit to be gained by investing time and effort in searching for better deals and switching supplier.

British Gas is in a different situation, since it is not incumbent in any single

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geographical area, but rather over all of Great Britain. If it could realise cost advantages in electricity over the incumbent electricity suppliers it might be able to generate competition, but this would leave a duopoly (British Gas and the incumbent electricity company) in each region. Of course if other companies could enter and supply more cheaply, competition could again be encouraged, but given the current predominance of the 'big 5' and British Gas this seems unrealistic in the immediate future.

The regulator seems to have confused the causality between competition and price differences. While competition may deliver cost related prices, at least in long run 'text book' equilibrium, equal prices cannot deliver competition; indeed the argument above shows that their imposition will impede the development of the market to the detriment of all consumers. Ofgem's persistence with this policy is particularly frustrating since it comes at the same time as many excellent suggestions to help all consumers, particularly the vulnerable, to make better choices. Sadly, the non-discrimination clause means they will find few opportunities to exercise their new found abilities to their own advantage, or the benefit of the market.

## Mergers and Balancing the Books in NHS Trusts

***Pinar Guven-Uslu, Lecturer in Norwich Business School***

Introducing financial flexibility and private sector management tools to the NHS creates incentives for mergers and takeovers. One of these financial flexibilities was for an NHS Trust that was in financial surplus to lend money to another that was not financially so stable and possibly was in deficit. Sometimes these organisations lent money overnight so that both sets of accounts seemed to balance. NHS Trusts in the North and Midlands, which have the highest health needs, but tend to end up in surplus, then lent money, interest free, to organisations in the South which tended to have healthier populations but often overspent. The money that the deficit Trusts owed was often not paid back to surplus Trusts. This left a hospital in heavy financial deficit to be taken over by Trusts in surplus. These financially more viable Trusts are usually Foundation Trusts regulated by Monitor, the foundation trust regulator. In order to eliminate this fictitious lending some takeovers have been taking place between NHS Trusts when the board of directors of a Trust judged it 'no longer financially viable'. These arrangements were usually in the form of takeovers rather than traditional mergers.

The Foundation Trust which took over the failing Trust was given a few million pounds as a one-off payment and then the failing Trust's accumulated deficit was turned into public dividend capital - capital effectively underwritten by the Treasury - and put on the Foundation Trust's books. The Foundation Trust is expected to pay a low rate of interest on capital which is technically repayable but in practice rarely repaid. This arrangement gives the NHS a way to write off debt at one level without doing so at another - instead putting an obligation on the Foundation Trust to service the debt. Similar takeovers and mergers are expected to increase in the NHS and the Cooperation and Competition Panel has been established to make independent recommendations to the Department of Health and Monitor by reviewing proposed mergers and advisees within the wider context of cooperation, patient choice and competition within the NHS.

Another change affecting service delivery with considerable potential to influence the structure of the health market is Service Line Reporting (SLR). SLR segments hospital services by specialty in order to create profit centres, as in management of a private sector organisation; the hospital can identify which centres make money and which ones make a loss as a result of the 'tariff', a price list used in procurement to pay for procedures. If Trusts have unprofitable procedures or specialties then they can explore the causes e.g. staffing, theatre use etc. However if they are efficient but not profitable then this might suggest some problems with the tariff and would signal the need for further work to refine the tariff. If the particular procedure is not efficient then the Trust management would need to consider producing either higher volumes or ending the service and letting another organisation provide it. This is very much a commercial approach and is expected to influence health service provision and therefore the health market structure in the country. For example: diagnostic services and their provision seem to be prone to changes as a result of SLR; pathology and radiology services are not considered as service lines in NHS Trusts, so NHS Trusts will try to avoid non-emergency or non-essential radiology and pathology services.

This would open the doors for private sector providers to enter the market and provide "over the counter" non-emergency blood tests, X-rays and MRI scans in a matter of hours. If this happens, it would mean that Foundation Trusts in the near future would be able to walk away from unprofitable services and provide an open invitation to private sector providers to enter the market in order to fill the gap.

Takeovers, mergers and SLR seem to bring some principles of the business and commercial world to NHS service provision, and these will affect the development of cooperation and competition between public and private providers in the health service market.

# Merger Remedies versus Efficiency Defence: Does the Current Merger Remedy Practice Create a Disincentive to Reveal Efficiencies?<sup>1</sup>

**Peter Ormosi, PhD student**

A central element of merging parties' litigation strategies in EC merger cases is to decide between offering remedies, revealing efficiencies, or applying them together. My paper analyses the motives of this decision and tests the hypothesis that companies regard the possible alternatives to be complements, as purported by European level merger regulations.<sup>2</sup>

EC merger control is focused on governing mergers that significantly impede effective competition in particular as a result of the creation or the strengthening of a dominant position.<sup>3</sup> As a basic rule the Commission declares these mergers incompatible with the common market,<sup>4</sup> which leads to the prohibition of the merger. Nevertheless, if the Commission finds that as a result of modifications (most frequently referred to as *merger remedies*) to the notified merger transaction the merger no longer raises serious doubts, it can gain regulatory approval. The European Community Merger Regulation (ECMR) adds that - when determining the competitive impact of a merger - the Commission also takes into account expected efficiencies put forward by the merging companies (*efficiency defence*).<sup>5</sup> The efficiencies brought about by the merger can counteract the negative effects on competition.<sup>6</sup>

A common feature of the above two legal instruments in the EC is that they both have to be initiated by the merging parties. The Commission is not in a position to impose merger remedies on companies, but it can assess whether the proposed commitments (merger remedy offers) are capable of eliminating the competition problem. Similar rules apply to efficiency claims. The ECMR explicitly requires that the Commission investigates those substantiated and likely efficiencies that were put forward by the merging parties. This means that whether parties perceive merger remedies and efficiency defence as complements will shape the choice between offering remedies, bringing forward efficiency arguments, and opting for both of them simultaneously.

Looking at those European Commission merger decisions between 1999 and 2008 (198 cases), where intervention was necessary<sup>7</sup> in order to avoid the anticompetitive effects of the merger, my research found evidence that earlier remedy offers result in shorter procedures, whereas investigating efficiencies leads to longer procedures. Roughly 90% of the remedies offered in phase I are accepted in phase I; therefore it clearly pays off for companies to offer remedies early in

the procedure. Assuming that a merger becomes more urgent for the merging parties when delay is more costly, the above results can significantly affect their choice between remedies and efficiency defence.

When announcing merger plans, companies often signal to the public that their merger would create cost savings. In many instances these expectations are published in a quantified manner. My paper shows that the magnitude of these published expectations<sup>8</sup> is directly proportional to how urgent the approval procedure becomes for the merging parties (i.e. delay becomes more costly when more savings are expected). An intuitive explanation could be that a delay in realising these synergies not only affects their present value but also jeopardises their realisation, given, for example, that delays can increase the likelihood of a third party pre-emptive takeover. I used these data to measure the cost of a delay.

As efficiency investigations increase the likelihood of a delayed procedure, we can say that the cost of efficiency defence is proportional to the signalled saving expectations (more saving expectations mean higher cost of efficiency defence). The analysed sample suggests that when the cost of efficiency defence increases, parties prefer earlier and larger remedy offers. The results seem to imply - although somewhat ambiguously - that *merging parties regard remedies and efficiency defence as being substitutes*.

The main finding of my paper, that remedies and efficiency defence - although being complementary merger control instruments in the ECMR - are treated as substitutes by merging parties when forming their litigation strategies, shows how strongly this strategy is influenced by how the Commission's practice is perceived from an entrepreneurial viewpoint. As longer investigations result in additional costs for the merging companies, it is in their interest to receive merger clearance as quickly as possible. As they do not treat efficiency defence and remedy offers as two complementary instruments, merging parties - rather opportunistically - will be more inclined to offer remedies and keep quiet about efficiency expectations even when these latter expectations may be plausible. An enforcement regime that fails to notice the tendency for such opportunistic behaviour can result in a situation which further reduces the incentives of merging parties to bring forward efficiency claims - resulting in potentially counterproductive merger decisions.

<sup>1</sup> A CCP working paper under the same title is to be published in May 2009.

<sup>2</sup> See for example Röller et al. (2006), 'The Impact of the New Substantive Test in European Merger Control', European Commission, available at: [http://ec.europa.eu/dgs/competition/economist/new\\_substantive\\_test.pdf](http://ec.europa.eu/dgs/competition/economist/new_substantive_test.pdf).

<sup>3</sup> Preamble 5 of the EC Merger Regulation (ECMR), Council Regulation (EC) No 139/2004 of 20 January 2004 on the Control of Concentrations between Undertakings, OJ L 24/1.

<sup>4</sup> Article 2(3), ECMR.

<sup>5</sup> Preamble (29) of the ECMR.

<sup>6</sup> Paragraph 76, Horizontal Merger Guidelines of the European Commission (2004).

<sup>7</sup> Intervention means either the prohibition of the merger according to Article 8.3 of the ECMR, or the conditional approval of the merger, see Articles 6.1 (b) (in conjunction with Article 6.2) and 8.2 of the ECMR. There were 12 cases in the analysed time period, where the Commission investigated efficiencies but intervention was not necessary to authorise the merger. However in these cases efficiencies were never considered as the sole circumstance outweighing a potential competitive concern and the reasoning of the Commission suggests that these mergers would have been unconditionally cleared even absent the efficiency arguments.

<sup>8</sup> The paper does not look at the validity of these expectations.

# Does the Punishment Fit the Crime?

**Oindrila De, PhD student**

For the competition authorities, it is extremely important to evaluate the actual effectiveness of a cartel in deciding the cartel fines. Many criteria have been used by different authorities in determining the extent to which the agreement had an anti-competitive impact and how it can be deterred from the future infringement. But there is a growing concern among the researchers that the fines imposed on the busted cartel members may not necessarily reflect these objectives. This concern is aggravated by the increasing number of repetitive offenders in prosecuted cartel cases over the years. Research in this area has focused on two specific areas. At the theoretical level the concern is what should be the optimum punishment strategy for the authorities. Empirical literature, on the other hand, tries to evaluate the current punishment policy in place. In this article, I will explore some of these empirical issues by using evidence from cartels already convicted in Europe.

The optimum punishment<sup>1</sup> literature emphasises the fact that fines should reflect not only the harm to the consumers (or gain acquired by the cartel by price rise) but the sufficient deterrence effect to cover the deadweight loss to society due to higher prices and the enforcement cost incurred by the authority. But in practice, it seems almost impossible to determine optimum punishment due to the lack of required information like mark-up or overcharge (cartel price over and above the competitive benchmark), elasticity of demand, probability of detection, conviction etc. Therefore, most of the competition authorities tend to establish their base fine on the basis of some percentage of affected commerce (cartels' sales in the relevant product and geographic market) for the entire duration of the cartel which provides a rough assessment of the cartel's gain from the market as well as level of deterrence in some cases.

For example, the US Federal Sentencing Guideline considers base fine equal to 20% of the volume of affected commerce (sum of the affected commerce for each period of infringement), which according to the guidelines reflects the overcharge (considered 10% of the affected sales) as well as the deadweight loss and the enforcement cost of the authority (another 10%). The final fine in the US may go up to 80% of the affected commerce after adjusting for the aggravating and mitigating situations.<sup>2</sup> The previous two EU guidelines (1998 and 2002) on the other hand did not explicitly use the affected sales in calculating the basic fine. But for deciding the gravity of the infringement, the Commission indirectly used the size of the market involved (both product and geographic) as well as the

share of each firm in the relevant market. The new EU Guideline (2006) in many respects is more transparent than the earlier ones. It sets up a base fine which may go up to 30% of the affected sales multiplied by the number of years of infringement. The guideline also adds an additional 15-25% of the affected commerce to the fine in the case of a price fixing agreement. But for all the EU guidelines, firms' economic ability to pay has been given significant consideration. So, the final fines of an individual firm (before leniency is applied) cannot go over 10% of its worldwide turnover in the last year of infringement. Since percentage of affected sales has played an important role and the data are easily available from the case reports, it will be interesting to explore whether the fines imposed reflect the affected commerce.

Let us first look at the cases where fines were imposed according to 1998 and 2002 guidelines that were effective between mid1998-mid 2007. There are 54 such cartel cases during this period and out of these 54 cases, the data on the affected commerce of the last year of infringement (or the preceding year in case the data are not available for the last year) are available for 41 cases. As mentioned earlier, the aggregate measure of value of sales can be calculated by multiplying it with the number of years the cartel was active. So information on duration is also necessary to estimate total affected commerce for the whole period of infringement. But the problem is that different members within a cartel have different duration whereas data on the affected commerce are available at the overall cartel level. To get around this problem, I have considered both the overall duration of the cartel as well as average duration of the cartel members as two measures of duration. The table below summarises the result.

The first row of Table 1 shows average overall fines (before and after leniency) and magnitude of affected commerce in the relevant product and geographic market (with maximum as well as average duration). Since fines which affect commerce as well duration

|              | fine before leniency | fine after leniency | affected commerce (maximum duration) | affected commerce (average duration) |
|--------------|----------------------|---------------------|--------------------------------------|--------------------------------------|
| overall      | 138                  | 91.65               | 3201                                 | 2660                                 |
| global (26)  | 201.11               | 95.32               | 3100.5                               | 2552.5                               |
| EU only (15) | 113.09               | 85.04               | 3850                                 | 2901.6                               |

**Table 1: Median Fines and Affected Commerce in Prosecuted Cartel Cases (EUR Million)**

|                 | fine/sales<br>(maximum<br>duration) | finest/sales<br>(average<br>duration) | finest/<br>WW<br>turnover |
|-----------------|-------------------------------------|---------------------------------------|---------------------------|
| overall         | 9.4                                 | 10.2                                  |                           |
| global<br>(26)  | 12.8                                | 13.6                                  | 1.4                       |
| EU only<br>(15) | 3.9                                 | 5.7                                   | 7.1                       |

**Table 2: Median Fines as Percentage of Sales and Turnover**

are positively skewed, the median is reported instead of the mean value. In recent years, an increasing number of global cartels are being prosecuted in different jurisdictions. It is necessary to differentiate these cartels from the national or regional cartels in the EU since the fine policy is quite different for both sets of cartels. As we can see from Table 1 the median fine is much larger for global cartels for their harmful effect compared to national or regional cartels in the EU. Affected commerce is much larger on average for the regional cartel since the Commission mostly considers its impact on the EU market, rather than in the global market.

Now, Table 2 reports the median fine/sales ratio which gives us a rough idea about the effectiveness of the cartel fine policy in the EU. Here fine implies fine before leniency since affected commerce cannot be reflected in the leniency reduction. As we can see, overall the fine reflected only 10% of the affected commerce, much lower than the starting point of the US or new EU guidelines. There is also a striking difference between the global cases and the EU-only cases. For the EU-only cases, only 3% of the affected sales are reflected in the fine. As mentioned earlier, the Commission also considers the ability to pay for its fine policy and applies a 10% worldwide (WW) turnover cap<sup>3</sup> for this purpose. I have calculated the fines as a percentage of the worldwide turnover of a cartel in the last year of infringement which is merely 1.4%, whereas for EU-only cartels it is as high as 7.1%<sup>4</sup>

Before concluding, let us look at the two recent cases under the new guidelines - professional videotape and flat glass. Both are global price fixing agreements and according to the new guidelines, the maximum base fine amount will range between 45-55% of the affected commerce. The final fine before leniency is only 16% of the affected sales for the professional videotape, whereas for the flat glass it is 40% of the affected sales. But the affected sales of the EU market are considered here despite the fact that the Commission had established that the market is global. Considering the economic ability of the firms, the fine accounted for 0.1% of the worldwide

turnover whereas for the flat glass it was 1.1%. Therefore, it seems that the new guideline may have improved from the previous guidelines in terms of transparency, to the extent that it clearly reflects the affected commerce, but it seems that there is much scope for improvement in terms of using this powerful tool for deterring infringements, especially global cartels.

<sup>1</sup> Punishment includes both fines and criminal conviction of the individuals, but for this analysis I will restrict myself to the first objective since jail sentence is not a component under EC law.

<sup>2</sup> Boltova and Connor (2008) "Cartel Sanctions: An Empirical Analysis"

[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1116421](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1116421)

<sup>3</sup> 10 firms in 3 EU cartels and 12 firms in 7 global cartels in my dataset were subject to the cap.

<sup>4</sup> The turnover estimate is not available for many individual firms for both sets of cartels.

## Regulatory Reform in Telecoms: The Role of an Independent Industry Regulator

**Yan Li, PhD student**

The demise of the natural monopoly status of traditional telecoms began in the mid-1980s when, due to rapid technological changes and various combinations of political-economic circumstances, the break-up of AT&T in the United States proved extremely successful and the monopoly of telecoms was ended successively in Japan and the UK. In the early 1990s, after many influential advisers recommended fast privatisation in Eastern Europe and the former Soviet Union as the only realistic method of reforming state-owned enterprises, the transfer of the telecoms infrastructure from public to private ownership became an important policy objective.

In the late 1990s, however, reformers in Eastern Europe and the former Soviet Union recognised that ignoring the competitive and institutional framework was a mistake in reforming state-owned enterprises. Many academic researchers also argued that the success or failure of privatisation is highly dependent on political and economic environments in general and the post-privatisation regulatory framework in particular.<sup>1</sup> Therefore, many countries around the world have established an industry-level independent regulator for telecoms and other utilities to promote competition and effective regulation.

Since then, the impact of regulatory governance and its determinants have been fiercely debated and these specific issues have been investigated in numerous studies with reference both to telecoms and other utility sectors.<sup>2</sup> These empirical studies consistently suggest that the existence of a strong and

independent judiciary is one of the crucial institutional elements bearing on good regulatory governance that tends to be associated with higher performance levels (such as fixed-line penetration or electricity generation). However, is the independent industry regulator the only player to enforce the quality of overall regulatory governance? Or does it by itself have direct/explicit impacts on certain regulatory outcomes, such as network penetration/expansion? The extant literature, however, pays little attention, with rare exceptions, to the explicit effects of an independent regulator, *per se*, on the performance of telecoms in general and of the mobile network sector in particular.

In a global telecoms climate characterised by an increasing prevalence of industry privatisation, it is important to address these questions. First, in a fully privatised market, a government's commitment to investments and effective pro-competitive regulatory principles - delivered often by good regulatory governance<sup>3</sup> - is especially important.<sup>4</sup> The existence of an independent regulator is a key element of ensuring such good regulatory governance, which may signal, to a large extent, the credibility of a government's commitment to private investments and the propensity to undertake effective pro-competition. Second, in many developing countries, it is difficult and unrealistic to achieve high quality overall regulatory governance in a short time period when they have just privatised or intend to privatise their telecom markets. Thus, one may inquire if merely establishing an independent industry regulator is sufficient to promote effective competition and deliver confidence to private investors. Accordingly, exploring empirically the explicit impacts of an independent regulator, *per se*, on industry performances has profound policy and managerial implications.

Two recent studies conduct econometric analyses to address the above questions, using both national-level (29 OECD countries and China) and firm-level (22 mobile carriers from 7 countries) panel-data to examine the relationship between an independent regulator and sector/firm performances.<sup>5</sup> The national-level empirical results suggest that the independent industry regulator, *per se*, is positively correlated with mobile penetration. Its role is particularly crucial in the privatised mobile markets. In particular, dynamic estimation results imply that even with certain degrees of competition, privatisation is, on average, harmful to mobile network expansion, unless there is an independent industry regulator.

As discussed earlier, the presence of an independent industry regulator may signal the credibility of a government's commitments to private investments. Subsequently, private ownerships, with more confidence in their investments and the primary

objective of profit-maximisation, have stronger incentives and higher propensity to invest in innovation and improving services quality, which in turn lead to sector performance enhancement. In contrast, the concern about government expropriation may hinder private investments. Since the sole objective of privately owned companies is profit-maximisation, competition may just render private firms more reluctant to invest. Consequently, without an independent industry regulator, market privatisation may fail to benefit industry performances.

The firm-level empirical results also highlight the significant contribution of an independent regulator to firm performance enhancement, by providing supportive evidence that an independent regulator is associated with higher mobile carrier technical efficiency, faster TFP growth, efficiency catch-up and technological innovation.

The two empirical studies provide evidence that the independent regulator is not only a key element of ensuring good regulatory governance, but also has explicit effects on certain performance measures, such as mobile network penetration/expansion, mobile carrier technical efficiency, TFP growth, efficiency catch-up and innovation. In particular, when the market is privatised, the existence of an independent industry regulator plays an especially crucial role in promoting effective competition and signalling credible commitments to private investments in innovation and improving service quality, which can directly result in better sector/carrier performances.

## Policy Implications

Although numerous studies have suggested that privatisation alone may not necessarily yield performance improvements, there is still a trend towards massive privatisation around the world, particularly in developing/transition economies. As implied by the empirical findings, an independent regulator is especially important in a privatised market and has explicit contributions to certain regulatory outcomes. Accordingly, building up a formal independent regulatory authority for individual sectors should be strongly recommended, in particular, for countries which have already privatised or intend to privatise their markets.

<sup>1</sup> See Ramamurti (2000); Villalonga (2000); Levy and Spiller (1994, 1996); Yarrow (1986).

<sup>2</sup> See for example, Stern and Holder (1999); Gutierrez and Berg (2000); Gual and Trillas (2003); Gutierrez (2003a, 2003b); Cubbins and Stern (2006); Gasmi et al. (2006).

<sup>3</sup> See North (1990); Levy and Spiller (1996).

<sup>4</sup> As argued by Armstrong and Sappington (2006), in settings where the government's commitment powers are limited, partial privatisation of the state ownership is preferable to full privatisation, since, when the government retains an ownership stake in the firm, it will be the same as private investors - i.e. it will suffer financially - if it implements policies that reduce the firm's earnings. As a consequence, a promise by the government not to expropriate private investors may be more credible when the firm is partially privatised than when it is fully privatised.

<sup>5</sup> Li, Y. (2008), 'Econometric Evidence on the Impacts of Privatization, New Entry, and Independent Industry Regulator on Mobile Network Penetration and Expansion', CCP Working Paper 08-35; and Li, Y. (2009), 'A Firm-Level Panel-Data Approach to Efficiency, Total Factor Productivity, Catch-Up and Innovation and Mobile Telecommunications Reform (1995-2007)' CCP Working Paper 09-6.

# Baby, Phone Home!

## Children and the Market for Mobile Phones

**Judith Mehta, CCP Research Coordinator**

One of CCP's ongoing research interests lies in the activity of consumers in markets in which there are opportunities to switch supplier with a view to obtaining better deals. A large-scale survey commissioned by CCP in 2005 was used to examine consumer search and switching activity in eight markets: electricity, mobile phone services, fixed phone lines, national and overseas calls, broadband internet service provision, car insurance, mortgage, and current bank account. A notable finding from this research was that the probability of switching varies substantially between markets: consumers are more likely to be active in the car insurance market than in electricity and mobile phone services; and they are less likely to search and switch for fixed line products, broadband, mortgages and current bank accounts (Chang & Price, 2008).

The market for mobile phone services has features which make it a particularly interesting market to take forward CCP's growing expertise in consumer search and switching activity.

First, the increasing demand for mobile voice and data services has been a major feature of telecommunications markets in the last five years, with mobile telephony becoming a substitute for fixed-line services in many countries. Indeed, in the UK in 2007, the number of mobile connections exceeded the population: 118.47 mobile phone subscriptions per 100 inhabitants<sup>1</sup> (ITU, 2009). But, second, a striking aspect of this development has been the rapid penetration of mobile technology amongst children and young adults: Ofcom (2008) reports that 52% of nine year olds use mobile phones, rising to 95% of 15 year olds; and that 7% of 8-17 year olds access the internet via a mobile (2007).

The use of mobile phones by young children is a feature of the market that has attracted the attention of suppliers. They appear to have picked up on a finding reported in several studies that a primary reason why parents provide young children with a mobile phone is to ensure safety and an awareness of the child's whereabouts (Davie et al., 2004). For example, one phone currently being advertised on the Internet embodies design features explicitly aimed at children under 10, accompanied by the banner heading: *The first ever safety phone for your children and grandchildren*. The phone offers limited functionality (no texting or downloading), calls to no

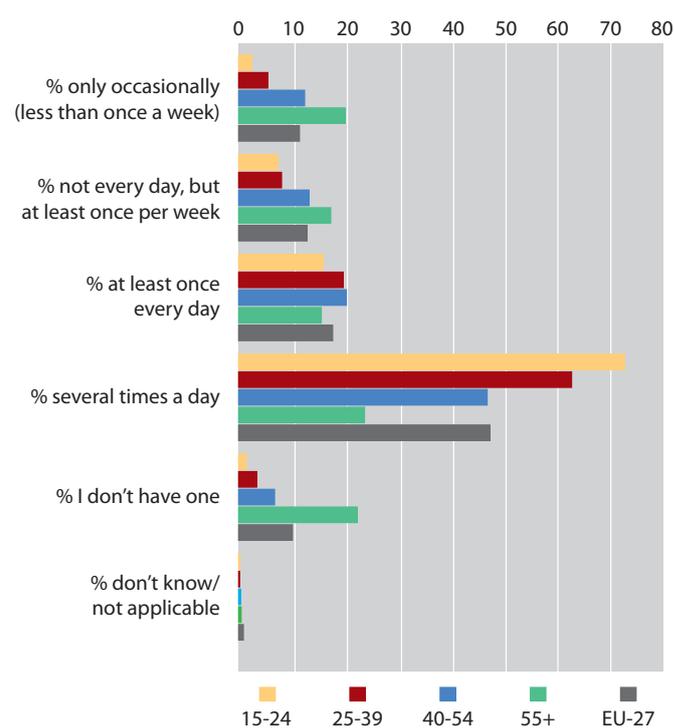
more than four pre-programmed numbers, and an automated SOS alert feature. And it's shaped in the form of a teddy bear.

High penetration of mobile phones amongst children and young adults raises a number of issues of concern to policy makers. For example, on the demand side, the OECD has pointed to serious risks of over-consumption and the potential for access to inappropriate content (2007). There is some evidence that might support these concerns: a survey of European Member States found that 73.1% of young adults in the age range 15-24 used their mobile phones 'several times a day', a much higher proportion than for any other age band (see Graph 1). And another survey found that a significant proportion of minors aged 17 or under have access to the Internet via their mobile phones; this includes 3.2% of children aged 6-10 (see Graph 2).

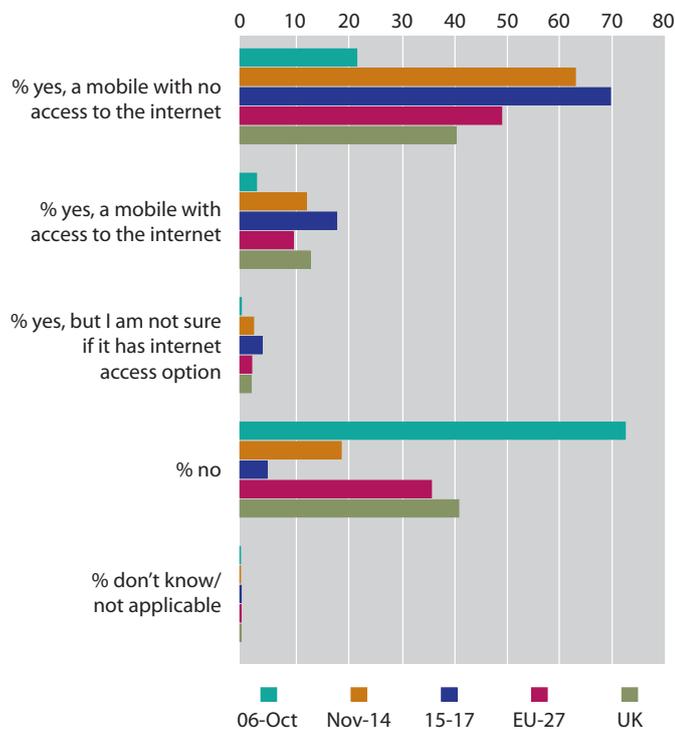
Strictly speaking, the user of a mobile phone who is too young to contract with a supplier is not a 'consumer' in the sense employed by standard economic theory - but they are not a disinterested party. This raises questions with respect to decision-making which are all the more interesting.

There is a literature on young people's decision-making but it tends to be focused on their behaviour in response to risk, for example, their attitudes and patterns of behaviour in the context of drug-taking, crime and sexual activity (see, for example, Fischhof, 2007). Rather less is known about the transition into

**Graph 1: The Frequency of Mobile Phone Use by Age**



Source: Flash Eurobarometer: Information Society as seen by EU citizens, 2008



Source: Flash Eurobarometer: Towards a safer use of the Internet for children in the EU – a parents' perspective, 2008

**Graph 2:** Responses to the Question: Does your child use a mobile phone of his/her own?

decision-making by young people and their emergence into fully-fledged consumers of mobile phone services. How much discretionary control over parental income do they exert? At what point do young people take over from parents in decisions related to the purchase of mobile phones and service packages? How do young consumers learn about decision-making? Are the same patterns of decision-making to be found amongst young and adult consumers? And how much search activity takes place prior to determining which mobile phone service package to buy or to switch to?

To the extent that young people do have an element of discretionary control over parental income, and given their relatively low level of experience of markets, concerns arise about children's ability to fully comprehend and evaluate advertising messages, particularly where advertising messages are blurred with entertainment (Moore, 2004). In this regard, children are thought to be especially vulnerable. For example, Moore observes that children under ten are less likely to understand advertising's essential intent, tend to believe message claims, and have more positive attitudes to advertising.

Concerns arise on the supply side of the market, too. We know very little about the behaviour of firms in response to the upsurge in use of mobile phone services by children and young adults. What we do know is that the market for mobile phone services is characterised by multiple tariffs, complex tariff

structures, and little standardisation in the specification of tariffs (Harker et al., 2008). What does this imply for consumer welfare and for competition policy?

Policy makers are concerned both that markets should work well and that vulnerable consumers are protected. Pertinent to these objectives, behavioural and industrial economists have argued that, because of cognitive limitations, consumers are liable to make sub-optimal choices when faced with complex decision problems. Firms can exploit these limitations by introducing spurious complexity into tariff structures thereby weakening price competition and inducing welfare loss. Thus, consumers do not merely have to navigate the 'natural' complexity of competitive markets, but they also have to cope with the unnecessary complexity which has deliberately been created to confuse them (Gaudeul & Sugden, 2007; Zizzo & Sitzia, 2008).

Against this backdrop, young adults appear to be rather more confident and active in negotiating the market for mobile phone services than their elders. A survey of European consumers finds that 70% of respondents aged 15-24 find price comparison to be easy compared to just 32% of respondents aged 55 and over. Moreover, young adults are more likely to consider switching provider: 37% of 15-24 year olds had considered switching compared to just 19% of those aged 55 and over (Special Eurobarometer 260, 2007). One of the issues arising from these findings is whether firms are able to use the tariff structure to create spurious product differentiation as a means of confusing less confident and able consumers making purchasing decisions on behalf of young users.

A team of researchers at CCP is currently exploring issues arising in the market for mobile phone services in relation to children and young adults. It is hoped that an investigation into patterns of decision-making and the behaviour of firms will help to assess the competitiveness of the market and the welfare of young people - as well as the welfare of those parents who must stump up the costs of the mobile phone habits of their offspring.

<sup>1</sup> Some consumers have multiple SIM cards/subscriptions.

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