

# When oligopolies confuse consumers, beware the rise of confusopoly

*Confusing consumers can be profitable for companies, in particular in a competitive market where they can hardly increase their prices without losing their consumers. **Ambre Nicolle, Christos Genakos, and Tobias Kretschmer** study the UK mobile telecommunications market before the introduction of 4G services – and find evidence that mobile operators decreased the transparency of their mobile plans, creating confusion to consumers and at the same time successfully managed to increase prices.*

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Choosing a mobile plan can be a daunting task for consumers, even the most tech-savvy. Hundreds of possibilities are offered, combined with hundreds of devices. While some attributes are quite intuitively understood (number of texts, minutes of calls), others are sometimes harder to grasp (gigabytes of data, mixed allowances, on-net allowances). But things can become even more complex if consumers cannot easily compare the options within and across operators' menus. Finally, there is growing evidence that consumers do not always make perfectly rational choices: they have search costs and would rather stop searching when they are satisfied with an option rather than comparing every option ([Ellison and Wolitzky, 2012](#)). Also, consumers are imperfectly rational when making choices ([DellaVigna, 2009](#)): they can select what is presented as the standard option because of the status quo bias ([Lambrecht and Skiera, 2006](#)), they can also exhibit a preference for the present in selecting the mobile plans which allow them to get a cheaper handset now, even if it implies higher costs in the future, or loss-aversion as documented in [Genakos et al \(2019\)](#). Firms can exploit such biases to increase their profits or gain market shares, as described in [Spiegler \(2011\)](#). The existence of obfuscation strategies, which use lack of transparency to create confusion, has been documented in [Ellison and Ellison \(2009\)](#) for example.

We have analysed an extensive dataset of mobile plans offered in the UK between 2010 and 2012. In this dataset, we observe all the mobile plans offered every month. For each of them, we know which operator offered it, when it was introduced, all the characteristics, the price, and the handset associated with it. We estimate a quality-adjusted price index (which captures the evolution of prices once the evolution of characteristics is "neutralised") and a variety index (which captures the degree to which products are differentiated) for each month. We found a surprising pattern over the period we study: variety was going down, while prices were going up – which goes against the intuition we would naturally have, as economists.

Puzzled, we decided to dig deeper into the data to understand what happened. One thing that surprised us at first glance was the proliferation of products available on the market, in particular the large number of possible combinations of mobile plans (bundles of sms, calls and cellular data) with handsets. We had the intuition that some of these products might be "dominated", i.e., that they are sold at a higher price compared to products with similar characteristics, available on the market at a given time. To spot the dominated combinations, we computed for each possible bundle of sms, calls, cellular data, handset cost and handset subsidy, the cheapest alternative among those offered by each operator, at each month. **Every combination with the same characteristics sold at a higher price within an operator's portfolio of products is considered dominated.** When we computed the share of dominated mobile plans at the industry level, we observed that its evolution over time was closely following the price index. Therefore, one of the mechanisms behind the evolution of the price index increase was probably the introduction of dominated combinations of services and handsets.

However, another puzzle arises: how can a dominated option survive in such a competitive market? We found that operators use one precious weapon: the complexity of the products. In particular, we highlight that combining mobile handsets with the mobile plans have been the key to decrease mobile plan transparency and confuse consumers, allowing firms to increase their prices, even in a competitive industry where the overall variety of products is declining.

Fortunately, this situation did not go on indefinitely. Indeed, in the data, we identify two distinct periods: after the merger Orange/T-Mobile, taking place in April 2010, we witness the rise of what we call the *confusopoly* (where an *oligopoly* of firms strives to *confuse* consumers): increasing prices and obfuscation going hand in hand with decreasing variety. At the beginning of the year 2011, the confusopoly appears to decline, with prices and obfuscation going down, together with the variety index. We argue that this is likely related to the move of Three, which started to advertise its simple and transparent offers – which pushed all the operators to follow the trend.

Even though this confusopoly did not last for long, it is natural to fear that such strategies might be observed again in this industry, at the verge of the upcoming 5G revolution. Consumers will have to upgrade their devices if they want to fully enjoy the new technology – and the operators will probably offer mobile plans with attractive and cheap 5G devices, opening the door to a new obfuscation era.

Moreover, such strategies can be observed in virtually any industry where the contracts (or products) are complex, and firms can release new products at low cost. Interestingly, the expectation that the internet and digital sales will lead to an increase in transparency through the reduction in search costs ([Goldfarb and Tucker, 2019](#)) may be offset by the ease of firms introducing variants of their products, creating confusion or choice overload for consumers. More generally, in the paper, we document how firms in competitive markets with homogeneous and mature technology may still use innovative strategies to keep the market from becoming perfectly competitive. We also add to the literature that analyses firm strategies to exploit search costs and bounded rationality of consumers, even in highly populated product markets.

To conclude, while we cannot claim to have answered all questions about obfuscation strategies and their impact, our exploratory study is one of the first to identify, operationalise and analyse them in oligopolistic markets. We hope that documenting this phenomenon will lead to follow-up research on this frequently “hidden” part of firm strategy.



#### Notes:

- This article summarises “[Strategic confusopoly: evidence from the UK mobile market](#)”, CEP Discussion Paper No. 1810.
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