



InSight 2018

1 Introduction

Digitalization is sometimes called the *fourth* industrial revolution. Revolutions can offer major breakthroughs, but they do not always happen without any downsides. In this revolution, too, we see many benefits for consumers and businesses, but also a broader range of societal concerns¹. These range from the effects of robotization on the labor market to nuisance complaints in residential areas or the question of what our fundamental digital rights are. And with regard to concerns in areas that fall under the responsibility of the Netherlands Authority for Consumers and Markets (ACM): are consumers sufficiently protected, is there sufficient access to telecom infrastructure, is competition in various markets healthy? Moreover, this picture changes constantly as a result of technological advances.

These concerns are not only varied, but often also have multiple causes, and, therefore, multiple solutions. No *one* regulator or ministry is responsible for all of them. However, these concerns cannot fall by the wayside just because their ownership is unclear. Regulators, policymakers, and market participants must cooperate in order to find answers, both at the national level and the international level. In addition, developments take place so fast that regulators should constantly be alert: ready to intervene where problems occur, to identify risks for the immediate future, to point out legislative gaps, and to enhance market knowledge, so that, when problems do occur, interventions can be carried out swiftly and effectively. At the same time, policies and oversight aimed at data access can, in many cases, help further capitalize on the opportunities of digitalization. ACM thus sees both risks *and* opportunities.

2 Risks

The rise of corporate behemoths has sparked considerable debate over the risks of market power in the digital economy, especially over the relationship between ex post regulation and ex ante regulation. Furthermore, ACM has concerns over the use of algorithms, and we call attention to the risks of price discrimination.

2.1 Market power in the digital economy

Big internet platforms are active in many Dutch markets. These are not just the well-known major American or Chinese companies. On many markets, relevant national or European platforms are also active. Think of Booking.com, Thuisbezorgd.nl or Bol.com. These service providers are able to

¹ <https://www.rathenau.nl/nl/publicatie/opwaarderen-borgen-van-publieke-waarden-de-digitale-samenleving>



grow very fast because of investments, network effects, economies of scale or technological innovations. This rapid growth often brings about profound changes in existing markets. That raises questions, for example, because public interests can come under pressure, or because existing companies with vested interests see their markets change quickly and drastically.

The fact that internet platforms are able to become huge fast does not necessarily mean that problems resulting from market power will arise eventually. As long as markets continue to be contestable for competitors and new entrants, such a scenario is not likely. In the digital economy especially, where sectors are constantly changing, and see a lot of innovation and market entries, markets are more likely to be contestable, and to offer consumers choices. For example, we are seeing in the food delivery market that local and national initiatives are able to spot opportunities with other or less costly business models, partly in response to an increase in the fee charged by food-delivery platform Thuisbezorgd.nl. Wherever powerful positions are abused, ACM (or the European Commission in case of cross-border markets) will step in by taking action against violations. And such situations are not just theoretical exercises, as illustrated by the case of the European Commission against Google. If markets are not contestable, because there are only one or two physical or virtual infrastructures, ex ante regulation may be desirable. In the telecom sector, for example, such regulation ensures affordable access to high-quality infrastructures for businesses and consumers, which is a prerequisite for digitalization. ACM makes sure there is competition on the market for fixed broadband connections, thereby enabling businesses and consumers to choose the connection that best meets their needs. The four mobile 4G-networks are already fiercely competing with each other, and deliver high quality in the Netherlands.

If market behavior exhibited by all market participants, both the dominant ones and the less dominant ones, produces outcomes that are undesirable, sometimes additional, new and specific rules of conduct are necessary. A recent example of this are the European rules ensuring net neutrality. These rules protect the rights of end-users by safeguarding equal and non-discriminatory treatment of internet traffic by internet providers. Furthermore, they also allow developers of apps and other online services to continue to innovate, even if that were to jeopardize the interests of the incumbents. A classic example of specific rules of conduct are the rules against unfair commercial practices. These protect consumers against misleading practices, aggressive sales methods or faulty products and services, both in the old and the new economy.

Some of the enforcement instruments can only be used if a problem is already taking place or has taken place. And sometimes the lead times of measures are also quite long because of the need of thorough investigations and the length of legal procedures. This is, for example, the case with



antitrust enforcement with regard to abuse of dominance². This solves problems after they have emerged (or, at best, as soon as they emerge). In addition to a disciplining effect, these instruments also have a deterrent, preventive effect. And yet, in a fast changing digital economy, an intervention may come too late for solving a problem. ACM is in favor of an evaluation of the currently chosen balance between, on the one hand, ex ante regulation and, on the other hand, general and specific rules with ex post regulation. Recent developments suggest that, in some situations, self-regulation can be a solution, too, when the reputation of powerful market participants is seriously on the line. Cut-and-dried alternatives are currently not available, but, in our view, that cannot be a reason not to send this signal. Any adjustment or tightening should be done at a European level as much as possible.

2.2 The rise of algorithms

One specific concern among market authorities involves the expected evolution and application of self-learning algorithms. As with so many developments in the digital economy, these algorithms offer opportunities, but they also entail risks.

One risk in general with self-learning algorithms is that they can become like a black box, the functioning of which their creators, owners or users are no longer able to understand or verify. In some situations, algorithms today are able to make better choices or analyses than humans. That can offer benefits, but it also raises the question of who is responsible when things go wrong, or how market stability is guaranteed.

One specific risk is that self-learning algorithms may act as automated cartels. Thanks to the enormous amount of data, and the ability to adjust prices instantly, algorithms are able to learn from different scenarios, and converge towards equilibrium with higher prices. The outcome of such developments is comparable to the harm caused by classic cartel agreements. This is probably not at odds with current Dutch and European competition law, since an underlying agreement is absent, as is the intention to form a cartel. As such, this kind of situation is similar to tacit coordination or “conscious parallel behavior”.

ACM assesses, also empirically where possible, whether such scenarios are already found in real-life situations right now, and what risks the future holds. For example, we are conducting a study into the

² With regard to mergers and acquisitions, ex ante assessments are carried out in order to see if a dominant position may emerge.



technologies that are used in the design of these algorithms, and into the theoretical effects on competition.

The risks call for a timely policy response with considerations about whether or not the toolkit needs to be adjusted or expanded. In that context, amendments to statutory rules must be taken into consideration as an option, as should more structural solutions such as the mandatory inclusion of a code of conduct in algorithms, transparency, and arrangements over who bears responsibility over the algorithm.

2.3 Increased personalization of prices and offers

In many sectors, prices depend on the situation or the target group. On flights, seats booked early are usually, but not always, cheaper than those booked later. It is generally accepted that certain groups of consumers such as seniors and students are offered reduced prices, but it would be not accepted if one consumer in particular, for example based on their income, were charged a specific price.

Not only the prices, but also the offers that are presented to consumers are becoming more and more personalized. For instance, algorithms determine which hotels from the search results are shown first, or what is included in your timeline or newsfeed on social media. To consumers, it is not clear on what criteria those selections are based, making it difficult to assess to what degree those selections actually match the preferences of consumers.

The most extreme form of personalization in an economic sense is individual price discrimination (each consumer pays exactly the maximum amount that they are willing to pay). There are currently hardly any real-life examples of this, as opposed to examples of similar processes that involve 'microtargeting' of information. The Cambridge Analytica scandal has shown what such practices can lead to. A well-known, but dated example in an economic context is an experiment with individual prices carried out by Amazon.com in 2000. This experiment was quickly halted after public outrage online. In this case, the threat of reputational damage was quite serious, but that does not mean that the reputation mechanism will always be effective in preventing unwanted personalization.

The technology for applying these kinds of dynamic prices, differentiation and discrimination will undoubtedly become even more intricate, and be used in more and different contexts. Personalization comes with benefits and drawbacks that are impossible to understand completely at this point in time. Consumers find it nice if they are presented with information that is tailored to their



preferences, if they see fewer irrelevant ads or if they are able to search and compare faster. And dynamic energy prices (automated or otherwise) can help save energy, and, by extension, help meet climate targets. However, with advanced individual price discrimination, the consumer surplus completely shifts to a producer surplus. Apart from this question of allocation, advanced price discrimination can also have other negative effects, such as postponing purchases or undermining financial incentives because additional net income will not fully lead to additional purchasing power.

The current toolkit offers few opportunities to combat unwanted forms of personalization. From a consumer perspective, one precondition is that consumers should be informed clearly about the prices they are about to pay. For instance, they cannot suddenly be confronted with additional costs afterwards, and offers should be actual offers. As long as consumers are clearly informed about the prices they pay, even if they are different from the prices other customers are paying, the requirements that have been laid down in current consumer protection laws will have been met. In addition, in the absence of market power, it is not plausible that price discrimination will lead to anticompetitive concerns. That also means that enforcement actions under competition law will likely be unfruitful.

The anticipated developments and the current uncertainty among consumers and providers call for a clear framework for what is desirable from a societal perspective. That calls for a policy and political debate first.

3 Capitalizing on opportunities

Data acts as important input for the development of services and products. In his New Year's address, the Secretary General of the Ministry of Economic Affairs and Climate Policy, Maarten Camps³, argued in favor of a new industry data standard based on open access. That can be a good way of promoting new economic activity or combating market dominance. We call for a systematic stock-taking exercise with regard to sectors or applications where open access to anonymized data in a secure manner can give a boost to innovative initiatives or help realize other social objectives. Another exercise is to identify the ways in which relevant data can be best made available, taking into consideration interests such as privacy, investment climate, improvement of the data sets, and feasibility.

ACM expects that, in regulated sectors such as energy and public transport, open access to data in a

³ <https://esb.nu/esb/20036698/nieuwjaarsartikel-2018-scherp-zijn-bij-vervagende-grenzen>



different or better way can give a boost to innovation, and, as a result, realize social objectives such as the energy transition or a more sustainable mobility mix. In these sectors, relevant data can often only be collected by a single organization. After all, the data are inextricably linked to an infrastructure that is a natural or legal monopoly. Furthermore, the justification of mandating open access to data because of the public nature is less problematic.

Data is sometimes called the new oil, but has obviously different characteristics: the volume of data is growing exponentially with each day. Data can also be used by multiple parties more than once. This means that scarcity or exclusivity is not always at issue.

Mandating data sets to be shared does not necessarily have to be the first choice. By promoting standards (open or otherwise) and well-functioning interfaces, and by eliminating legal obstacles or inconsistencies with regard to, for example, ownership of data, open access to data can be given a further boost. If consumers have control over their data, they can also make it available to other providers. That can stimulate innovative entrepreneurship. ACM therefore looks forward to the impact of the right to data portability, which is laid down in the General Data Protection Regulation, when it enters into force⁴.

In other situations, it may be necessary to require data sets to be shared, for example, if undertakings are not willing or not able to share data that act as crucial input for new services or products. In the systematic stock-taking exercise, it needs to be determined what data for what applications are or become important. Criteria such as size and diversity of the data set, exclusivity, the value of the data, and the possible importance of reciprocity (not just taking advantage of the data, but also contributing data) play a role in the assessment of whether mandatory open access to data is needed. In situations where multiple market participants are able to collect similar or alternative data themselves, mandatory requirements are less obvious than in situations where there are unique data sets. In the public domain, such assessments are likely to be different than those in the private sector.

An example in which the European Commission mandates access to data through ex ante regulation can be found in the financial sector. The revised Payment Services Directive (PSD2) mandates banks to grant third parties access to their customers' payment accounts. Those customers must have explicitly given their consent first. With access to these payment accounts, third parties are able

⁴ Article 20 of Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)



to offer payment services such as mobile payment apps and household budgeting apps. In one of our studies, we concluded that banks have an incentive to foreclose third parties. The PSD2 may not completely solve this problem, because, among other reasons, there is uncertainty about the precise access criteria. That is why additional oversight efforts may be necessary, if access to the payment accounts is considered an essential facility.

Within the energy sector, ACM sees the importance of data increasing tremendously⁵, creating opportunities for the energy transition and innovative services. Expanding the roll-out of the smart meter is a first precondition for capitalizing on those opportunities. However, service providers such as price comparison sites, independent service providers, and, at some point, also aggregators, face limitations in the current system. They cannot have the right data at the right time, even if consumers wish they do, and if it is compliant with the GDPR. ACM supports the Ministry of Economic Affairs and Climate Policy in its initiatives to reassess regulations regarding data governance in the energy sector so that innovative economic activity is given the opportunity to flourish. In that context, attention to privacy, data ownership, and a level playing field for access are important.

4 Conclusion

We see that digitalization calls for clear and new frameworks (public or otherwise) for new situations. Within those frameworks, additional regulations can be desirable, especially if it is about regulating sustained market power free from abuse or advancing personalization of offers and prices. In the future, however, the increasing use of algorithms will most likely have to lead to additional regulations. Given the rapid developments and the complexity of these digitalization questions, the attention of lawmakers is needed today. Capitalizing on the many opportunities of digitalization and the large-scale use of data in particular calls for a complex assessment of interests, the outcome of which may differ per application or sector. In this edition of InSight, ACM is calling on everyone (lawmakers, policymakers, market participants, and regulators) to do their part in reducing the risks of digitalization, and in capitalizing on the opportunities. And in joining the public debate about all of these topics.

⁵ For data with regard to energy consumption, the European Commission is working on new rules (Clean Energy Package).