

OPENINGS FOR ZERO RATING

Zero rating is a highly controversial aspect of the internet. **AUGUSTO PRETA** and **PENG PENG** provide a cost-benefit analysis amid the context of net neutrality

Zero rating (toll-free data) is the practice of internet service providers (ISPs) and mobile operators not charging end users for data usage of specific internet content and applications of content providers through their network. On one hand it may benefit consumers from using the subsidised services, on the other it could be considered anti-competitive and against the net neutrality principle. This article focuses on the cost-benefit analysis of zero rating.

STATE OF PLAY

Network neutrality has become a major issue as the internet is playing an increasingly fundamental role in the global economy. To preserve the open internet, concerns have been expressed about the risk that ISPs might exploit their control over the network to inappropriately prioritise some content over others. The FCC's Open Internet Order and other countries have enshrined net neutrality in laws from 2010.

In the EU, on 30 June 2015, the European Union reached an agreement on key elements for a single market in telecoms, including net neutrality rules that went into force on 30 April 2016. Until now there have been no clear rules on net neutrality at EU level, even though some member states have adopted national laws on this issue, and zero rating has become a controversial issue.

Thanks to the mobile internet, the availability of mobile devices among consumers, and exponentially growing internet services, zero rating schemes are becoming increasingly popular as mobile internet penetration rises. Zero rating allows consumers to use specific internet content and services through the operators mobile network, without deducting the data usage from data caps.

Half of mobile carriers around the world have been providing zero-rating schemes (the only OECD countries where operators have not been carrying any zero rating plans were Finland, Norway, Estonia, Latvia, Lithuania, Malta, Chile, the UK and

◀ Japan).¹ As of November 2014 there were at least 92 zero-rated services in the developed world; of those, 36 mobile phone operators were exempting their own video services from usage caps and ten were doing so for their cloud storage offerings.²

Zero-rating content covers a wide range of services: online government and community service sites; popular services like Facebook, Google, Twitter and Wikipedia; music and movie streaming services (for example in the US, T-Mobile offers its data plan subscribers zero-rated access to more than 25 online music services, including iHeartRadio, Pandora and Spotify); an HBO app was provided by Vodafone in the Netherlands before January 2015 (and the operator was fined); in India several mobile operators made Facebook and WhatsApp data use free to attract more college students; Facebook Zero, Internet.org, Wikipedia Zero etc. are designed for developing countries.

The types of business arrangements between carrier and content provider are:

- **Carrier initiated:** with the purpose of attracting customers to the mobile operator's platform. Third-party applications such as YouTube, HBO Go, Spotify and Facebook are the most popular. Besides third-party apps, carriers may choose to zero-rate their own content or content produced by affiliated companies, such as until recently with mobile TV plans offered by Canadian carriers Bell Mobility and Vidéotron.

- **Sponsored data:** generally content providers pay mobile operators to finance the cost generated by the data usage of consumers (this is mainly the case in the US). However, content-oriented applications like Facebook Zero and Internet.org aim to promote internet penetration in the developing countries.

Zero rating in developing countries plays an important role in extending the reach of the internet. Facebook Zero was launched in 2010, in collaboration with 50 mobile operators in countries such as Bangladesh, Cameroon, Indonesia, Kosovo, Myanmar, Pakistan and Zimbabwe. It allows customers of participating mobile carriers to access Facebook's standard mobile site content, send messages, and update their status on a zero-rated basis.

As Facebook and others do not pay ISPs for providing the content, concerns have been raised. Indeed, in January 2015 a study found that Facebook Zero shapes internet use in the developing world: 11% of Indonesian users of Facebook said that they did not use the internet and 65% of Nigerians, 61% of Indonesians, and 58% of Indians agreed with the statement that 'Facebook is the internet' compared with 5% in the US.³ The fear is that a few big internet companies are becoming increasingly important and may have a large impact on the economy.

More importantly, the practice of zero rating certain internet services has been criticised as anti-competitive and a violation of open internet principles, particularly as many new internet and content services target mobile markets. The further adoption of internet connectivity globally will rely heavily on the consumer base of the mobile

internet, so zero rating has also been regarded as a threat to the open internet, particularly by small, innovative content providers.

PROS AND CONS OF ZERO RATING IN THE CONTEXT OF NET NEUTRALITY

The pros of zero rating are in economic efficiency, and the benefits of zero-rating schemes are straightforward: consumers enjoy lower prices for mobile internet. (Zero-rating opponents do say that mobile operators would lower the price of mobile data usage if zero rating is banned; we do not deny this possibility, but consumers could better avoid a bill shock with zero-rated offers.) Given that certain data volumes of internet services and applications are not limited or metered against data caps, customers benefit from carefree pricing for offerings such as video streaming.

Furthermore, zero-rating provides incentives to expand market size and penetration of mobile broadband. Subsidising the consumer side may effectively increase the value of the platform as a whole in the network industries.⁴

Regarding sponsored data, zero-rating deals benefit consumers with lower prices for mobile broadband. In the US, where zero rating is allowed, content providers pay for subscribers. This is a typical pricing strategy of cross-subsidisation in multi-sided platforms. Inducing a larger number of consumers to use the services is socially efficient in markets with large fixed costs and small variable costs. It applies to both content providers and mobile operators, which are characterised by the significant investment (and risk) of innovation, and the investment in infrastructure respectively.

In addition, mobile operators can differentiate their services with zero-rated content, which enhances competition among them.⁵

The cons of zero-rating are, by and large, in the context of net neutrality. Obviously, zero-rating deals are not neutral, and to some extent they allow mobile operators to discriminate by content (in favour of some content

over others). Net neutrality advocates such as Public Knowledge and Engine argue that zero-rating schemes interfere with consumers' unfettered choice on the open internet and may ultimately discourage innovation by small players and/or new entrants.⁶

Another net neutrality concern is associated with a quality of service (QoS) issue: if some data traffic is favoured by the mobile operators, are they throttling or blocking unfavoured data? Zero-rating deals may disadvantage competing content providers or services – zero rating falls into a broader category of discrimination if mobile operators discriminate against other traffic, either by throttling (ie. degrading transmission quality) or blocking it. Admittedly, this is a central issue under the net neutrality debate. However, zero rating cannot be considered as against net neutrality



Net neutrality advocates argue that zero rating interferes with unfettered choice.



principles: net neutrality prohibits ISPs from discriminating by content “in favour of some content over the others” through network traffic management practices: “No blocking, no throttling, no paid prioritisation,” as the FCC’s Open Internet Order says. It is not zero-rated traffic compared with the rest of traffic: it is only price differentiation at the retail level, not different treatment in terms of traffic management.

EFFICIENCY JUSTIFICATION: A LEGAL AND ECONOMIC ANALYSIS

Clearly zero-rating is not neutral, but it allows mobile users to enjoy some ‘carefree’ content, especially with data hungry services such as video streaming. It is true that zero rating has been criticised as anti-competitive and against the net neutrality principle enshrined in law in several countries, especially if such offers involve the mobile operators’ vertically integrated video and cloud services. But we found economic arguments that suggest zero-rating certain applications could benefit consumers and enhance welfare.

‘Tying’ complementary services

Infrastructure and content are economic complements: mobile internet users derive utility only with a system consisting of both internet connection, and content and services. In other words, content providers, for example over the top (OTT) players, rely on the infrastructure of the telecoms operators; on the other hand mobile operators establish higher value for their platforms by offering popular services. Besides carrying the offerings of content providers, some operators also offer their own services such as music streaming and cloud storage.

Zero-rating offers can be considered as zero pricing on the tied product of certain content when consumers choose the tying product of mobile internet. Bundling these two products by mobile operators may serve as an effective tool to internalise the negative pricing effect generated between the complementary services (known as Cournot complements).⁷ Pricing externalities arise if the prices of the complementary services are set independently; prohibiting efficient tying will lead to a loss in both the revenues of the firms and in consumer welfare; furthermore, internet penetration is smaller than with a vertically integrated pricing scheme.

When the two tying products are not related, the tying practice is likely to be unlawful. Another element is when the tying product has a dominant position which manifests an abuse. Prominent cases were Microsoft tying its Windows Media Player and Internet Explorer to Windows. The remedies imposed by the European Commission in these two cases were different: unbundling in the media player case, and a ‘must carry’ requirement to show users alternatives to using Internet Explorer. As long as mobile operators do not block the traffic of non-zero-rated content, zero rating does not induce vertical foreclosure or raise interoperability concerns as in the Internet Explorer case.⁸

Network effects and competitive price discrimination

The most significant motivation of zero-rating schemes is no doubt to expand the use of certain content providers, and in turn to increase mobile wireless penetration. This may generate a variety of economic and social benefits,⁹ particularly among low-income populations and in developing countries. In developed countries, zero rating is mostly a tool to push up demand for mobile internet.

Both the markets of content providers and mobile operators exhibit network effects, in that the value of the network to end users grows with the number of users. Historically, governments often subsidised participation in sectors with network effects to promote universal service for the telephone and, more recently, broadband. These kinds of subsidies are generally considered beneficial for consumers. Promoting the network effect of increased adoption generates positive social as well as economic externalities. In this context, zero-rating serves as a mechanism that helps to expand mobile wireless adoption.

In the context of competition, mobile operators aim to add to the value of subscriptions to their mobile internet services by provided zero-rated content. Otherwise the chicken and egg problem may arise. The most widely used internet content providers or applications, such as Facebook and Spotify, are likely to partner with a large platform. Consumers choose the mobile operator that offers the most valuable, relevant content and the more users there are, the more consumer surplus is extracted from potential users.

When the platform operator faces the challenge of establishing a consumer base and providing valuable content or services at the same time, subsidising one group of users is often observed, and zero rating is no doubt an effective tool to attract subscribers and to compete against other mobile operators.

Both the markets where mobile operators and content providers operate are characterised by large, non-recoupable investments in R&D and/or physical infrastructure; in contrast the marginal cost of serving additional users is trivial. Firms need users’ participation to recoup the fixed cost of the deployment of the infrastructure for mobile operators and R&D for content providers. In such industries, consumer and social welfare increase when more consumers derive utility from services ➔

ANOTHER VIEW ON REGULATION

In a recent paper, ‘Comparative case studies in implementing net neutrality: A critical analysis of zero rating’ (SCRIPTed April 2016) Christopher Marsden examines countries that have implemented net neutrality and pulls out thinking on zero rating. He suggests two regulatory actions to encourage the correct use of zero rating:

- Treating zero rating as a short-term exception to net neutrality
- Ensuring any such short-term exception is not exclusive, by subjecting such contracts to ‘fair, reasonable and non-discriminatory’ (FRAND) conditions.

These conditions are not dissimilar to the principles by which the Wikimedia Foundation permits Wikipedia Zero to be offered by mobile ISPs, he notes. In concluding, he says that while zero rating is highly controversial it is a relatively minor problem compared with so-called ‘specialised services’ (see also the article on net neutrality by Richard Feasey, Intermedia April 2016).

As Marsden also notes: “The majority of ‘mobile’ data traffic is actually downloaded to devices via WiFi in homes, offices or hotspot locations. It is not the cost of mobile data plans that is the dominant price driver, but that of hardware and prevalence of WiFi.”

Marsden does though flag up privacy as a “thorny issue” that is largely unregulated in developing markets. “The wider issue of how users of ‘free’ apps such as Facebook are being monetised by advertisers is associated with the net neutrality and zero-rated debates, and in particular the correct policy responses,” he says. Jana’s mCent service is a leading example of this type of application.

← whose costs have mostly been made before serving the additional user. As marginal users purchase, even at a discounted price, it is welfare enhancing. Therefore, bundling the two products – mobile broadband and online content – to push up demand can be efficient.

‘All you can eat’ vs metering

Note that offering zero-rated content could be perceived as an ‘all you can eat’ tariff for certain content that directly benefits consumers. This is particularly meaningful for some data-hungry applications such as video streaming, whose data usage is more likely to generate bill shock, and customers have to monitor it. But contrary to the harms emphasised by net neutrality proponents, offering zero-rating pricing would significantly help mobile broadband users to avoid bill shock while enjoying the growing number of data-intensive services over the internet.

Some market studies on earlier online services demonstrated that metering data usage could be a barrier to consumer participation in the mobile internet.¹⁰ This is in line with the well-documented phenomenon that consumers want to be insured against fluctuations in their billing amounts under some circumstances. In general, consumers prefer to choose ‘all you can eat’ than metering even if they end up paying more. This preference has been explained from various angles: mental accounting (ie. evaluating the economic outcome),¹¹ self-control of usage,¹² and loss-aversion.¹³

Not only may customers prefer the certainty or convenience of flat-rate pricing, but they also tend to avoid schemes where there is the possibility of feeling uncomfortable by linking every extra unit of consumption to an increase in price.¹⁴

This is meaningful particularly for data-hungry applications – self-control of using the application is likely to be fruitless. Therefore, zero rating these applications is beneficial for consumers, and it helps to achieve higher use of streaming services.

Multi-sided platform competition

A multi-sided platform typically internalises the externalities between agent groups and enhances the value of the platform. Services like Facebook, Twitter and Wikipedia attract consumers who are also content creators; thus, by encouraging additional users to participate, zero rating increases both the number of consumers and the amount of content available. This effect helps to explain why service providers like Facebook are also taking the lead in promoting zero-rating programmes.

As for the pricing structure of the multi-sided platform, a seminal paper demonstrated that there is no particular price structure bias under monopoly provisioning in two-sided markets; with specific assumptions such as linear demand, a monopoly pricing structure coincides with the welfare-maximising pricing structure.¹⁵ A mobile operator could adopt a socially optimal pricing structure by internalising cross-group externalities. Therefore, neither prices below cost nor very high prices are indications of anti-competitive behaviour.



Customers prefer the certainty or convenience of flat-rate pricing.

the ISP’s overall profits, from every source, are kept down to a normal level by the competitive process; this result holds if it faces competitive pressure, but it could extend also to ISPs with market power. The effect of a lower price on the end user side is because of the nature of the multi-sided market, where there are positive externalities among content providers and end users. As a result, a charge for sponsored data would be to the advantage of end users; on the other hand a suppressed price on one side may lead to a ‘pop up’ of the price on the other side of the platform.¹⁷

Product differentiation

Zero-rating schemes may act as an instrument by which mobile operators differentiate themselves from competitors by offering access to customised content with their mobile wireless services. Product differentiation provides variety to consumers, and may also serve to intensify competition in the mobile market. It enhances consumer welfare by providing better-fit tariffs for individual users instead of one-size-fits-all services.¹⁸

Like pay TV operators that differentiate their services by spending massively to obtain premium content, mobile operators allow subscribers to access the most valued content or services even with a discounted price. Potential subscribers can make their choices among mobile operators by comparing which services are most suitable. Rather than distorting competition, zero rating could be considered as the result of competition among mobile operators, with the ‘outside option’ of no subscription.

In sum, the internet is dynamic and is undergoing dramatic increases in demand and changes in the nature of services provided. We consider zero rating an effective tool to encourage consumers’ usage of the mobile internet by offering differentiated zero-rated content; it benefits mobile operators in pushing up the penetration of mobile internet, which also has a positive spillover effect on content providers, and may encourage further development of new content.

Admittedly, bundling and price discrimination are likely to be found anti-competitive if the undertaking has a dominant position. However this is not the case in the mobile network market, for example in the EU, where there are at least three operators in each of the 28 member states, and there is no incumbent. Market players are reacting by reducing prices and introducing new retail services, notably by focusing on the development of mobile broadband, and the competitiveness of the market is constantly monitored at both national and European levels.

Nevertheless, zero rating is reliant on the legislation of net neutrality. In net neutrality, the analysis should refocus on how the market works and the net effect on consumers, rather than being narrowly concerned with the role of ISPs or some popular content providers.

So where and why has zero rating been found unlawful?

COUNTRIES AGAINST ZERO RATING

As the first country to enact a net neutrality law, Chile was also the first country that prohibited zero rating, which was alleged to generate anti-competitive effects: the competitors of Facebook and Google would be severely disadvantaged as consumers would be tied to those free services. Note that Chile did work with large content providers to promote zero-rating plans to increase internet penetration, but the regulator, Subtel, now stresses that zero rating is illegal under Chilean net neutrality law.

Cross-subsidisation in a multi-sided market is well explained by the concept of the ‘waterbed effect’ in the analysis of mobile termination fees.¹⁶ For an ISP allowed to charge content providers for sponsored data, it is expected that the subscription fees paid by end users will decrease, since

In January 2015, the Dutch ACM (Authority for Consumers and Markets) fined Vodafone for zero rating a third-party TV application from HBO. Zero-price schemes are considered illegal by the ACM because the deals between the mobile operator and certain content providers favour some internet traffic over others. This practice is prohibited even if the zero-rating offers do not directly harm consumers. The Netherlands was the second country in the world to enact a net neutrality law, under which ISPs are not permitted to charge different access rates for specific online services. According to an ACM board member: "That is the idea behind net neutrality, and that is what we are enforcing in these cases. ACM thus prevents consumers from having less freedom of choice online."¹⁹

In January 2015, Slovenia's national regulator, AKOS (Agency for Communication Networks and Services), found that vertically discriminating (zero rating) music streaming by Telekom Slovenije and cloud storage services by Si.mobil violated the net neutrality provisions stipulated in its electronic communications act. The country was the second in Europe to adopt net neutrality rules. The communications industry fiercely opposed the adoption of the rules; in response to lobbying, the second reading removed an explicit prohibition of price discrimination. Although the decisions have been limited to zero-rated music streaming and cloud storage services, it is logical that they could apply to other zero-rated products (especially video streaming) as well as to other operators.

Similarly, the Canadian Radio-television and Telecommunications Commission (CRTC) issued a decision in January 2015 against carriers Bell Mobility and Vidéotron, which were exempting their own mobile TV services from their regular data plans (for a small monthly fee of around \$5) while counting traffic for rival services against those data caps. This deal was essentially zero rating with a flat fee of the mobile operators' own services. The CRTC has now banned carriers from zero rating their own services, but it remains open to the practice being applied to third-party applications.

Regulators in both Canada and the US have stopped short of outright bans on zero-rated services, but have signaled that such practices will be closely scrutinised. "Consumers will end up losing access to a service they really value, or pay more for that service," warned Bell's chief regulatory officer, Mirko Bibic. "Consumers don't benefit when prices go up or when innovative services stop being offered."²⁰ The CRTC is currently consulting on differential pricing practices.

The Telecom Regulatory Authority of India (TRAI) started an investigation against mobile operator Airtel, which was offering lower rates for WhatsApp and Facebook than the standard rates, and planned to zero rate some voice over IP services and other apps on the Airtel Zero scheme. In February this year, TRAI issued a prohibition of discriminatory tariffs under net neutrality principles, which was a blow to Facebook's Free Basics, but currently is in a 'pre-consultation' phase in a deeper inquiry into net neutrality.²¹

ZERO RATING: NET NEUTRALITY VIOLATIONS

Country	Carrier	Content/app	Theory of harm
Chile (2014)	N/A	Wikipedia Zero, Facebook Zero, Google Free Zone	Competitors of Facebook and Google severely disadvantaged
Netherlands (2015)	Vodafone	HBO	Discrimination among internet traffic, even if no direct harm
Slovenia (2015)	Telekom Slovenije Si.mobil	Music streaming Deezer cloud storage Hangar Mapa	Vertically discriminating music streaming and cloud storage services
Canada (2015)	Bell Mobility Vidéotron	Bell Mobile TV illico.tv	Vertically discriminating video streaming
India (2015)	Airtel	WhatsApp Facebook	Price discrimination among voice service traffic (throttling not prohibited)

Source: ITMedia

The ban on the zero rating providers in Chile and the fine given to Vodafone in the Netherlands implies that the Chilean government and the Dutch authority have taken a harsh line on zero-rating deals, while this issue is considered ambiguous by national authorities in other countries. Among the current zero-rating cases, Chile, the Netherlands and Slovenia are countries that already have a law enshrining net neutrality. Therefore, even if the regulators admitted that zero-rating of third-party applications involves only positive discrimination that does not directly harm consumers, discriminating among internet traffic and interfering with consumer choice are deemed unlawful.

The cases in Slovenia and in Canada put an emphasis on vertically integrated music, video and cloud services in contrast to third-party applications (although in Slovenia there was an investigation by the Electronic Communications Council in 2014 that alleged that third-party zero-rated products such as HBO's Go, Champions League football video, and a popular music streaming service, Deezer, violated the net neutrality law). The concern is that the monopoly mobile operator (for the end user) could favour its own services, which may in the extreme foreclose the market and severely disadvantage the rivals of such internet services.

However, from an economics point of view, there is a well-established literature on industrial organisation that demonstrates that vertical integration is often welfare enhancing and the antitrust laws already articulated are a possible recourse for anti-competitive vertical integration. (Admittedly, vertical integration may reduce consumer and total welfare particularly under two scenarios: raising rivals' marginal costs of operation or depriving rivals of economies of scale necessary to reach minimum efficient scale.)²² Strategic tying by a monopolist is unprofitable without exclusionary effect.²³

So in summary, we can summarise the theory of harm claimed by national regulators and net neutrality proponents:

Discrimination practice

- If the mobile operators offer zero-rating schemes which are either their own services or of third-party applications with charges, they may have an incentive to discriminate between zero-rated and non-zero-rated services.

Disadvantage to small content providers

- Small content providers that cannot afford to participate in zero-rating schemes may have difficulty in obtaining users, if substitutes are free.
- In the long-term it will discourage application or content providers from innovating and entering the market.

← Quality of service (QoS): hypothetically raised by net neutrality proponents

- Prioritising zero-rated traffic and/or discriminatory degradation (throttling) of non-zero-rated internet traffic.
- Mobile operators may enhance QoS only to selected content and applications, sometimes based on sponsorships or premium payments, if it increases their wholesale revenues.

On a zero-rating ban and broader net neutrality provisions, the attitudes of national authorities in Europe and all over the world have been sharply divided. As we argue above, zero rating does not involve traffic management and therefore should not fall under the scope of net neutrality. Moreover, in the US and Canada, a case-by-case approach on zero rating has been adopted.

Based on the economic analysis, we do not find the arguments by the opponents of zero-rating convincing. Consider the facts – that most of the currently observed zero-rating plans are ‘carrier initiated’, with the purpose of improving the value of their platform with no payments by content providers, and no foreclosure involved. Can a single mobile operator foreclose the market?

Regarding sponsored data arrangements, there is no evidence of exclusivity of the services. Even if a zero-rating programme involves exclusivity, it may be justified by efficiency motivations. Without foreclosure, exclusive dealing may be welfare-enhancing with larger participation.

‘Victims’ of zero rating are supposed to be the small, innovative content providers. However, it is worth noting that mobile operators also have a strong incentive to maintain a diversity of content providers as complementary to increasing the value of their mobile broadband service. And, as argued in most competition cases, even if individual competitors have been disadvantaged, it does not necessarily demonstrate harm to competition.

The most important consideration for regulators should be the net effect for consumers. Some regulators and academics believe that a total ban on zero rating could force mobile operators to raise data caps and they would be trying to offer as much capacity to users as possible; the net effect for consumers is positive where zero rating is absent. But this argument is not wholly convincing, and the normative implications are less clear. The market outcome depends on the interactions among regulators, service providers and consumers, and whether banning zero rating would bring a positive net effect for consumers seems not to be straightforward.

CONCLUSION

Technology shapes economic institutions. The past two decades have seen that traditional industries are facing severe challenges that are only becoming more so thanks to the mobile internet. Not only economic institutions, but also political and social institutions, must adapt to these new technological conditions. A good regulatory regime may pave the way for innovation and technologies, and is the key to a successful economy.

Regarding zero rating, the regulatory position across countries can be summarised as follows:

- **Zero rating is deemed as a net neutrality violation in some countries.** A few countries have taken a hard line by banning it; it is prohibited in Norway even though no net neutrality rules are enacted.
- **Not a violation but a case-by-case basis.** In the US the FCC is taking an approach consistent with the recently issued net neutrality rules: zero rating by carriers of their own services, or of third-party applications for a fee, will likely be found unlawful, whereas zero-rated third-party services with no charges may remain acceptable. Canada has a similar case-by-case approach.
- **Zero rating is not prohibited.** In countries without net neutrality rules, the large internet firms (champions of net neutrality) can team up with mobile network operators and offer zero-rated services to subscribers. Interestingly, Netflix, the major net neutrality advocate, announced zero-rating deals with ISPs in Australia, because competing streaming services have participated in zero-rating schemes.

According to our analysis, zero rating could be an effective mechanism that while not neutral, could have positive effects on social welfare. It can help to increase mobile broadband penetration, and to achieve higher usage of certain internet services. Mobile operators will have more content and applications to enrich the attractiveness of their platform; with a higher user base, content providers have better incentives to invest in quality and in innovative services; consumers will ultimately have access to more engaging and competitive content with a comfortable pricing scheme.

We do not find a rationale and empirical evidence for the necessity of ex-ante regulation regarding zero-rating – the opposite to the application of net neutrality principles. Any distortion of competition by the conduct of operators should be examined under the specific market scenario, and current competition laws applied. Given that the internet and communications industries are highly dynamic, it is unlikely that a regulator could correctly identify the business models and practices that maximise consumer welfare. Improper interventions can delay the introduction of new technologies and result in significant harm to consumers. In our opinion, a case-by-case approach, through ex-post intervention by competition authorities is more proper than ex-ante prohibition in regulations.

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