Discrimination and Neutrality on the Internet: the Zero Rating Case

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32° Conference of the European Association of Law and Economics (EALE)
Vienna, 17 September

Zero Rating

Zero rating is a commercial practice provided by MNO in mobile internet services.

Typical tariff per month (1giga, 2 giga, 4 giga…) at a fixed cost.

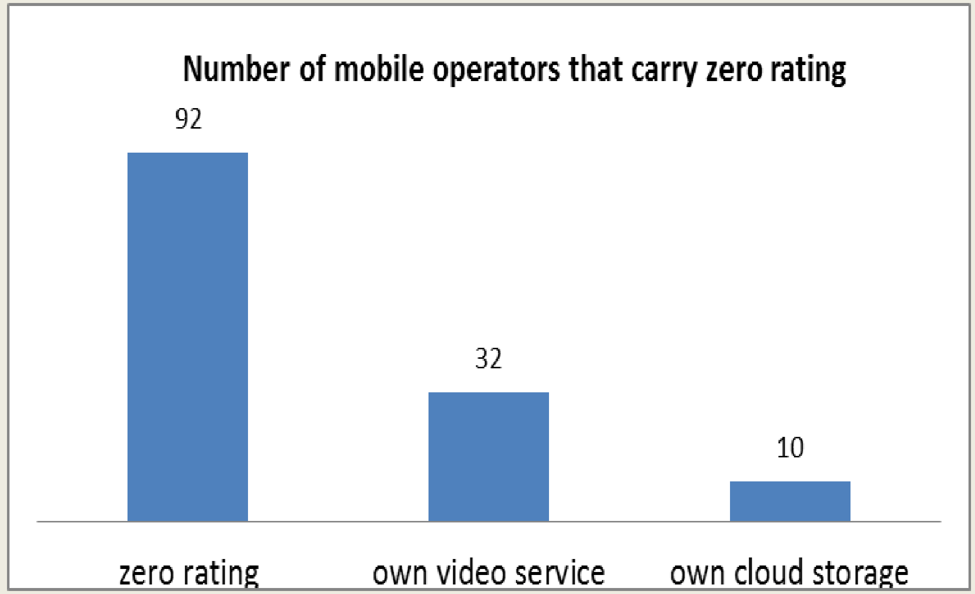
This scheme can be modified, allowing subscribers to access certain online content or applications totally or partially free of charge (at reduced rates).

Zero rating: the associated data volume NOT deducted from the users' data caps

Zero Rating

Zero-rating schemes are increasingly popular, thanks to the growth of mobile internet penetration.

- Half of mobile carriers around the world are now providing zero-rating schemes; the only OECD countries where operators don't currently carry any zero rating plans are: Finland, Norway, Estonia, Latvia, Lithuania, Malta, Chile, the UK and Japan.
- As of November 2014 there were at least 92 zero-rated services in the world; of those, 36 mobile phone operators were exempting their own video services from usage caps and 10 were doing so for their cloud storage offerings.
- Third-party applications such as YouTube, HBO Go, Spotify and Facebook are the most popular ones.



Source: ITMedia Consulting

Zero Rating: content and business agreements

The type of content varies widely:

- online government and community service sites;
- popular services like Facebook, Google, Twitter and Wikipedia;
- music and movie streaming services: iHeartRadio, Pandora and Spotify by T-Mobile in the US, HBO app by Vodafone in the Netherlands;
- customized content designed for zero Rating: Facebook Zero, Internet.org, Wikipedia Zero etc, particularly in developing countries. Internet.org deployments in 2014-2015: Zambia, Tanzania, Kenya, Colombia, Ghana, India.

The business arrangements between carrier and content provider are the following:

- Carrier initiated: with the purpose of attracting customers.
- Sponsored data: content providers pay carriers.
- Content-oriented applications like Facebook Zero, Internet.org do not pay ISPs.

Zero Rating in the developing countries

With the scope **to extend the diffusion of the internet in less developed countries**, content-oriented services and applications like Wikipedia, Facebook, Twitter and Google have been active in working together with mobile operators to develop and promote Zero Rating plans, particularly in developing countries.

Facebook, for example, launched Facebook Zero in 2010, in collaboration with 50 mobile operators in countries. It allows customers of participating mobile carriers to access Facebook's standard mobile site content, send messages, update their status on a zero-rated basis.

It is worthy noticing that these zero rating projects particularly designed for developing countries do not engage a fee: Facebook, Internet.org, Wikipedia do not pay ISPs for providing the content.

However, concerns have been raised associated with the success of these zero rating projects. Indeed, it was shown in January 2015 that Facebook Zero shapes ICT use in the developing world: 11% of Indonesians using Facebook also said they did not use the Internet; 65% of Nigerians, 61% of Indonesians, and 58% of Indians agree with the statement that **"Facebook is the Internet"** compared with only 5% in the US. *(Source: "Millions of Facebook users have no idea they're using the internet" http://qz.com/333313/milliions-of-facebook-users-have-no-idea-theyre-using-the-internet/*)

Zero Rating in the developed countries: commercial proposition

In the U.S., T-Mobile offers its data plan subscribers zero-rated access to more than 25 online music services, including iHeartRadio, Pandora and Spotify.

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 Videotron.

In Italy :

- *3* offers an unlimited music package
- *Tim* includes its own music service
- *Vodafone* offers at zero rating its *Spotify* service

Zero Rating: *Pros* and *Cons*

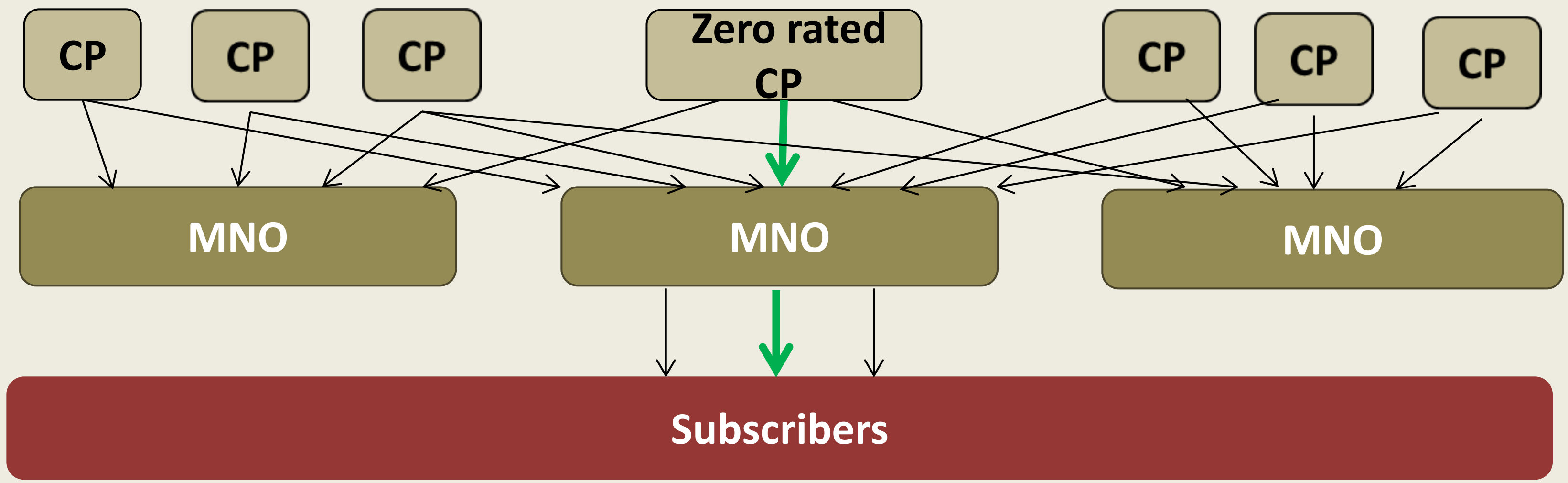
***Pros*: economically efficient**

- Free, or lower price for consumers;
- Push up the demand for mobile broadband, and to expand the market

***Cons*: violates net neutrality principles**

- Discriminate content (in favor of some content over the others);
- Interfere consumers' unfettered choice; in the long run consumers may stick to certain applications, discourage technological advancements and innovations by small content providers / new entrants
- Associate with a quality of service (QoS) issue: throttling or blocking unfavored data?

Positive effects

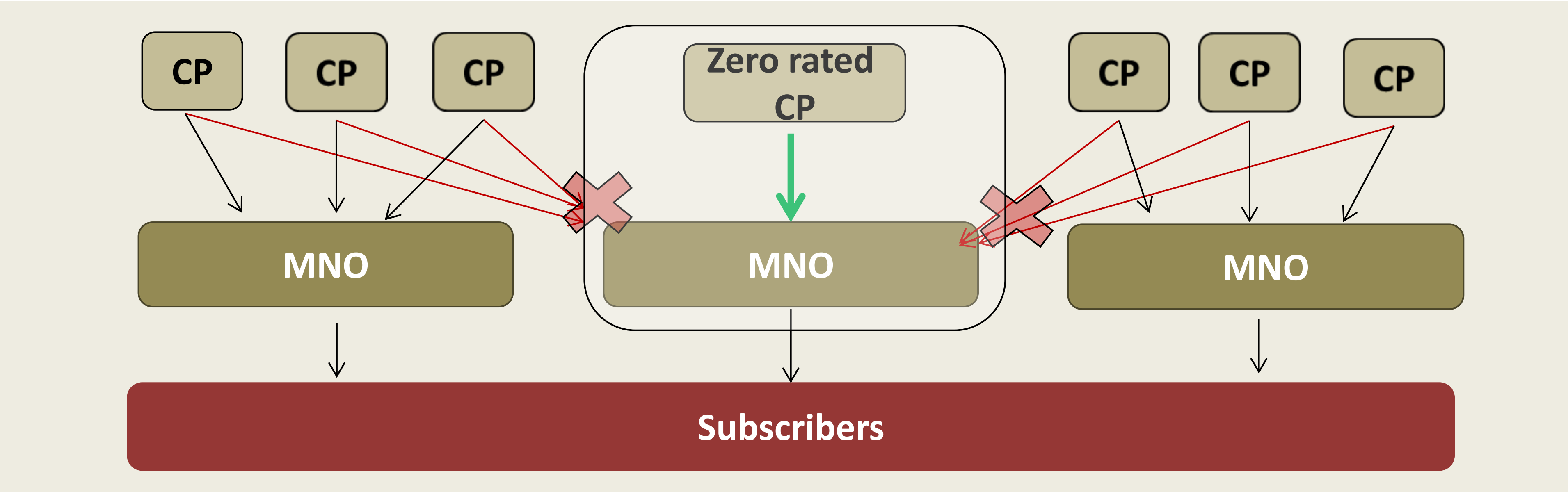


- Zero rating deals may benefit consumers with lower price for mobile broadband (in some cases content providers pay for subscribers– cross subsidization in multi-sided platform)

- Both content providers and mobile network operators have a larger amount of users – socially efficient in the market with large fixed cost and small variable cost.

- Mobile network operators could differentiate their services with the zero rating contents – enhance competition among the operators.

Negative discrimination (according to net neutrality principles)



Zero rating schemes may disadvantage the competing contents or services:

- MNOs may favor own/partnered zero rated content;
- Zero-rating falls into a broader category of discrimination, if MNOs discriminate against other traffic, either by throttling (i.e. degrading transmission quality) or blocking them.

Zero rating found violate net neutrality rules in:

Country	Year	Carrier	Content/App	Result
Chile	2014	N/A	*Wikipedia Zero, Facebook Zero, Google Free Zone*	Stop the services by June 1, 2014
The Netherlands	Jan 2015	Vodafone	HBO	Vodafone fined of €200,000
Slovenia	Jan 2015	Telekom Slovenije Si.mobil	music streaming *Deezer* cloud storage *Hangar Mapa*	Stop the practices within 60 days
Canada	Jan 2015	Bell Mobility Vidéotron	*Bell Mobile TV illico.tv App*	Stop the practices March 31, Apr 29
India	Apr 2015	Airtel	*Whatsapp Facebook*	On progress

Source: ITMedia Consulting

Zero Rating: recap

Zero rating is deemed as a Net Neutrality violation	Case by case approach. Not *per se* a violation but under certain conditions	Zero rating is not prohibited
So far, a few countries, **Netherlands, Slovenia and Chile**, have taken a hardline by explicitly banning zero rating and consider it as a net neutrality violation.	In **the U.S.** 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.	In other countries without net neutrality rules, the large Internet companies (champions of net neutrality) could choose to team up with mobile network operators and offer zero-rated services to subscribers.
Zero-rating is also prohibited in **Norway.**	**Canada** is having a case-by-case approach when it is not ISP's own service, which is prohibited.	Interestingly, Netflix, the all-time net neutrality advocator, in April announced zero-rating deals with ISPs in Australia, because several of their competing streaming services have participated the zero-rating schemes. However the plan was given up in May due to the fierce debate over the zero rating practice.

Source: ITMedia Consulting

Net Neutrality and Zero Rating (1)

Country	Net Neutrality Law	Zero rating	Is zero-rating a NN violation?
Chile	June 2010	x	Yes
Israel	2011 Mobile, 2014 Fixed		No
The Netherlands	June 2012	x	Yes
Slovenia	Jan 2013	x	Yes
Brazil	April 2014		No
Finland	Jan 2015	Do not carry	
U.S.	Feb 2015		Case by case
Canada	«policy guidelines»	x	Case by case
India	Not approved yet	x	Under Debate
Japan	«policy guidelines»	Do not carry	-
EU	In progress		The Netherlands has esplicity requested to include and prohibit 0 rating. Other Member States (Slovenia, Poland, Estonia, Greece, Hungary and Finland) have supported this proposal. **EU commission seems oriented on a case by case by case approach (as in the US)**
Other EU countries	*See the following slide*		

Source: ITMedia Consulting

Net Neutrality and Zero Rating (2)

Other EU Countries	Net Neutrality Policy	State of Legislation	Is zero-rating a NN violation?
Norway	Co-regulation	«Policy Guidelines» by NPT National P&T Authority	Yes
Sweden	Self- regulation	Memorandum on Network Neutrality in 2009	No cases
Denmark	Self- regulation	Industry code of conduct (stakeholders and consumer organisations, regulator ERST as an observer)	No cases
United Kingdom	Self- regulation	Industry code of conduct Broadband Stakeholder Group	Under debate
Belgium	Law under discussion	Proposal to enact NN law	-
Luxembourg	Law under discussion	Proposal to enact NN Law	-
Germany	Law under discussion	Proposal to enact NN law, currently freezed	Yes (in the proposal)
Other Countries	No regulation, no cases		

Source: ITMedia Consulting

The potential theory of harm

Discrimination practice

- Promote MNO’s own services or of third-party applications with charges, and interfere competition at content level.

An issue of Quality of Service (QoS)

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

Disadvantage small content providers

- Small content providers that cannot afford to participate the zero rating schemes may have difficulty to obtain users, if there exist substitutes for free.
- Long term discourage application or content providers to innovate and enter the market.

Additional considerations

Zero rating is not in contrast with NN principles

- NN prohibits ISPs to discriminate content «in favor of some content over the others» through network traffic management practices: «no blocking, no throttling, no (paid) prioritisation».
- In this case there is not such practices of the zero rated traffic, compared to the rest of traffic. It is only a price differentiation at the retail level, not a different treatment in terms of traffic management.

Anti-competitive effect?

- Most of the currently observed zero rating plans are "carriers initiated", with the purpose of improving the value of its platform: no payments by content providers, no foreclosure involved (can a single mobile operator foreclose the market?).
- Regarding "sponsored data" arrangements, there is no evidence of exclusivity. Even if zero rating program involves exclusivity, it may be justified by efficiency motivations. Without foreclosure it is likely to be welfare-enhancing with larger participation.
- "Victims " of zero rating: small innovative content providers. However mobile broadband operator has strong incentive to maintain a diversity of content providers as complementary. Even if individual competitors were unable to successfully compete in the market, it does not necessarily demonstrate the harm to competition.

What is the net effect for consumers?

- Some regulators and scholars believe that a total ban on zero rating could force MNOs to raise the caps. According to Harvard's prof. Crawford, MNOs "would be trying to offer as much capacity to users as possible. The net effect for consumers is positive where zero rating is absent".
- The market outcome depends on the interactions between regulators, service providers and consumers, whether banning zero rating would bring a positive net effect for consumers seems not straightforward.

1. **Network Externalities**

The most significant effect of zero rating schemes is no doubt to expand participation in the zero-rated content and applications, and to increase mobile wireless penetration. This increase may generate a variety of economic and societal benefits, especially within low-income population and in developing countries.

2. **Competitive Price Discrimination**

Both the industries of mobile broadband operator and OTT (Online content provider) are characterized by large, non-recoupable investments in R&D and/or physical infrastructure. The marginal cost of serving more users is trivial. Firms need users' participation to recoup the fixed cost. In such industries consumer welfare and social welfare can also be increased if demand is pushed upwards, with "marginal users" purchase, even at a discounted price. Bundling the two products - mobile broadband and online content - can be efficient

3, **Multi-sided Platform Competition**

A multi-sided platform typically internalizes the externalities between agent groups and enhance 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 programs.

4. **Product Differentiation**

Zero rating scheme may act as an instrument by which mobile broadband operators differentiate themselves from competitors by offering access to customized content with their mobile wireless services. Product differentiation provide varieties to consumers, and may also serve to intensify competition in the mobile market.

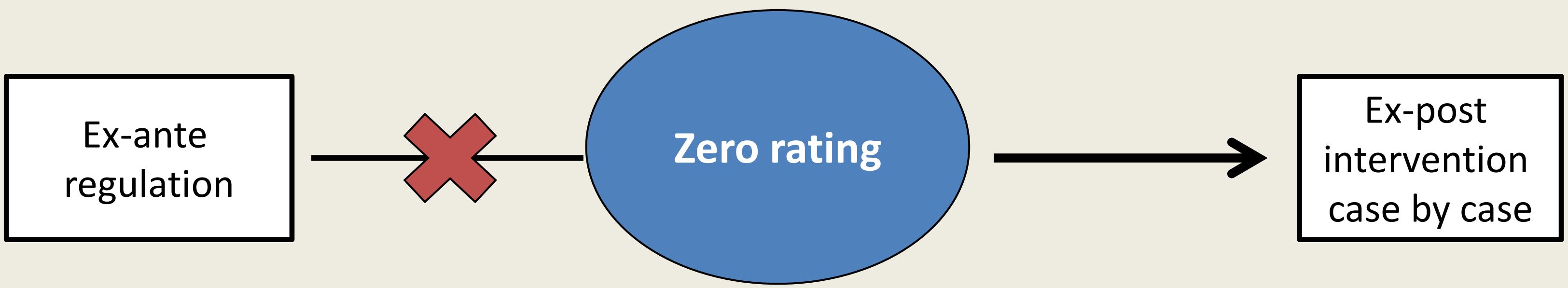
Main results:

According to our analysis, zero rating is in principle an effective mechanism of product differentiation with positive effects on social welfare.

MNOs will have more contents and applications in order to enrich the attractiveness of their platform; content providers might expand their offer to consumers, therefore investing more in quality and in innovation; consumers will have access to more engaging and competitive content.

Moreover, considering zero-rating is not in contrast with NN rules (related to traffic management), we do not find any evidence for ex-ante regulation on this subject, in contrast with the cases considered above, in application of net neutrality principles.

Any distortion of competition caused by the conducts of the operators should be examined, in our opinion, case by case, though ex-post intervention by antitrust authorities.



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