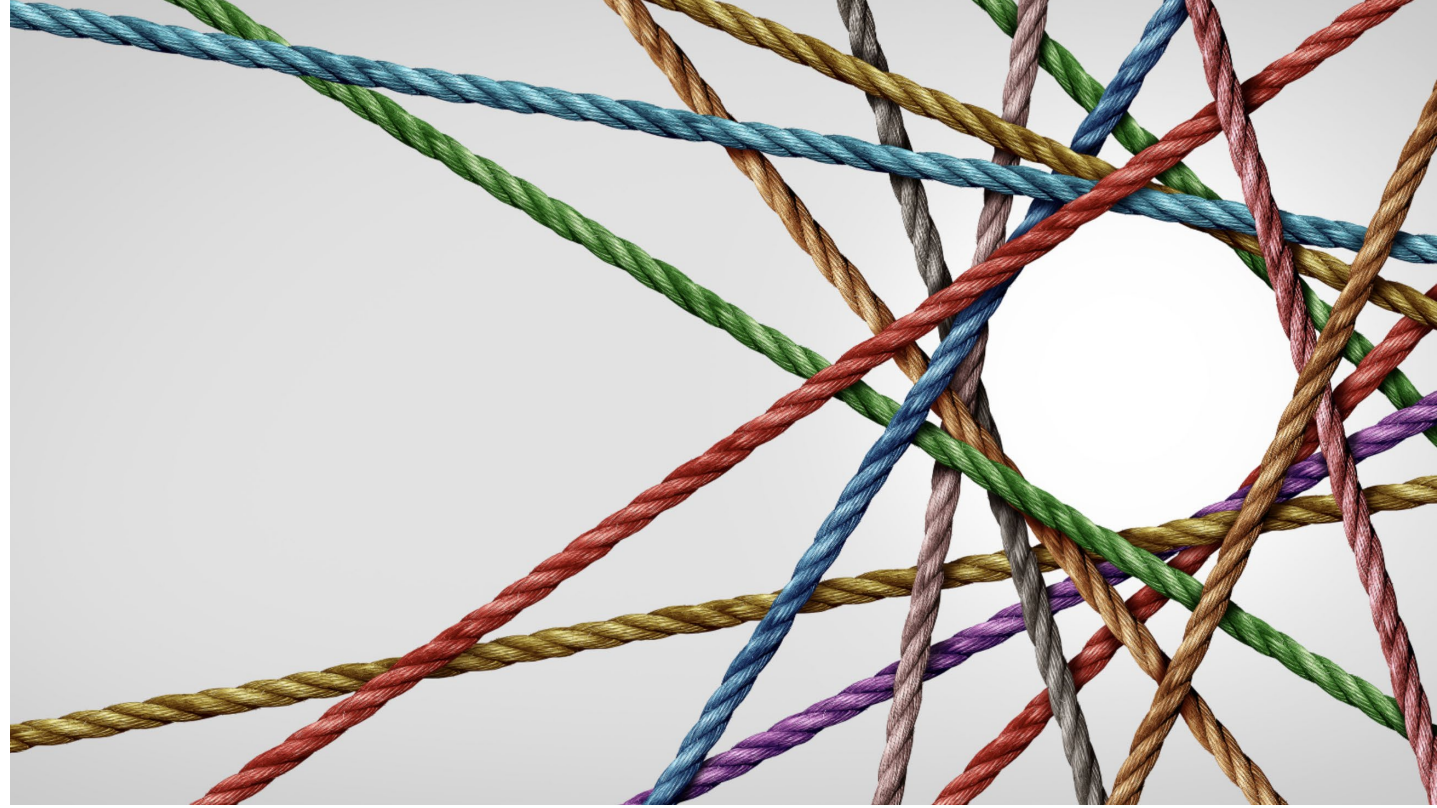


Reshuffling the Connectivity Ecosystem

CENTRE FOR A DIGITAL SOCIETY
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QUALCOMM

Untangling the Connectivity Ecosystem Policies

Google

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amazon



Asymmetric regulatory playing field

- Large online platforms have progressively introduced a wide range of digital products and services, which are either **complements** or **substitutes** to those of the telecom and media companies
- **ECS&N regulation** :
 - Pro-competitive access regulation: intense (price) competition
 - Net Neutrality rules: prohibition of commercial and unreasonable technical discrimination
- **Large Platforms regulation**: until DMA/DSA enter into force: '**Soft regulation**'/**Self-regulation** which reinforced size and market (and bargaining) power

Substitutes

- Competitive disadvantage (**different regulatory burdens**)
- Difficult to replicate/emulate because of the scope of 'physical network' (national vs trans-national scale)
- Earlier partial adaptation of regulation (AVMSD, NI-ICS in the EECC)

Complements with asymmetric regulations

- Perfect or non-perfect complements, yet asymmetric
- ISPs are bottleneck for CAPs: ISPs have material possibility to exert market power through non-price discrimination practices ► NN rules (**asymmetric**)
 - a. **ISPs with no vertical integration** (CAPs-ISPs) (in EU net neutrality was not a market power leveraging problem, as in US), while it addresses discrimination issues between CAPs (with different market power) yet placing obligation on ISP (and an opportunity cost)
 - b. **If CAP has must-have content** (\approx gatekeeper), **ISP cannot exert mkt power** because of intense competition between ISPs for end-users

Complements with asymmetric regulations

- **Must-have contents drive ISP connectivity demand**: how much this should be accounted as contribution to the entire ecosystem / network deployment?
- It depends on the **capacity of ISP to monetize demand increase** (regardless of costs) (market-based / new subscription vs mere data increase)
 - a. **Competitive pressure created by pro-competitive access regulation**
 - b. **Net Neutrality regulation, e.g., prohibition of zero rating and other content differentiation practices (cost opportunity on ISP)**
- How to tackle this '**regulatory failure**'?
 - Softening regulatory asymmetry, decreasing regulatory/competition intensity on ISPs side (ex-ante EECC and merger regulation)? Softening NN rules?

NN
 - Tightening regulation on the CAPs/ISPs direct relationship?

Transit fee and traffic externalities

- Cost-sharing mechanism ('fair contribution' as transit fee)
- Transit fee would **discipline data traffic**, whereas at the moment there is no incentive for CAPs to optimize traffic (on the network perspective) while the optimization is on the CAPs' profit side (externality) ► a transit charge would put incentives for CAPs to efficiently dimension the data transmitted (**internalize externalities**)
- This is always true – variable with costs
- yet especially true for content which are actually **not requested by end-users**:
 - Content with an automatic streaming or advertisements (auto-play)
 - Advertisements

Transit fee and effect on prices and cons welfare

(a) Decreasing price for ISPs' services; (b) decreasing overall price and increasing consumer welfare [Jullien, Bouvard 2023]

➤ (a) means that any fee income is greatly competed away [no direct funding base for new investments]

➤ (b) depends on return to ads (ability to indirectly monetize users): if this is high the effect is positive ⇒ considering the opportunity cost of attention for users yet not the transfer of data (which is the main driver for consumer monetization)

➤ In the opposite direction = empowering end-users to partly monetize their data (fairer re-distribution of consumer surplus) so transferring a share of data surplus indirectly (as users could have more resources and willingness to pay for a higher internet access price) or directly (as a service for data intermediation, e.g., Telcos as default data intermediaries under DGA)

Transit fee and vertical inetgration

- In long run, this solution might be undesirable for telcos: it creates a “make or buy” trade-off for large CAPs ► **incentives to vertical integration**
- Substitutability and competition with a level playing field (access fee or investments), yet ISPs would face competition vis à vis a vertically integrated CAP/ISP
 - a) vertically integrated CAP to distribute its must-have content only via its networks [asymmetric/one-way NN regulation!] [maybe art 6(6) DMA?] In any case, art 102 special responsibility against an abusive leveraging of market power. However, the typical remedy [i.e., BskyB] is content sharing in exchange of a payment [**possible complete overturn!!**]
 - b) when you have an ads model and CAPs efficiently monetize users, an integrated player could increase its profit by **lowering the access charge and choosing the profit-maximizing ads level**. [also enhanced by competition differential in the two sides]

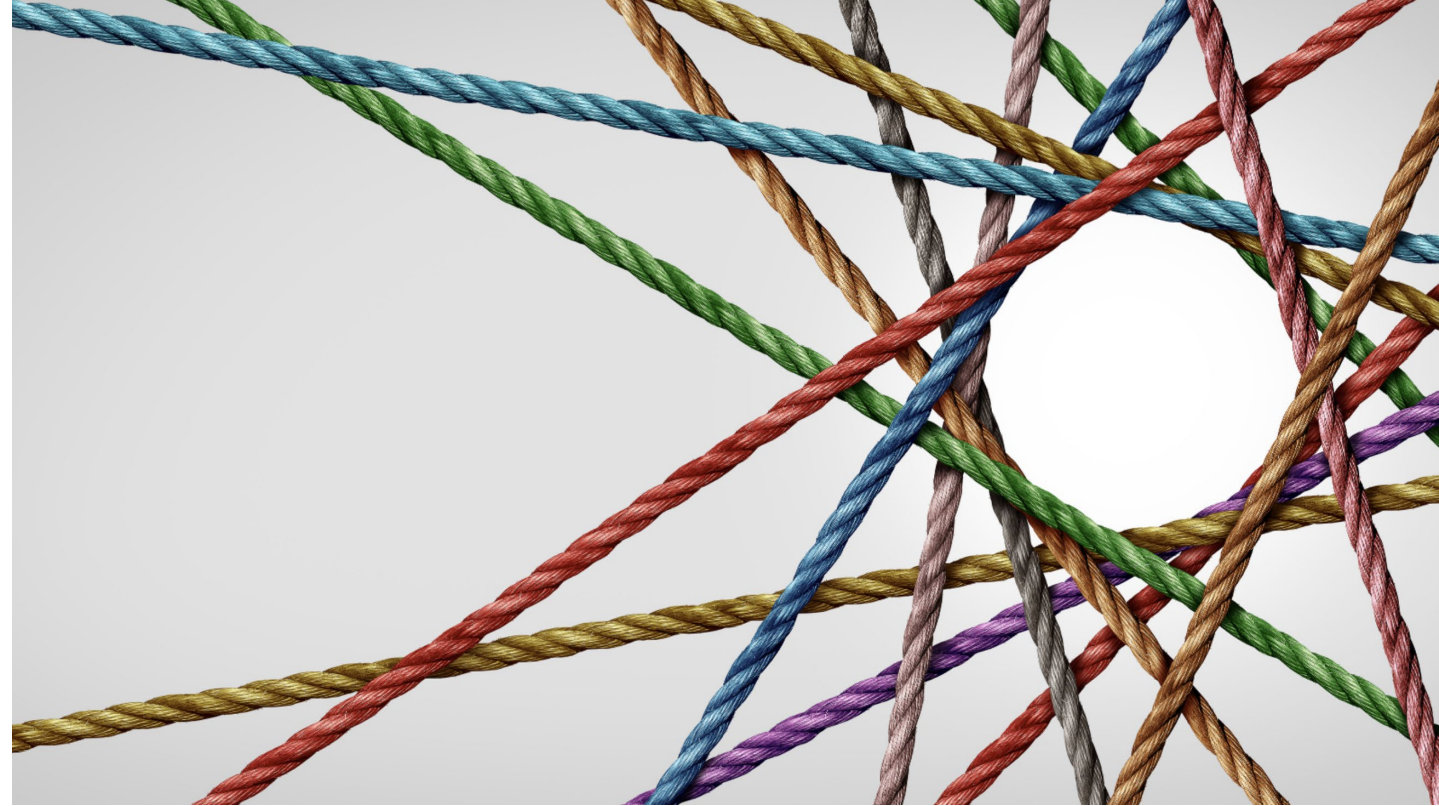
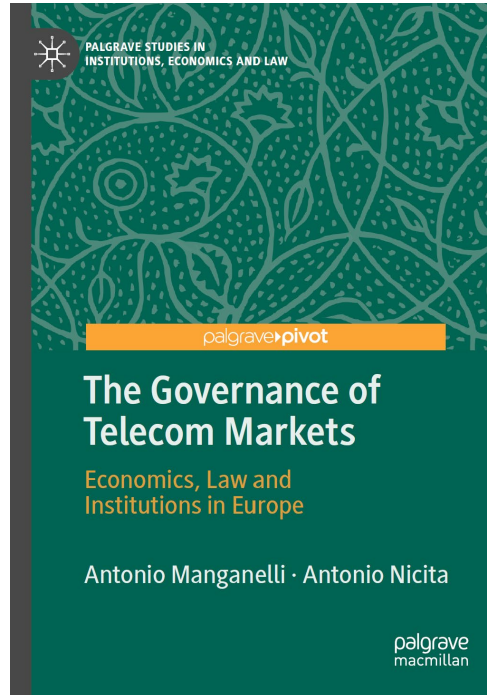
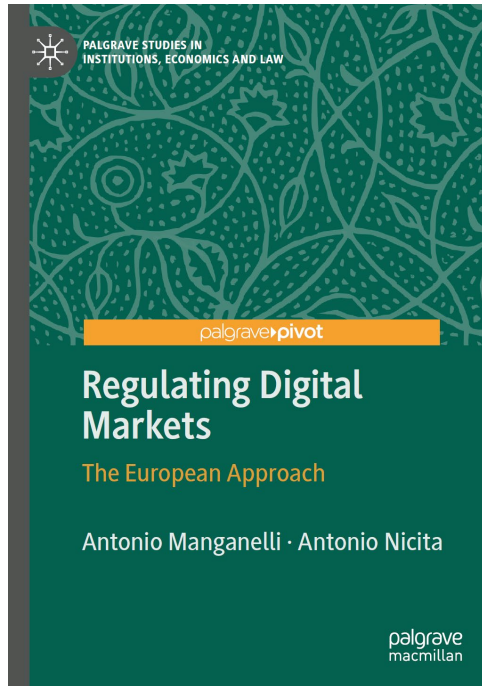
Exploratory Consultation: objectives and follow-ups

- Defining the extended ecosystem
- What are relevant investments and what players should be involved.
- Taking account all investment – consultation results (possible comparability – CAPS using some allocation driver for allocating investment cost)
- Positive externalities (at industry level and society level – connectivity as enabler of digital citizenship)
- Contribution of all players to the system / relationship with general taxation OTT

Exploratory Consultation: objectives and follow-ups

- Assessing the intersection of different regulatory frameworks
- Assessing the need of altering those framework and how
- Softening NN? How?
- Decreasing regulatory asymmetry, decreasing regulatory/competition intensity on ISPs side (ex-ante EECC and merger regulation)?
- Transit fee (for unsolicited contents/ads) ?
- Contribution to (EU) investment funds or, in alternative, network investments/ co-investments ?

Thank you !



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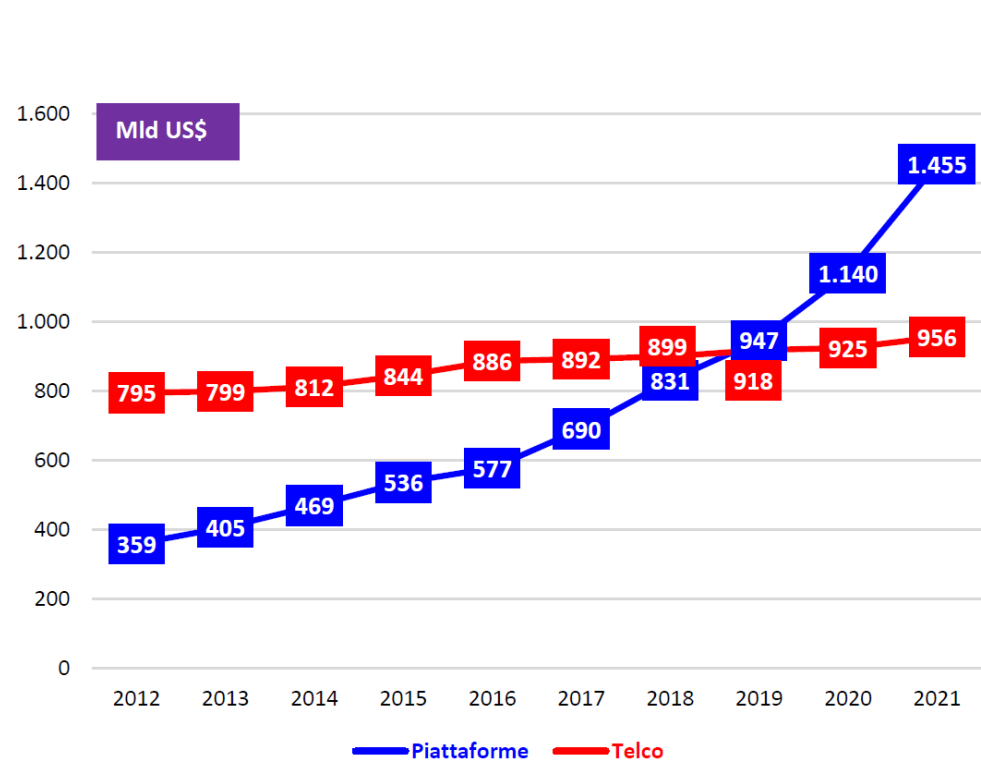
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Softening Net Neutrality ?

- Fair contribution is not a NN issue (not a traffic discrimination ISPs vs end-users), yet if this is an ecosystem you cannot look only at one side of the market
- NN rules considered at the base of Telcos inability to discriminate and monetise some surplus from OTTs. Nevertheless, both Telcos and public opinion are not willing to change NN rules. A marginal adaptation (even done by interpretation), consistent with the principle of the regulation (and recital 7), could be to implement a consumer-driven net neutrality, in the sense that end-users can chose to have prioritised some traffic, paying extra money to the prioritised CAPs for the “premium” service, which could be than transferred to ISP.
- This solution works well for CAPs receiving direct payments from users, e.g, Netflix, (even if could be applicable to you tube premium / meta new business model in Australia)
- See OFCOM consultation on revision of NN rules

BACK

Profits

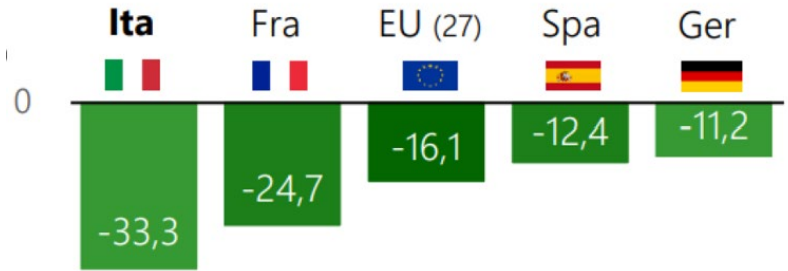


Mld US\$	Rank 2021	Var. (%) 2021/2020	Var. m.a. (%) 2021/12
Totale	1.455	27,6	16,8
Amazon	470	21,7	25,4
Apple	378	28,6	9,7
Google	258	41,2	19,9
Microsoft	185	20,6	10,9
Facebook	118	37,2	41,8
Netflix	30	18,8	26,4
Spotify	11	22,7	36,8
Twitter	5	36,6	36,1

Mld US\$	Rank 2021	Var. (%) 2021/2020	Var. m.a. (%) 2021/2012
Totale	956	3,4	2,1
AT&T	169	-1,7	3,2
Verizon	134	4,1	1,6
DT	129	7,7	7,2
China Mobile	123	10,4	4,3
NTT	111	1,8	1,2
China TLC	64	11,7	5,0
Vodafone	63	4,0	0,3
Orange	50	0,6	-0,3
Telefonica	46	-8,8	-5,0
BT	29	-2,3	1,6
Tim	18	-3,1	-5,6
Swisscom	12	0,7	-0,2
Iliad	9	29,2	10,2
- Asia	297	7,3	3,2
- USA	302	0,8	2,4
- EU	356	2,4	1,0

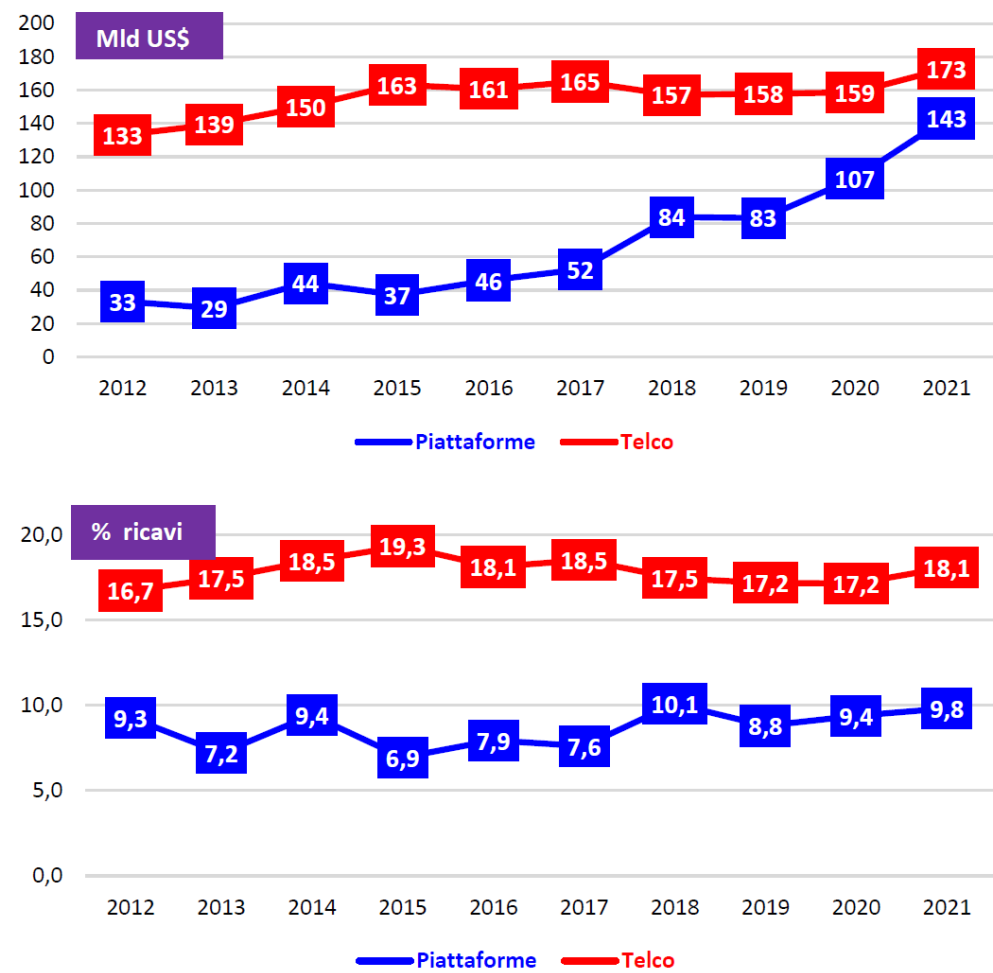
Fonte: elaborazioni su dati aziendali

Source: Agcom 2022



Telcos price variation (%) from 2011 to 2021

Investments



Source: Agcom 2022

Mld US\$	Rank 2021	Var. (%) 2021/2020	2021 % Ricavi
Totale	143	33,6	9,8
Amazon	61	52,1	13,0
Google	27	25,3	10,6
Microsoft	23	11,9	12,6
Facebook	19	32,0	16,5
Apple	10	18,4	2,7
Twitter	1,0	9,0	19,9
Netflix	0,5	15,8	1,8
Spotify	0,1	5,4	0,9

Mld US\$	Rank 2021	Var. (%) 2021/2020	2021 % Ricavi
Totale	173	8,9	18,1
DT	31	41,0	24,2
China Mobile	30	8,9	24,4
Verizon	20	11,5	15,2
AT&T	17	5,4	9,8
NTT	16	-2,1	14,5
Vodafone	12	4,9	19,9
China TLC	12	-4,4	19,3
Orange	10	2,4	20,6
Telefonica	7	-12,2	15,7
BT	6	-6,0	22,1
Tim	5	15,4	26,2
Iliad	3	21,5	32,3
Swisscom	2	3,7	20,3
- Asia	58	2,7	19,6
- USA	37	8,7	12,2
- EU	78	14,3	21,8