Should the Electronic Communications Code include provisions on co-investments?

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Experts, industry stakeholders and representatives of national regulators and the European Commission spoke at the BITS seminar on co-investment organised by Cullen International with the universities of Leuven and Namur on May 11, 2017. The influence of co-investment on NGA networks take-up and coverage, the intensity of competition and the impact on welfare outcomes were some of the issues discussed.

Co-investment is one of the main issues addressed in the proposed European Electronic Communications Code (EECC, Tracker) presented by the Commission in September 2016.

On the same day that BITS seminar was held, BEREC published its views on co-investment as part of a series of analyses on the EU Telecoms Framework Review (Flash), criticising both the Commission proposal and the draft report by the Industry, Research and Energy (ITRE) committee. In BEREC's opinion the provisions on co-investment in the draft Code should be deleted or rewritten.

Economic literature on co-investment has also informed the debate. Various economists have modelled the impact of different regulatory regimes (e.g. regulated access, co-investment, regulatory holidays) on NGN investments, NGA coverage, competition and welfare. According to the majority of the economic literature, co-investment seems to offer a balanced outcome when compared to other regulatory alternatives because:

- there is significantly more investment compared to a regulated access scenario; and
- competition is stronger than in a regulatory holiday scenario.

Last but not least, experts and industry stakeholders offered their views on co-investment practises, focusing on the delicate topics of how to address procedural aspects and set a risk premium in co-investment projects.

Cullen International has recently started tracking co-investment in fixed NGA network deployments (Table). The clearing of cases by national competition authorities (NCAs) will also be tracked as is already done for mobile network sharing cases (Tracker).

The debate on whether or not co-investment provisions should be included in the EECC will likely continue because co-investment deals will have a significant impact in broadband market reviews and competition authorities are likely to scrutinise them closely (see for example Telecom Italia and Fastweb JV case).

Commission proposal on co-investment

The proposed EECC would provide regulatory relief for very high capacity networks (VHCN) deployed under co-investment.

The Commission thinks that co-investment could mitigate some of the risks associated with investment in fibre networks while at the same time preserving competition in fixed broadband networks.

National regulatory authorities (NRAs) would not be allowed to regulate access to "*new network elements"* deployed by operators with SMP when the following three cumulative conditions are met (Art. 74 of the draft Code):

- the co-investment scheme is open to candidate co-investors under transparent, fair, reasonable and non-discriminatory terms;
- the deployment of new network elements contributes significantly to the deployment of very high capacity networks; and
- access seekers not participating in the co-investment can benefit from the same quality, speed, conditions and end-user reach as was available before the

deployment, either through commercial agreements or via regulated access.

Details of the above-mentioned conditions are further defined in Annex IV of the draft Code.

BEREC's view of the co-investment provision of the EECC and the draft ITRE report

BEREC's views of Commission proposal

In the assessment of the draft Code, BEREC is "*sceptical"* about the need for a separate provision on co-investment, pointing to:

- different co-investment models that have already been successfully used in France, Spain, Portugal and Switzerland in the absence of specific provisions enabling them; and
- the concern over the Commission's "*apparent preference for one business model over others"*.

BEREC's view of the draft ITRE report

BEREC is rather critical also of the European Parliament draft report by ITRE committee rapporteur Pilar del Castillo (EPP Spain) because it:

- *"introduces substantial regulatory uncertainty by anchoring legal provisions to a vague and aspirational definition of VHC networks"*; and
- *"seeks to carve out an exceptional regulatory framework for such networks"*.

BEREC's key takeaways

BEREC proposes two options:

- delete article 74 of the draft Code - according to BEREC, there is no need for a specific article on co-investment because "w*here it makes commercial sense, they will happen"* and it opposes provisions intended to "*incentivise co-investment at the expense of competition"*; or
- rewrite article 74 of the draft Code - to accommodate the "*legitimate desire to explicitly signal "openness" to this particular business model"*.

The sections below look at BEREC's proposed amendments if article 74 will not be deleted in order to "*prevent the creation of new monopolies, and to continue to promote effective competition"*.

Forbearance as an option

NRAs should be given an option, rather than an explicit obligation, to provide regulatory relief in case of co-investment ("*may*" vs "*shall*"). Such discretion would, however, be subject to the regulatory provisions of the EU Telecoms Framework and the EECC.

New networks elements definition

BEREC states that the draft Code should clarify what would be covered by "*new network elements"*. For instance, whether this term would refer only to future networks updates (e.g. fibre), "*not yet built*" network elements or also include already existing deployments (e.g. less than five years old). How long a network element would qualify as '*new*' should be clarified as well.

Conditions for co-investment

Rather than needing to meet three cumulative criteria as proposed by the Commission, BEREC proposes several non-cumulative factors that NRAs should assess when considering regulatory forbearance in case of co-investment.

If one or more of these factors "*sufficiently addresses"* competition problems in relation to new network elements, the NRA "*shall not be required"* to impose remedies on the

SMP operator.

Criteria for regulatory forbearance in case of co-investment (Cullen International)

Commission proposal – Sep. 2016	ITRE draft report – March 2017	BEREC assessment – May 2017
Forbearance when the deployment of new network elements: • is open to co-investment offers according to a transparent process and on terms which favour sustainable competition in the long term – the proposal contains a detailed overview of examples; • *"contributes significantly"* to the deployment of VHCN; • commercial or regulated access should remain available for access seekers who are not participating in the co-investment, under the same conditions as before the deployment.	Forbearance would: • apply only to VHCN as defined in the ITRE draft report • following the same criteria proposed by the Commission, except for the removal of the provision on the "*significant contribution"* to VHCN.	Forbearance relates to the following non-cumulative factors NRAs should take into account: • the "*deployment of the new network elements is to be funded through an existing co-investment"* – the examples of conditions are the same as in the Commission proposal; • the *"co-investors to the SMP operator are or intend to be service providers in the relevant retail market, and have a reasonable prospect of competing effectively with the SMP operator or, where the co-investors to the SMP operator intend to be wholesale-only providers, whether they are reasonably likely to host service providers that have a reasonable prospect of competing effectively with the SMP operator"*; • the deployment of the new network elements "*contributes significantly"* to the deployment of VHCN; • alternative access remains available for non-participants, as proposed by the Commission. BEREC adds a reference to '"*fair, reasonable and non-discriminatory access conditions, taking appropriate account of the risk incurred by the co-investors"*.

Economic literature on co-investment

Wolfgang Briglauer (ZEW Centre for European Economics – Presentation**)** and **Carlo Cambini** (Politecnico di Torino– Presentation) presented an overview of economic literature illustrating regulatory implications of co-investment.

NGA networks investments and level of coverage in relation to co-investment

Co-investment can be particularly beneficial in terms of investment incentives leading to larger investments in NGA network deployment than with access regulation, even though incentives are still lower than in absence of NGA regulation (Nitsche and Wiethaus, 2011). Alongthe same lines, Cambini and Silvestri (2012) found that co-investment leads to less incentives to invest than '*partial regulation*' (where ex ante intervention applies only to the legacy network, while the NGA network is left unregulated) but more than '*standard access*' obligations.

Inderst and Peitz (2013) show how co-investment reduces the duplication of infrastructure and may lead to more investments compared to cost-sharing agreements taking place after the network has been constructed. Mr Briglauer stressed that co-investment models appear particularly useful in enhancing investment in grey areas.

Co-investment has positive effects on NGA coverage and on the level of investments in NGA networks when compared with '*standard access*' obligations (Bourreau, Cambini and Hoernig 2016). The aforementioned academics compare three regulatory regimes:

- '*pure access*' regime: corresponding to the standard access regime;
- '*pure co-investment*' regime: where the entrant can ask the incumbent to share its infrastructure by sharing investment cost;
- '*co-investment with access*' regime: allowing the entrant to decide whether to ask for access or to co-invest.

Key findings are that '*pure co-investment*' leads to higher NGA coverage and higher investments than '*pure access*' because the former eliminates the so called '*wait and see approach*' that new entrants might adopt in case an access obligation is assured after network deployment.

In contrast with those views, Krämer and Vogelsang (2017) have found - by performing a laboratory experiment (role play) - that co-investment facilitates collusion while not stimulating further investments. Commenting the laboratory experiment, Briglauer and Cambini (2017) stressed that in actual markets co-investment practises led to higher roll-out as in the French and the Portuguese case.

Co-investment and intensity of competition

An issue related to co-investment is the risk of collusion among operators taking part in the co-investment project, leading to a reduction in competition.

According to Cambini and Silvestri (2012), compared to '*partial regulation*' and '*standard access*', co-investment represents the most balanced regulatory tool to incentivise investments while assuring a competitive environment. Indeed, '*standard access*' increases competition but decreases incentives to invest, whereas '*partial regulation*' raises investments but harms competition.

However, a reduction of competition in the areas covered by co-investment agreements is the cost to pay for a coordination at the investment level (Inderst and Peitz, 2013).

The laboratory experiment performed by Krämer and Vogelsang (2017) shows how co-investment facilitates collusion because of communications among firms. On the other hand, Briglauer and Cambini (2017) stress that NCAs have not detected cases of collusive agreements yet. During the seminar, Mr Carlo Cambini pointed out that the only investigation on co-investment opened by a competition authoritywas launched by the Italian competition authority (AGCM) only after the operators' notice (Telecom Italia and Fastweb' joint venture project 'Flash Fiber', Flash).

Impact of co-investment on welfare outcomes

Co-investment can potentially enhance consumer and social welfare by sharing costs and investment risks.

Nitsche and Wiethaus (2011) and Cambini and Silvestri (2012) show under different assumptions how co-investment brings higher welfare when compared to a fully regulated or completely unregulated approach.

Social welfare increases more under co-investment regimes than in a '*pure access*' regime. However, social welfare is higher with '*pure co-investment*' rather than with '*pure co-investment with access*' regimes if the access price is set relatively low.

Organisational mode of the co-investment agreement and demand uncertainty

Co-investment agreements are complex and access options constitute an opportunity cost making the incentive to co-invest for entrants less attractive.

Because of the co-investment agreements' complexity, Cambini and Briglauer (2017) suggested to leave the design of those agreements to the market avoiding specific ex ante restrictions.

Demand uncertainty would dilute the entrants' incentives to invest in new NGA networks deployment. Hence, '*pure access*' or '*co-investment with access*' regimes giving later entrants the chance to enter the agreement should ensure access charges reflecting the risk premium incurred by the former investors.

Experts and industry stakeholders debate on procedural aspects and risk premium in co-investment

Regulatory approval of co-investment agreements: procedural aspects

At the BITS seminar, industry representatives expressed broad support for deregulating network expansions where co-investment agreements meet certain broad criteria. However, concerns were raised over the need for flexibility to accommodate a wide range of possible business models and co-investment. Divergent views were expressed on whether the rules on exemption of co-investment agreements should be made optional or binding for NRAs.

Richard Feasey, University College of London, (Presentation) criticised any prescriptive '*tick the box*' approach as fundamentally flawed and bound to produce serious mistakes. To address the concerns over certainty and flexibility, he presented a possible alternative procedure - described as 'market testing' - to be applied by NRAs.

Under this procedure, any co-investment proposal would be submitted to the NRA to be examined on its individual merits. The proposal would be considered as forming a new geographic market for which the NRA would immediately undertake a new market review. The regulatory treatment of the geographic market outside the co-investment area would remain unchanged and would not require further review. Within a defined period (e.g. nine months), the NRA would be required to issue a binding decision defining SMP positions and potentially setting regulatory obligations to be applied to the co-invested network, if needed. If the terms of the co-investment agreement change in a way which is likely to alter the analysis, then the NRA would be able to revisit its former conclusions.

Under the proposed procedure, firms would benefit from the same right of appeal as in market reviews. An additional benefit of this alternative procedure is that it relies upon the SMP framework rather than upon an exemption from it.

Mr Feasey concluded that such an approach would require NRAs to make decisions on whether the competitive landscape is altered by the changes arising from the co-investment project. NRAs would have to act in a way similar to NCAs in merger cases. This would entail a close cooperation between authorities.

Rita Wezenbeek, European Commission, DG Competition, stated that from the NCA perspective the regulatory approach to co-investment deals would be "*business as usual*". In assessing co-investment agreements, the NCA would apply the established framework used for assessing joint ventures and other forms of restrictive agreements, in particular in the mobile sector (Tracker on mobile network sharing).

Ben Wreschner, Vodafone, explained that co-investment agreements shouldn't be subject to regulatory pre-approval. There should be a presumption of no regulation, if they meet certain competition-based criteria. Ultimately, a regulator should base the decision whether to intervene on the extent to which competition materialises.

Jan Krancke, Deutsche Telekom, pointed out that granting regulatory relief to co-investments is a step in the right direction. However, the conditions listed in Art. 74 and Annex IV of the draft Code are very prescriptive, excluding crucial single investments and many voluntary market-driven cooperation models to benefit from regulatory relief. Any investment in fibre networks should be welcome. There is no reason to favour a narrowly defined subset of investment models and to withhold regulatory incentives from common business models such as single investments with long-term wholesale offers.

Marc Lebourges, Orange, argued that making deregulation subject to a signed co-investment agreement, as opposed to a co-investment offer, would encourage regulatory gaming by access seekers. Access seekers would benefit from regulated access to the SMP network by testing the market without being subject to investment risk until they decide to sign the co-investment agreement. In addition, regulated access would put access seekers in a position to negotiate better conditions, effectively delaying the co-investment deal and deterring investment in the first place.

Carlota Reyners-Fontana, European Commission, DG Connect, observed that the risk of regulatory gaming by SMP operators is also present. The regulatory framework for co-investment should take all factors into account to achieve a balanced approach. She reminded the audience that the draft Code ensures continued access for those not willing to co-invest only to the wholesale products that were available before the investment took place, and not to the new assets. This provision is intended as a competitive safeguard.

Ms Reyners-Fontana also stated that the NRA decisions on co-investment agreements will be subject to the coordination process at the EU level, same as the current market analysis procedures. The first decisions on co-investment will be reviewed by the Commission and contribute to consistent approach.

Co-investment: when to set the risk premium?

One of the Commission's goals in promoting co-investment is to achieve sufficient competition in the fixed broadband markets to justify rolling back ex-ante access obligations of incumbent operators.

One principle generally accepted is that co-investors should have a "*better deal*" than mere access seekers. Three main justifications for that are:

- Co-investors are investing upfront while access seekers may request access several years later, when the demand for very high speed network materialises. So, the risk incurred by the former is higher.
- Co-investors pay capital expenditure upfront to build an infrastructure for which demand is unproven (Cullen International table shows the gap between NGA coverage and take-up), while access seekers generally mainly pay a monthly charge per commercially active access.
- Operators will be reluctant to co-invest if they believe they can get an equally good deal by merely seeking access later.

To be noted - for new networks, operators are not *'a priori'* investor or co-investor, access provider or access seeker. Each company may choose between these roles depending on the respective risk/benefit balance.

While the conditions listed in Art. 74 and Annex IV of the draft Code pave the way for a potential roll back of SMP obligations, NRAs would, in theory, still retain the legal power to impose wholesale access obligations on operators in the context of dispute settlement (Art. 59). However, it is hard to imagine a NRA removing SMP obligations for a geographic area covered by a co-investment project and then reintroducing access obligations through dispute resolution.

The pending and interesting question is when the risk premium should be set for co-investors wishing to invest not at the beginning of the co-investment project (Case 1) but later (e.g. two years after the launch of the co-investment project). An additional complexity is that operators that co-invest later in the project may either have committed from the start (Case 2) or commit at the same time as they invest in the project (Case 3). Investors bear a higher risk in Case 1 and Case 2 than in Case 3, and should therefore pay a lower price. NRAs will therefore have to assess three different generic cases shown in the table below.

Generic types of co-investors (Cullen International)

		Timing of commitment to co-invest	
		Now	**Later**
Timing of co-investment	**Now**	Case 1	-
	Later	Case 2	Case 3

In the spirit of Art. 74, co-investment should be open at any point in time for both early and late co-investors.

Marc Lebourges, Orange, explained that even the most qualified regulator could not objectively calculate the value of the option to invest until it is revealed. For this reason:

- a co-investor wishing to invest late, but ready to commit early (Case 2) may benefit from the price set for late investors in the original co-investment offer (Case 1);
- a co-investor investing late that also commits late (Case 3), should pay a higher co-investment price (not the original price for late investors). The higher price would depend on the revelation of the demand for fibre (and would be subject to NRA scrutiny).