

Fair share or effective incentives?

—Infrastructure investments and Sending Party Network Pays in the EU

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Background

European network operators are once again proposing that online services should fund telecoms infrastructure. The EU's largest telcos – dissatisfied with the existing regime of public subsidies and consumer payments – rehashed their arguments in an ETNO consultancy report published in May.

Specifically, the report points to a handful of online content providers, including the likes of Alphabet, Meta, and Netflix, that account for a significant share of network traffic. Europe's operators argue that asymmetric market capitalisation and disparities in sectoral regulation are preventing them from harnessing the revenues necessary to sufficiently contribute to Digital 2030 connectivity targets. In this vein, the ETNO report advocates for a means of orchestrated redistribution. Content providers may compensate operators themselves, or bypass telcos' shareholders and make a more direct contribution to network deployment, via “a fund or form of digital taxation.”

Meanwhile, in the US, FCC Commissioner Brendan Carr is pushing for content providers to finance efforts to close the digital divide. More specifically, Commissioner Carr is calling on Big Tech to pay for the Universal Service Fund (USF), which subsidises rural telecoms infrastructure, as well as access fees for under-served areas. Since the 1990s, every US carrier that provides interstate telecommunications services must contribute to the fund based on their end-user revenue. Carriers, in turn, add a universal service fee to their end-users to recoup this cost. The system, which has been in place since the 1990s, is *de facto* a sales tax. The USF then redistributes the funds to broadband providers to deploy and operate networks in high-cost or unserved areas.

Content providers contribute to telecoms networks in other jurisdictions. Korea has implemented a Sending Party Network Pays (SPNP) regime amongst Internet Service Providers (ISPs) since 2016. This has been followed by the passing of the Content Providers Traffic Stabilization Law in 2020, which obliges large platforms to carry out measures that ensure a “convenient and stable” service. Most content providers have complied with the law, but there are some notable exceptions. In an ongoing case since March 2022 in the Seoul High Court, SK Broadband sued Netflix for the costs associated with increased traffic and maintenance. In particular, SK had to invest in additional submarine cables between Korea and Netflix's Content Delivery Network (CDN) located in Japan, following a sudden surge in traffic from the popular *Squid Game* series.

Defining incentives

Given these international developments, it is easy to discern a general trend towards payments by ISPs towards payments by ISPs. However, the Korean and the US models are between them quite different. Where the USF is effectively a marginal redistribution of funds to promote universal and nationwide service, the Korean case is a mandated

change in business models based on network usage. Whether either of these solutions would actually create funds for network investments in Europe is far from given.

The payment structure for traditional telecoms is also based on discrete pricing on origination, transmission, and termination – which allows for interoperability and reasonable cost recovery, especially for smaller players. In contrast, the commercial arrangements on internet traffic build on a free peering model, where each network keeps the revenues from their respective users (“sender keeps all”) without any settlement, as it was cheaper than measuring and charging for any imbalances.

But unlike the idea of fairness – which is highly subjective – whether a “fair share” of the costs would inspire infrastructure investment is conditioned by the incentives and circumstances that shape market behaviour. It is specific to the conditions prevailing in the Single Market.

Here, the ETNO report claims that an annual ‘contribution’ of €20 billion would enable 5G network deployment with the potential to foster €36.16 billion in additional GDP by 2025. But these calculations disregard the fact that economic growth relies less on network investment and more on the uptake of services, like cloud computing and other Industry 4.0 applications.

When confronted with the notion of orchestrated redistribution in Europe and the US, content providers have hit back. They note that network operators already derive enormous value from their services. Telcos themselves acknowledge the complementary nature of these products, by marketing the likes of Netflix, Spotify and Disney-plus as add-ons to their own subscription packages.

The debate also re-opens questions on net neutrality, which is established in the EU Open Internet Regulation and the FCC Open Internet Order. Targeting content providers on the basis of data flows could amount to discrimination or violation of commitments at the World Trade Organization, depending on how fees are levied.

Identifying the underlying problem

It is clear that both sides of the fair share debate make passionate arguments. But when exploring solutions, it is important to identify the underlying problem at hand. In the EU, the real problem is how the network operators are unwilling to invest in their own core business – at least without regulatory interventions that create new revenues.

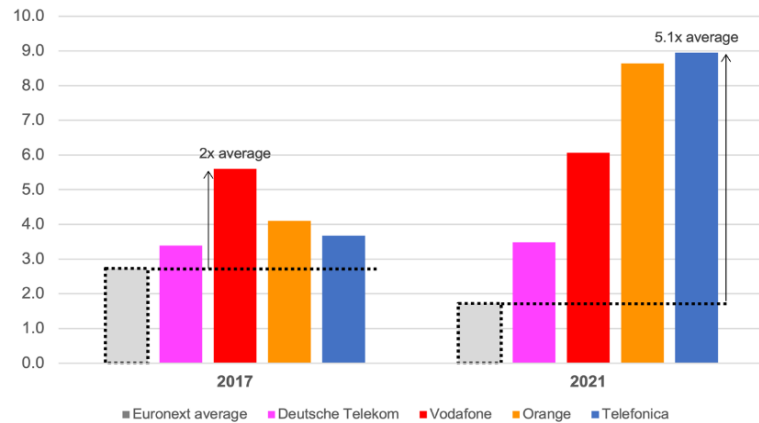
There is little evidence of a funding issue in the European telecoms industry. €130 billion of the Recovery and Resilience Facility has been earmarked for 5G and fibre deployment – which is on top of the existing support already allocated at both EU and Member State level for the next decade. Europe’s operators and investors also choose to commit €100 billion euros to telecoms projects *outside* of the EU (Eurostat, 2022).

In other words, European public funds are *replacing* cash that the private sector prefers to invest in emerging markets or the US. Whilst it is easy to blame our telcos, we should not forget that they are disincentivised from upgrading their own networks by structural impediments to local investment.

To begin, capital expenditure in Europe may not pay off. The revenues generated by EU operators are comparable to other OECD countries when measured *per byte*. However, the average revenue per user (ARPU) is relatively low as Europeans purchase less data than their counterparts in equivalent markets. Upgrades to local infrastructure are even less appealing in view of a regulatory regime which optimises for low consumer prices.

Aside from diminishing ARPUs, telcos' shareholders predominantly consist of state interests, financial institutions and pension funds as a legacy of prior public ownership. Ironically, these investors have tended to prioritise steady returns over Europe's digital future. Dividend-hungry shareholders are rarely enthusiastic about the up-front costs associated with portfolio diversification and the construction of secure, world-class networks.

Telco dividend yields vs. Euronext average (%)



Without other revenue streams, telco management has few means to appease their investors and uphold share prices. Their personal fortunes are also closely linked to market valuation via stock options. In this context, European operators exhibit a propensity to buy back their own shares and increase already-inflated dividend payments. As we see from the figure above, the EU's largest telcos have consistently issued dividends that are well above the market average. For example, Vodafone has used nearly €5 billion of its own cash to buy back shares over the last five years, as well as spending at least twice that much on dividend payments.

By comparison, the US market is relatively well-functioning, with ample investment in infrastructure rollouts. The problem there is a financing crisis in a public fund that rightly provides internet access in situations where it would be unprofitable for a private market to do so. Traditionally, the USF has been funded by telcos based on a percentage of the revenues they generate from long-distance and international phone calls. However, as demand for these services has diminished, so too has the funding base, leading to a rapid increase in the requisite 'contribution factor'. This peaked at around 33 per cent of long-distance and international revenues in 2022.

Concurrently, demand for subsidised internet access has also ballooned with the COVID pandemic, the proliferation of teleworking and the rising cost of living.

Alternatives to support our telecoms networks

In the EU, investment concerns over fixed and mobile networks cannot be ignored – especially in the context of sluggish rollouts. However, fair share payments risk legislative debate and diminished connectivity without addressing the underlying problem.

Instead of adding to the overall regulatory burden, the EU may consider reducing it. A telco must be allowed to generate a competitive profit from its own networks, rather than demanding revenues from a business customer connected to the open internet via another network.

Spectrum bandwidth auctions could be redesigned to favour prospective network investment instead of cold, hard cash. In Japan, the regulator grants radio frequency allocations by conducting a comprehensive review of operators' plans for quality networks. If the EU were to disregard the current auction system and adopt this approach, it would incentivise telcos to improve their offerings, whilst freeing up some capital for local investment and business diversification.

Conclusions

There is no denying that streaming has fundamentally changed the economics of the 'middle-mile' where telcos exchange their data flows. To some extent, Europe resembles the US and other markets with rapid growth in online streaming, which now accounts for a major share of traffic. But unlike the US, the total network usage and operator revenues in the EU are not growing at the same rate, and the EU telco market would have already contracted without streaming and other content services.

Both the EU and the US suffer some severe regional funding gaps, which a fund like the USF is intended to address. But lawmakers must think carefully about how we finance general-purpose services like internet access – or any other public or commercial service for that matter – weighing different fiscal policy options. For instance, \$65 billion was committed to rural broadband projects as part of the Infrastructure Investment and Jobs Act.

But Europe's problems are not about the distribution of investments – or even the availability of funds for investments overall. A European USF would also be redundant, as there are EU regional instruments that are well-equipped for such purposes.

Instead, it is abundantly clear that the EU has created a unique and structural problem for its telcos. Price caps and modest ARPUs contrive such that capital is funnelled towards shareholder dividends and overseas expansions. This vicious cycle is more evident in Europe than in any other major market.

Taken together, SPNP alone is not a sufficient answer for 5G investments in the EU. Regulating interconnection pricing will not deliver the investment that Europe needs since public co-funding alone has not altered structural impediments to investments and merely led to higher dividends, further share buybacks or more EU capital invested abroad.