

# Vertical Integration in Telecoms



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## INTRODUCTION

The telecommunication (TLC) industry has experienced, during the last years, very important changes. They involved either the technological field, for instance through the introduction of advanced services such as the broadband lines, or the regulatory environment, with the implementation of policy measures aimed at fostering competition, which is expected to ultimately benefit consumers through lower prices and higher service quality.

With reference to the fixed branch of the TLC sector, a relevant obstacle to the development of an effective competitive environment is the strategic importance of bottleneck assets, related to the so-called “last mile” network, i.e. the final portion of telecommunication network reaching the retail customers, that usually still belong to the incumbent operators.

Among other solutions, a powerful one (although one to be undertaken cautiously, or as a “last resort” solution, following the European Commission recommendations) has been seen in the vertical separation of the local access infrastructure; to date, within the European Union, the regulatory tendency is to promote functional separation of the wholesale segment, that includes the bottleneck assets, from the retail segment, which operates facing other retailers’ competition.

The aim of functional separation is to prevent some (or many) forms of discriminatory behaviors that the wholesaler-incumbent can potentially undertake against other retailers (competing against its own downstream branch), thus creating a market more favorable to competition.

These potential benefits in terms of improved competition, however, come together with some

potential costs and risks, for instance the impossibility of exploiting vertical economies of scope.

The aim of this work is to focus mainly on the latter point: after having presented the issues related to the implementation of vertical separation, it will provide a review of the empirical contributions on economies of scope in general, focusing on estimation techniques, either traditional or recently developed, and in particular on the empirical evidence related to economies of integration in fixed telecommunications.

## BACKGROUND

Telecommunications belong to the broad category of the so-called network industries, a group of sectors including, for instance, water supply, gas, electricity, transportation, and presenting the common characteristic of relying on a network as a key asset. As for the other industries of the group, also for telecoms the ownership of the network, and the “last mile” especially, represents a powerful competitive advantage, as this kind of asset is so expensive to replicate that quite likely presents some “natural monopoly” features, while the downstream retail segment, that needs access to the local network in order to reach the final users, allows certainly for the presence of several competitors.

Usually the “last mile” belongs to the incumbent firms, which in general operate also in the retail segment. Although the regulators impose mandatory access to the last mile network (i.e. the incumbent must grant access to other firms under fair and equal condition at regulated prices), nevertheless incumbents have a strong incentive, and also the operational tools, to undertake anti-

competitive discriminatory behaviors against the competitors. Discrimination can be price or non-price based. Price discrimination can, for instance, take the form of predatory prices in the retail market, subsidized (or “cross-subsidized”) by the margins recognized in the regulated wholesale segment; to prevent (or to detect) price discrimination, accounting separation, i.e. imposing just separated accounts for upstream and downstream units, is a sufficient tool (Cave, 2006). Non-price discrimination is also known as “sabotage,” and involves mainly quality difference in the intermediate input provision, i.e. the possibility that the incumbent does not provide access to competitors as timely and reliably than it does to its own downstream branch. As it is very difficult for regulators to verify such unfair strategies, a powerful “ex-ante” regulatory tool has been seen in functional separation. It is more pervasive than the “accounting” form, as the separated branches, still belonging to the same ownership, have not only to provide separated accounts, but also need to set-up separated compensation schemes for managers, and have some constraints in the circulation of employees and information.

In Europe, to date (on top of being supported by the Commission as a powerful extreme solution when mandatory access policies do not seem to be enough effective) functional separation has been fully implemented in three member Countries, UK (2005), Italy (2008), Sweden (2008), as explained in Tropina, Whalley, & Curwen (2010), and Crandall, Eisenach, & Litan (2010). Nucciarelli and Sadowsky (2010) and Teppayayon and Bohlin (2010) provide a deeper discussion of the functional separation of Telecom Italia and TeliaSonera, respectively.

Although the potential benefits in terms of competition of the vertical break-up of the incumbent are broadly recognized by the literature, nevertheless several contributions point out that functional separation is also a risky and costly policy, and that regulators should carefully compare such costs and risks with its potential benefits. Some of the main drawbacks relate to the following points.

- The separation process is irreversible, while the TLC technology is in rapid evolution (Waverman & Dasgupta, 2007). Therefore, it is possible, if not likely, that a break-up measure representing an optimal choice today will no longer be such in the future. However, at that point, undoing that measure would be impossible or, at least, very costly.
- Separation implies also independent decision making in the two branches, and this could lead to sub-optimal long term choices when particular kinds of investment, needing a high degree of coordination between subsequent stages, are involved, such as, for instance the investments in the next generation network (Waverman & Dasgupta, 2007). Anyway, Cremer, & De Donder (2007) explain that, under certain theoretical conditions, functional separation can be designed in such a way that this problem, that applies to ownership separation in a much more dramatic way, could be almost completely overcome.
- Functional separation prevents the possibility of exploiting most of the sources of integration efficiencies, namely the opportunities of avoiding the “double marginalization” problem and of enjoying (vertical) economies of scope.
- Finally, although break-up measures enhance service-based competition by favoring the access to the local network, they delay the development of infrastructure-based competition, broadly recognized as superior. In fact, in this case, the competitors construct their own network and do not need to rely on the incumbent infrastructure; intuitively, the easier the access to the latter, the lower the incentive for new entrants to invest in a new infrastructure.

Notwithstanding the importance of all these points, and although, in my opinion, to none of them has been devoted sufficient space in the

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