On January 30th, 2013, CER and Bocconi University gathered a number of scholars and experts from universities, regulatory bodies and the business community in a round table in Milan, to discuss a new study (“The economic effects of vertical separation in the railway sector”\(^2\)) prepared by Eves – Rail for the Community of European Railways (CER). CER is the representative association of most of the European rail companies on both the upstream and downstream sides of the market.

The CER’ study provides a deep and systematic insight into the pros and cons of different types of structural organization of the rail industry, by focusing mainly on comparative costs. While recognizing that vertical integration (VI) can occur according to different models, the cases compared are essentially represented by the “holding company”, on the one side, and full (ownership) unbundling (VS) on the other. While acknowledging that different conclusion might be drawn according to countries’ specific conditions, the general result of the study is that full unbundling between the management of rail infrastructures and of services is non convenient from the economic standpoint. The study also provides raw estimates of the comparative advantage of VI for the European rail sector as a whole: 6 to 14,5 billions euro/year, according to the dynamic of traffic density over time, which is seen as the most important driver of the economic benefits associated with VI. Such results have been drawn from an econometric analysis based on data provided by the member of CER.

I have no quantitative evidences to oppose the economic results of the study nor to question its reasoning that VI makes easier coordination of decisions, alignment of incentives, ecc. in general, unless adding potential scope and perhaps scale economies deriving from vertical integration. Finally, I’ll not question the possibility to envisage a regulatory framework less “traumatic” than full unbundling to guarantee parity of access (tracks and other essential facilities, charges, confidentiality of commercial information provided by train operator, etc), while keeping the benefits of vertical integration.

Indeed, the transition from the holding model to full unbundling might be a much more complicated deal than the mere transfer of companies’ shares, specially where the integrated parties operate in a strictly interlinked manner, as often occurs in the rail sector and as depicted by the study (what in turn raises delicate competition issues). In fact, interrelation between the two sides of the market appear to be structurally closer here than in other sectors such as telecommunication, electricity and gas, so that one must be careful in generalizing conclusions.

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However, several issues must be raised, which are substantially neglected by the study and can be summarised as follows:

- **a)** while the theoretical arguments related to the relative costs of coordination and realignment of incentive appear valid in principle, the quantitative estimates suffer from a too aggregated approach and are made weak and questionable not being supported by analytic data based on rail companies analytic accountancy;
- **b)** additional elements should be considered, which are bound to reduce – now and progressively - the delta of costs between VI and VS as appraised by the study;
- **c)** the (very) macro approach of the study should be complemented by a close investigation of distribution aspects – i.e., if and to what extent the benefits of vertical integration are spread over all the players; the study deserves poor attention to competition issues, taking into consideration that the “combination” of VI with “chinese walls” might ensure parity of access to the essential facilities, whilst parity of access to the market calls for additional remedies;
- **d)** there are two structural (bidirectional) conflicts between the economic advantages of VI and competition: the one, most discussed, according to which VI might undermine competition, to be offset by full regulatory remedies; the other one, which instead seems to be disregarded by the study, that competition reduces the benefits of VI.

Banal to say, in countries where competition in the market is running, hybrid, asymmetric full unbundling is already in place: the separation between the IM and the operators other than the present incumbent, often coupled with VI between the IM and the incumbent.

Hence, the discussion on the benefits of different models of VI vs. VS amounts to the advantages of preserving such integration models between the IM and the incumbent only.

In this regard, at least two aspects should be closely investigated:

- **a)** the first one deals with the correct calculation of the overall benefits of the “hybrid” VI structure of the industry – a model bound to get increasingly hybrid in step with rising competition;
- **b)** the second one has to do with the allocation of such benefits, i.e., with competition; besides analysing the most proper regulatory framework to guarantee equality of access to the essential facilities, the goal of ensuring fair competition also requires to investigate how the economic and organizational benefits of VI, including scope and scale economies due to integration (emphasis on “due to integration”, i.e., apart from the stand alone economies deriving from the size and structure of business of the train operator as such), can be shared equally by all the players.

Taking the above into consideration:

1. **first of all**, (i) the need for strict coordination of the two sides of the market – in terms of investments, technologies, operations, etc. – is quite obvious; (ii) the effectiveness of coordination is a function of the share of the downstream market being coordinated; (iii) the shorter is the “coordination chain” the lower the costs;
2. **the benefits of VI** come from direct internal coordination and alignment of incentives between the IM and the incumbent, as well as from scope and scale economies; the
largest portion of the virtues of VI relies on the existence of an integrated train operator representing by far the most important player and customer of the IM, which is able to ensure the IM steady long term revenues and return from investments – an exigency that cannot be underrated, independently of the source of funding;

3) the benefits of VI are highest in the extreme case of integrated “bilateral monopoly” (so to say), where both the upstream and the downstream markets are monopolized by the same actor or by integrated, self-coordinating actors – all the conditions outlined at point 1) above are fulfilled in this case (as remarked, not always efficiency and competition is self-reinforcing each other – regulation is to cope with that trade-off);

4) then, the benefits of VI are a function of the market share of the incumbent (the greater its market share, the higher the extent of internal coordination, the lower the costs of coordination and re-alignment of incentives between the upstream and downstream markets);

5) hence, the benefits are bound to decrease as competition increases - i.e., as the share of the unbundled market rises; it follows that the need for a kind of external coordination and alignment of incentives exists now and is hopefully expected to rise in the future;

6) in the very long run, if competition grows substantially (like in telecommunication and electricity markets) the benefits of (residual) VI are bound to fall drastically, theoretically up to levelling pros and cons of the two models – but that is an highly hypothetical situation and is for the very very long run, anyway;

7) instead, in the short/medium period the benefits from internal coordination might be considerable, as the study suggests, but:
   (i) the immediate benefits are (automatically) for the integrated parties;
   (ii) allowing all the train operators to gain equal advantages requires that internal coordination be complemented by careful and non discriminatory external coordination and alignment of incentives – a costly situation, as indicated by the study, which will reduce the net benefit of VI; moreover, net benefit are further lowered by the fact that VI increases the need for regulation and the related administrative costs, to ensure parity of access to both the essential facilities and to the economic benefits of VI, unless…
   (iii) one assumes that the incumbent is a kind of Alfred Marshall’s representative firm or acts as “representative agent” of the universe of train operators, which is an highly unrealistic hypothesis - beyond the incumbent’s good will and fairness, the players have different objectives, dimensions, structure of business, incentives’ responses, etc.);

7) The estimates of the rising benefits of VI along with the growth of traffic (7 to 14 billion/year, according to the study) should consider that a portion of the new traffic will be made by companies operating in full unbundling regime (hence higher coordination costs), so that the delta of costs between the two models will reasonably decrease.

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3 Incidentally, I don’t see public funding of the IM a necessary watershed, as it seems to be argued in the study (the benefits of VI would be greater where investments are financed by the State), in so far this is seized to compensate the IM for costs exceeding the (regulated) infrastructure charges, i.e., to restore its incentive to invest and operate on reasonable commercial bases. Where this condition is fulfilled, the origin of funds makes no conceptual difference.
Therefore, given the present (and perspective) hybrid VI/VS situation, the direct coordination between the IM and the incumbent should be complemented by expensive actions for external coordination and by more extensive and costly regulation, which likely reduce the overall net benefit of VI: benefits that are bound to fall further as competition rises.

Therefore, the appraisal of the overall net benefit and its dynamic over time would be important in order to get to final conclusions on the ground of economic efficiency of VI vs. VI.

From the competition standpoint, some really challenging questions arise in order to allow all the competitors to share such benefits to the same extent of the incumbent:

(i) how and to what extent the benefits from VI are presently apportioned between the IM and the incumbent? The study does not provide any information in this regard, despite that is a basic question, since the benefits appropriated by the IM only will be (subject to proper regulation) “automatically” transferred downward;

(ii) then, how to skim the incumbent’s “position rent” due to integration (for instance, the incumbent should only keep “stand alone” scope and scale economies - i.e., as if it were separate from the IM) and how to shift the whole benefit to the IM,

(iii) in order to allow the latter to equally relocate such advantages to all the players?

Taking for good the theoretical results of the study, I believe that these two sets of aspects, respectively dealing with efficiency and competition, should be investigated deeply in order to draw final conclusions and to introduce correct regulatory remedies. The costs of additional regulation required by the VI model should be taken into consideration to appraise the total pros and cons of the different models.

Under VI regime, regulation cannot be confined to the parity of access to the essential facilities but must also deals with the allocation of the benefits produced by that model, including scope and scale economies. Lacking the latter step, the risk exists to have parity of access to the infrastructure coupled with disparity of access to the market.