

# Transport, Communications and Infrastructure in a United and Effective Europe

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#### 1. Drawing the policy area's boundaries

This policy area comprises the Single Market's backbone. The use of the singular "backbone" rather than the plural "backbones" indicates a holistic approach in which transport, communications and infrastructure are distinct aspects of the same overall structure. While acknowledging their unique instrumental roles for the Single Market, it should be noted that these three parts have different legal bases:

of Rome is now Title VI of the TFEU, applying to services by rail, road and inland waterway and, for sea and air transport, the European Parliament and the Council have the appropriate powers.

Transport, communications and infrastructure are at the heart of the Single Market. However, a more united and effective Europe requires a new and upgraded relevant infrastructure, greater liberalisation, and service provision regulated by more homogenous rules. This reform process has financial, social and political costs. In spite of these, all Member States have an incentive to advance the Single Market project. Incentives for Member States to leave the core group, once the project has started or has been completed - thus causing huge damages - should be counterbalanced by heavy penalties. The current crisis reduces the risk that public investment crowds-out private investment. However, public resources are needed in this policy area. As such, a golden rule for the Stability and Growth Pact to exclude investment spending in EU infrastructure as far as the Excessive Deficits Procedure is concerned would be welcome. Finally, avoiding sub-28 governance models could improve the EU's influence over the international rules of the game. Europe's "single market" has to evolve into "a single Europe in the global market" where unity is physically intertwined with effectiveness.

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- for communication services (in their electronic¹ form): although there is no explicit reference in the Treaty of Rome, transport and communication services are included on the periphery of the services of general economic interest which occupy a distinct place "in the shared values of the Union as well as their role in promoting social and territorial cohesion" (art. 14 TFEU). EU action was initially triggered by the liberalisation process, starting at the end of the 1980s, implementing the Single Market provisions notably the free circulation of services in the sector.
- for infrastructure: the Maastricht Treaty established an EU policy for Trans-European Networks (TEN), now Title XVI of the TFEU, in the areas of transport, telecommunications and energy infrastructure.<sup>2</sup>

Thus this policy area is made up of:

- two vertical sectors transport and communication services for which the EU defines
  the rules by Single Market principles (such as: liberalisation and the contestability of
  national markets; regulation, where there is no room for competition; and interoperability where there is no standardisation); and
- a horizontal layer in which the EU focuses upon the infrastructure required to provide the transport and communication services by designing and co-financing along with the Member States projects of common interest.

These two orthogonal approaches - services and infrastructure - even though they have different legal bases, overlap since services and infrastructure should develop hand-in-hand. A user cannot enjoy a broadband service if there is no network reaching her/his device, and a European-wide rail network is essentially useless without a pan-European rail service. Moreover, the conditions intended to foster liberalisation might have an impact on the profitability of an investment in infrastructure; and the standards and interoperability rules might have an impact on the way infrastructure is built. Thus while networks are the physical backbone of the Single Market, they are only valuable with a fully functioning Single Market for transport and communication services.

<sup>&</sup>lt;sup>1</sup> Electronic communications comprise networks and services and include: fixed-line voice telephony; mobile and broadband communications; and cable and satellite television.

<sup>&</sup>lt;sup>2</sup> In this paper, infrastructure refers to its part relevant for transport and communication services.

Finally, even transport and communications share a common destiny since the former requires the use of the latter. The synergy between transport and communications (and energy too) might be visualised through those particular projects intended to make our cities "smart",<sup>3</sup> for example, traffic management and information systems might increase effectiveness and efficiency of transport services by reducing congestion and emissions. Smart cities will be the tile-mosaic illustrated in the EU's Europe 2020 strategy:<sup>4</sup> innovation for sustainable and inclusive growth, where inclusiveness is achieved due to a network assuring efficiency as well as social and territorial cohesion.

#### 2. A more united and effective Europe

Before indicating what the EU needs to be more united and effective in this policy area (section 2.2), unity and effectiveness must be defined in the context of this paper (section 2.1).

#### 2.1. Defining effectiveness and unity

Effectiveness has got both an internal and an external dimension. The internal dimension is associated with the Single Market. Effective transport and communications, infrastructure and services together are a driver guaranteeing the EU's four fundamental freedoms: free movement of goods,<sup>5</sup> persons, services and capital.<sup>6</sup> Of course other policies contribute to the creation of the Single Market (e.g. taxation, labour law) and, as stated in this paper's introduction, this policy area's components are its backbone.

<sup>&</sup>lt;sup>3</sup> This self-reinforcing relationship between transport and communications confirms that the latter are not celebrating the "end of geography". That was trumpeted in the 1990s: see, for example, Stephen Graham and Simon Marvin, *Telecommunications and the City. Electronic Spaces, Urban Places*, London and New York, Routledge, 1996. Since then the UN expects the world's urban population to grow and even the servers of the most virtual service - i.e. cloud computing - must be located taking into account the local climate, available infrastructure and legal framework.

<sup>&</sup>lt;sup>4</sup> European Commission, Europe 2020. A strategy for smart, sustainable and inclusive growth (COM(2010) 2020 final), 3 March 2010, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=celex:52010dc2020:en:not.

<sup>&</sup>lt;sup>5</sup> Part 3, Title II TFEU: "Free movement of goods.

<sup>&</sup>lt;sup>6</sup> Part 3, Title IV TFEU: "Free movement of persons, services and capital".

The Single Market draws the boundaries of the European model, the social market economy;<sup>7</sup> and services of general economic interest<sup>8</sup> (SGEIs) - such as transport and communications - are a clear example of how this model works.

Regarding the model's "market" component, the aim is on the:

- demand side: customers should be able to obtain services from any of the undertakings present in the EU, regardless of their location; and
- supply side: undertakings should be able to competitively offer services outside their Member States and target end-customers located throughout the EU.

Against this background, the EU is not a federal system but rather a confederation of different States. The EU does not have the political power to impose homogeneous competition rules without taking into account national sovereignties and a variety of significant local characteristics. Thus national markets still have different degrees of openness and, in sectors such as transport and communications, liberalisation processes have not yet achieved their full potential.

However the secondary legislation, including that recently proposed by the European Commission, is devoted to levelling the "playing-field" to provide an efficient allocation of resources in the economy, to foster innovation, and therefore to increase citizens' welfare. Such legislative levelling can only foster so-called contestability9 while it is business profitability that encourages their entry into new geographic markets leading to to fully-fledged competition in the Single Market.

The reference to "citizens" instead of "consumers" is the link to the adjective "social" that precedes "market", since for SGEIs such as transport and communications, every citizen

 $<sup>^{7}</sup>$  With the Lisbon Treaty, the EU's model is now clearly indicated by Art. 3 par. 3 TEU.

SGEIs are economic activities that public authorities identify as being of particular importance to citizens and that would not be supplied (or would be supplied under different conditions in terms of quality, safety, affordability, equal treatment or universal access) if there were no public intervention. European Commission, *A Quality Framework for Services of General Interest in Europe* (COM(2011) 900 final), 20 December 2011, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=celex:52011dc0900:en:not.

<sup>&</sup>lt;sup>9</sup> See William J. Baumol, "Contestable Markets: An Uprising in the Theory of Industry Structure", in *The American Economic Review*, Vol. 72, No. 1 (March 1982), p. 1-15. According to Baumol, a market is contestable when incumbents restrain their pricing behaviour by the threat of entry by competitors. Far from a theoretical perspective, entry and exit barriers exist so that contestability cannot produce the welfare effects that competition makes in a market; however contestability is undoubtedly precursory to the competition.

is a consumer. In a market where competition is "effective"<sup>10</sup> the outcome is welfare-enhancing for consumers. But that outcome arises by taking a long-term perspective. In the short-term, the process of resource re-allocation towards a more efficient equilibrium means there are, physically, winners and losers.

The EU is not a mere theoretical model (even though theory is needed in outlining a policy's direction) and the "market is an instrument and not an end in itself". Since every citizen is often a user of transport and communications services, those unable to take the benefits of the market - the ones who cannot access services at a certain minimum quality level - need support. The case for financial support requires building infrastructure and/ or providing services where private investors and/or operators do not find a business case for doing so.

Thus "sectoral legislation adopted at EU level has always carefully balanced the need to increase competition and the use of market mechanisms with the need to guarantee that every citizen continues to have access to essential services of high quality at prices that they can afford."<sup>12</sup>

The EU is not a "fortress" and the internal dimension's effectiveness risks being hollow if it is not coupled with an external one. Transport and communication services interact with the rest of the economy and, in a globalised economy, they link the Single Market with the rest of the world. So effective policies are required to strengthen the EU's competitiveness and require international cooperation. Competitiveness has a relative understanding and

<sup>&</sup>lt;sup>10</sup> A basic microeconomics course teaches that perfect competition is the best equilibrium for consumers. But "perfect" is an attribute linked to a theoretical simplification only valid in textbooks. While "effective" is the usual attribute added to the word "competition" in EU secondary legislation (e.g. Art. 2 par. 1 of Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings; Art. 8 par. 1 of the Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services) as well as in Euro-jargon (e.g. Commissioner Mario Monti's speech at UNIFE annual reception on 21 May 2002 titled *Effective competition in the railway sector: a big challenge*, http://europa.eu/rapid/press-release\_SPEECH-02-216\_en.htm). Especially in regulated sectors such as transport and communications, effective competition is still a benchmark rather than an achieved target. See, amongst others: Christian M. Bender, Georg Götz and Benjamin Pakula, "'Effective Competition' in Telecommunications, Rail and Energy Markets", in *Intereconomics*, Vol. 46, No. 1 (January/February 2011), p. 4-35, http://www.ceps.be/node/4141; J. Scott Marcus et al., *How to Build a Ubiquitous EU Digital Society* (PE 518.736), Brussels, European Parliament, November 2013, http://www.europarl.europa.eu/RegistreWeb/search/simple.htm?language=EN&reference=518.736.

<sup>&</sup>lt;sup>11</sup> Mario Monti, *A new strategy for the Single Market at the service of Europe's economy and society,* Report to the President of the European Commission, 9 May 2010, p. 12, http://ec.europa.eu/internal\_market/strategy/docs/monti\_report\_final\_10\_05\_2010\_en.pdf.

<sup>&</sup>lt;sup>12</sup> European Commission, A Quality Framework for Services of General Interest in Europe, cit., p. 9.

puts the EU in a stronger position *vis-à-vis* the rest of the world. Competition is a driver for competitiveness. European firms facing the pressure of more competitors in a wider internal market are fitter to face international competitors world-wide. However, when economies of scale are at stake, then concentrated markets - eventually dominated by European "champions" - might guarantee competitiveness. Concentrated markets (e.g. after merger and acquisition operations) allow exploitation of economies of scale, thus increasing the productive efficiency of firms and their competitiveness.<sup>13</sup> Yet a reduced number of firms have more leeway to increase their prices, thus hampering allocative efficiency - the cornerstone of competition assuring the market *equilibrium* maximises both social and consumers' welfare.<sup>14</sup>

If a concentrated market does not allow the positive effects of productive efficiency to overcome the negative effects of a loss in allocative efficiency,<sup>15</sup> then a solution to this trade-off between competition and competitiveness might be found moving from a static approach to a dynamic one. The constant evolution of a market's features (e.g. consumer demand and/or production technology) means that the extra-profits of firms in a concentrated market are not long-lasting. This is due to the cyclical process fed by innovation, which replaces obsolete products.<sup>16</sup> Therefore, to couple competition with competitiveness, the Single Market should be a level-playing field not only in geographic terms (companies able to sell in all the Member States) but also in product terms by creating conditions enabling companies to innovate.

Still, with reference to the external dimension of effectiveness, since rule-setting is undertaken in the context of multilateral bodies, the EU should have sufficient bargaining power to push or to defend its view such as, in general, its social and environmental model.

<sup>&</sup>lt;sup>13</sup> Productive efficiency allows a firm to minimise production costs and it is not possible to produce that given quantity of output at a lower cost.

<sup>14</sup> Allocative efficiency is achieved in a market when firms produce their output until when the marginal cost of a unit they produce is equal to the value of such a unit for consumers. In that instance, those consumers willing to pay the price at least equal to the marginal cost of producing the good are supplied with it. Thus the quantity produced of the good is optimal and social welfare (i.e. the sum of consumers' and producers' welfare) and the share of consumers' welfare are maximised.

<sup>&</sup>lt;sup>15</sup> Williamson explained how a loss in allocative efficiency resulting from greater market power could be compensated by an increase in productive efficiency. Oliver E. Williamson, "Economies as an Antitrust Defense: The Welfare Tradeoffs", in *The American Economic Review*, Vol. 58, No. 1 (March 1968), p. 18-36.

<sup>&</sup>lt;sup>16</sup> Joseph A. Schumpeter, *Capitalism, Socialism and Democracy*, New York and London, Harper & Row, 1942.

The definition of unity can be understood in two possible ways. The first is to assess unity based on policy outcome (output legitimacy, and so its effectiveness), such as the decrease in heterogeneity between EU components<sup>17</sup> (Member States, regions and citizens) as far as transport and communication services' availability and infrastructure endowment are concerned. The second way might be based on the inclusiveness of the decision-making process (input legitimacy).

Unity, from an output legitimacy perspective, overlaps with effectiveness since the social market economy should guarantee that, in any area of EU intervention, nobody lags behind. However, when unity, from an input legitimacy perspective, is understood as consensus, then some decisions, inspired by effectiveness, might suffer a shortcoming of democratic legitimacy because the traditional co-decision process might not be successful in taking into account the very particular interests of each of the EU's components. An example is that by designing a high-speed train network or by building a new airport, everyone would like to enjoy the new transport benefits of such infrastructure without suffering either from disadvantages, such as the altered natural landscape and/or from the increased noise of the new service (a typical case of NIMBY - "not in my backyard" - syndrome).

Such a trade-off could theoretically be resolved with "deep-pocket" expenditure. So, in the previous example, a train station could be built in every city enabling a super-fast train to run underground and so minimise the environmental impact and the delays caused by making frequent stops). However a more realistic approach leads either to adopting a long-term perspective, in which everyone - even those affected negatively by the new infrastructure - could benefit from the re-allocation of resources within a single market, or to recognising that the EU decision-making process has appropriate democratic legitimacy when Single Market issues are at stake. As decision-making in the EU takes place at different levels (local, national, European), EU-level decisions to build infrastructure, such as a TEN-T railway, are likely to encounter opposition from more local parts of the democratic scale. If the long-term perspective is to succeed, then the appropriate European body must decide what is in the wider interest, regardless of local democratic feeling.

<sup>&</sup>lt;sup>17</sup> According to art. 3 par. 3 of the TEU, the EU "shall promote economic, social and territorial cohesion, and solidarity among Member States."

#### 2.2. The steps towards more unity and effectiveness

Before detailing what is required to increase unity and effectiveness in this particular policy area, this section 2.2 will outline the common features needed to produce a consistent view. As stated, the EU - according to the aims set out in the EU Treaties - has not achieved a fully functioning Single Market and this failure is partly due to shortages in transport, communication services and related infrastructure. Since the market, by itself, cannot achieve an equilibrium consistent with a social market economy model, then some public intervention should be permitted either to correct the market failures and/or to decrease inequalities within the EU.

Since the key rule of the Single Market is competition,<sup>19</sup> public intervention is needed for a couple of reasons. First to liberalise a sector by eliminating entry and exit barriers. Secondly, when necessary, to create the framework for effective competition by ex-ante regulating access conditions, namely price and quality, concerning monopolist-owned essential facilities<sup>20</sup> (such as access to a telecommunication network, where cable operators are not available, or to a railway network), especially when the same monopolist is vertically integrated. In such a case, that firm could enjoy an unfair advantage *vis-à-vis* other competitors in the retail market by selling inflated essential wholesale services.<sup>21</sup>

<sup>18</sup> For some authors competition is not fully effective "given, for instance, their high level of State intervention, the number of competition cases, and the still important role of the historical incumbent, sometimes representing bottlenecks for further market opening. An exception is offered by air transport passenger and some eComms [electronic communications] segments like mobile communication services, whose prices have fallen substantially in the EU after 2002." Emmanuelle Maincent, Dimitri Lorenzani and Attila Eordogh, "Market Functioning in Network Industries - Electronic Communications, Energy and Transport", in European Economy Occasional Papers, No. 129 (February 2013), p. 25, http://dx.doi.org/10.2765/40736.

<sup>&</sup>lt;sup>19</sup> Even though "competition" has been formally downgraded in the Treaty ranking with the entry into force of the Lisbon Treaty, this paper still considers the role of competition remains unchanged since the Treaty of Rome. See, among others, Giorgio Monti, "EU Competition Law from Rome to Lisbon - Social Market Economy", in Heide-Jorgensen et al. (eds.), Aims and Values in Competition Law, Copenhagen, DJØF Publishing, 2013, http://www.eui.eu/Documents/DepartmentsCentres/Law/Professors/Monti/GiorgioMonti-Cph-AimsandValuesinCompetitionLaw.pdf.

<sup>&</sup>lt;sup>20</sup> Certain services, which are at the heart of transport and communications, are provided more efficiently by just one undertaking due to the huge fixed and sunk costs of the network infrastructure and the relative low-demand which does not over-burden the capacity. These services are known as "natural monopolies".

<sup>&</sup>lt;sup>21</sup> This practice, named "margin squeeze" is such that "a dominant undertaking may charge a price for the product on the upstream market which, compared to the price it charges on the downstream market, does not allow even an equally efficient competitor to trade profitably in the downstream market on a lasting basis". European Commission, *Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings* (2009/C 45/02), 24 February 2009, par. 80, http://eur-lex.europa.eu/LexUriServ.do?uri=celex:52009xc0224%2801%29:en:not.

Since the vertically-integrated undertaking that controls the essential facility has the expected incentive to discriminate against competitors, wholesale prices paid by the latter to access the essential facility should be set by a public authority taking into account the cost of an efficient undertaking that owns and manages the essential facility while allowing for a reasonable profit. There are ever-developing regulatory techniques (accounting analysis, benchmarking, price-caps) to decrease the information asymmetry between the regulator and the regulated undertaking to shape non-discriminatory models of wholesale service. In that context, an effective model should foresee a separation between the undertaking owning and operating the essential facility and the undertaking competing with all the other competitors in the downstream retail market.

Between an upstream and downstream market there can be different types of separation. These range from a simple accounting separation (within the same vertically-integrated firm) to ownership separation passing through functional separation<sup>22</sup> and legal separation under the same ownership.<sup>23</sup> The clearer such separation is then, the better it is for regulation and for effective competition at the retail level (and thus in citizens' interest). Moreover, a clear-cut separation does not hamper effectiveness by reducing the incentive of the undertaking controlling the essential facility to invest. Even though there might be a hold-up problem when the investment by an upstream firm is tailored to meet the needs of another party and cannot be used by a third party,<sup>24</sup> a competitive downstream market eliminates that risk since that investment undertaken by the owner of the essential facility is unlikely to be specific,<sup>25</sup> or in Williamson's words, idiosyncratic.<sup>26</sup>

<sup>&</sup>lt;sup>22</sup> Functional separation requires that a vertically integrated undertaking has "to place activities related to the wholesale provision of relevant access products in an independently operating business entity. That business entity shall supply access products and services to all undertakings, including to other business entities within the parent company, on the same timescales, terms and conditions, including those relating to price and service levels, and by means of the same systems and processes" (art. 13a of the Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities).

Martin Cave, "Six Degrees of Separation: Operational Separation as a Remedy in European Telecommunications Regulation", in *Communications & Strategies*, No. 64 (2006), p. 89-103, http://mpra.ub.uni-muenchen.de/3572.

<sup>&</sup>lt;sup>24</sup> This places the investor at a disadvantage, as the party for whom the investment is made can behave opportunistically based on the fact that the investor has limited possible alternatives to utilise the investment for alternative purposes. Vertical integration between the parties would internalise the gains to be made from the investment and so remove the incentive for opportunism.

<sup>&</sup>lt;sup>25</sup> SPC Network, *Equivalence of Input and Functional Separation: A Framework for Analysis*, 26 February 2009, http://spcnetwork.eu/uploads/20090226\_EFS\_Report.pdf.

<sup>&</sup>lt;sup>26</sup> Williamson wrote that "the crucial investment distinction is this: to what degree are transaction-specific (nonmarketable) expenses incurred. Items that are unspecialized among users pose few hazards, since buyers in these circumstances can easily turn to alternative sources, and suppliers can sell output intended for one order to other buyers without difficulty. Nonmarketability problems arise when the *specific identity* of the parties has important cost-bearing consequences. Transactions of this kind will be

As included within the perimeter of the SGEIs, for essential transport and communication services,<sup>27</sup> every user should access these services at a reasonable quality and an affordable price.<sup>28</sup> When the market does not provide such services, or does not provide them upon fair conditions, then a public authority could compensate the service provider for the net cost incurred in building the infrastructure and/or in supplying the service in unprofitable areas. But each time there are public resources at stake, then strict conditions should be met to reduce the negative impact of a State aid.<sup>29</sup> Thus, where there is no room for competition in the market and the public service provider is not chosen pursuant to a public procurement procedure (competition for the market), the compensation should be calculated by taking into account the cost of an efficient undertaking providing that specific service.

The European added value,<sup>30</sup> though fundamental in pushing the liberalisation process, is increasing homogeneity of national legal frameworks to smooth cross-border business and for financing those relevant "missing links" which are necessary to reach an adequate level of effectiveness of European infrastructure. Since the EU is a confederation of different States, different national level standards and procedures (e.g. authorisation) increase the cost of cross-border operations.

National liberalisation processes, along with homogenous rules, are the recipe for the level-playing field in the Single Market. In this seamless market, transport, communications and the relevant infrastructure should be managed according to a unique EU framework.

referred to as idiosyncratic." Oliver E. Williamson, "Transaction-Cost Economics: The Governance of Contractual Relations", in *The Journal of Law and Economics*, Vol. 22, No. 2 (October 1979), p. 239-240.

With "essential" services we refer to those services for which sector-specific EU legislation establishes the principles that Member States should follow when defining public service obligations. Thus these are services mainly for citizens (e.g. passenger collective transport services, and connection to the public telephone network at a fixed location) rather than for business (e.g. cargo transportation, and videoconferencing).

<sup>&</sup>lt;sup>28</sup> Art. 1 of the Protocol No. 26 of the TEU on Services of General Interest reads "The shared values of the Union in respect of services of general economic interest within the meaning of Article 14 of the TFEU include in particular: [...] a high level of quality, safety and affordability, equal treatment and the promotion of universal access and of user rights."

<sup>&</sup>lt;sup>29</sup> European Commission, *Communication on the application of the European Union State aid rules to compensation granted for the provision of services of general economic interest* (2012/C 8/02), 11 January 2012, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do? uri=celex:52012xc0111%2802%29:en:not.

<sup>&</sup>lt;sup>30</sup> As stated by Tarschys, the European added value can be considered the "corollary of the established principle of subsidiarity". Daniel Tarschys, "The Enigma of European Added Value. Setting Priorities for the European Union", in *SIEPS Reports*, No. 2005:4 (June 2005), p. 8, http://www.sieps.se/sites/default/files/45-20054.pdf.

However homogeneity in transport and communications is not achievable in the short-to-medium term due to physical and legal limitations and as changes in these industries require a long adaptation time. There are still transaction costs in moving from one Member State to another, both for the undertakings wishing to supply the same service, and for those consumers wishing to use the same service supplied by firms resident in other Member States. Network services rely on the legacy of national network design and operating systems, while transport and communication services are affected by Member States' different institutional and legal frameworks. Thus a one-size-fits-all framework might be a source of distortion within the EU. Even a simple country-of-origin principle can lead to a harmful heterogeneity, which would hamper European business.

Therefore in the short-term, effective governance must combine an EU-level approach with a national-level approach. At the EU-level there should be models of regulation (e.g. how to calculate efficient wholesale tariffs, how to define obligations to ensure non-discrimination) and models of procedures (e.g. how to outline an authorisation procedure) to create more consistency among the 28 national markets. This EU-guided harmonisation process would not lead to homogenous - wholesale and retail - prices due to the different national conditions, such as energy and labour costs and taxation.

National-level policies should integrate the EU-level approach to increase effectiveness as well as unity. According to the subsidiarity principle, national authorities (Government and regulatory authorities) are better placed to know local conditions for the supply side (services and infrastructure) and for the demand side (consumers' behaviour). Thus, a unique model for transport and communication markets, shaped at the EU-level, could provide consistent implementation and still physically differentiated results at the national level.

In the long-term, as economic and legislative developments minimise national differences, and if *ex-post* antitrust intervention is not considered more efficient than *ex-ante* regulation, unique models of regulation with national implementation could be substituted by a unique sector-specific regulation at the EU level. This choice would be consistent with the scale of operations of the relevant markets. That is a scale that is always moving upward because of the globalisation processes and technological evolution. The speed of these processes could require more "European" regulation because of the inadequacy of every national regulation. This step would pave the way for a unique EU regulator, which

would still need national institutions to guarantee both effectiveness (*e.g.* by monitoring local implementation of EU regulations,<sup>31</sup> such as the fulfilment of universal service obligations), and unity (e.g. by keeping a closer-to-the-citizens presence for the protection of consumers).

#### 2.3. Transport

After decades of EU activity, and despite noteworthy investments, the EU does not currently have a sufficiently interoperable and resource efficient network of interconnected, cross-border transport infrastructure. The market is still affected by missing links, bottlenecks and other market barriers. Since there are large divergences between the eastern and western parts of the EU, this issue relates both to the effectiveness and to the unity of Europe.

The European Commission has proposed measures for a Single European Transport Area<sup>32</sup> where effectiveness is associated with competitiveness and sustainability. To have effective transport systems, the EU should capitalise existing infrastructure in different Member States and should combine a top-down approach with a bottom-up design of a functional network aiming to carry large and consolidated volumes of freight and passengers traffic with high-efficiency and low-emissions. This aim would be achieved due to the extensive use of more efficient modes in multimodal combinations and the wide application of advanced technologies and the supply of infrastructure for clean fuels.

The bottom-up approach shapes the "comprehensive network" which constitutes the basic layer of the trans-European transport network (TEN-T) and includes all existing and planned infrastructure and the *desiderata* of every Member State.

The top-down approach shapes the "core network". This network overlays the comprehensive network and consists of its strategically most important parts. The design of the core network should be even more effective by connecting those components of

<sup>&</sup>lt;sup>31</sup> Once the regulation is no longer differentiated due to the fragmentation in national markets, then regulations will be replaced by directives as the leading legal instrument.

<sup>&</sup>lt;sup>32</sup> European Commission, Roadmap to a Single European Transport Area - Towards a competitive and resource efficient transport system (COM(2011) 144 final), 28 March 2011, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=celex:52011dc0144:en:not.

TEN-T with the highest European added value and by realising cross border missing links, eliminating bottlenecks and increasing multi-modality at the relevant nodes.

The distinction between a core network and a comprehensive network reflects the hierarchical structure of a transport network; since nodes have unequal ranking, there is room, and necessity, for a correct subsidiarity approach. What is relevant vis-à-vis the integration strategy is the top-down core network that will serve the whole of Europe only when fully completed.

The design of the network should be effective in ensuring efficient multi-modal links. Such links would be between the EU capitals and other main cities, ports, airports and key land border crossings, as well as other main economic centres. These links would have a view beyond the EU's borders, 33 by extending the EU's transport network to its immediate neighbours, and by connecting Europe to the rest of the world through its ports and airports. According to the Expert Group for the TEN-T Policy Review, 34 for a long time now the EU's ports and airports have been considered just as the Single Market's closure points. The Eastern enlargement, the globalisation of markets and the emergence of new business powers is rebalancing the role of sky and sea modes with respect to road, rail and inland navigation modes. From the current global market perspective, new, very sensitive "missing links" coincide with ports (goods) and airports (people) making it easy, or not, to connect Europe to the global market and so reduce external transaction costs.

The transport network should be efficient in reducing the investment in infrastructure by favouring more direct connection between the core nodes, and since infrastructure shapes mobility, the design should break the transport system's dependence on oil (currently at 90%). Reducing oil dependency is necessary to diversify input portfolio to face both its expected increasing scarcity and the fact that this input is mainly controlled by an international cartel.

<sup>&</sup>lt;sup>33</sup> Art. 21 par. 2 of the TEU reads: "The Union shall define and pursue common policies and actions, and shall work for a high degree of cooperation in all fields of international relations, in order to: [...](e) encourage the integration of all countries into the world economy, including through the progressive abolition of restrictions on international trade."

<sup>&</sup>lt;sup>34</sup> See "TEN-T and Connections outside the EU", Annex 3 to the final report of the *2010 TEN-T Policy Review* Expert Group 4, available at http://ec.europa.eu/transport/themes/infrastructure/ten-t-policy/review/expert-groups\_en.htm.

Airports, ports, railway, metro and bus stations, should increasingly be linked and transformed into multimodal connection platforms for both passengers and goods. Online information and electronic booking and payment systems integrating all means of transport should facilitate multimodal travel. But today, legal, administrative and technical barriers are multiplied. There is no single transport document, but different modes of transport require different documentation.

Despite rail freight services opening up to competition in 2007 and international passenger services in 2010, market access in rail services continues to be a major problem. That is mainly due to the insufficient independence of and the lack of financial transparency between infrastructure managers and service operators, which can result in discriminatory behaviour and market distortions.<sup>35</sup> Thus the European Commission proposed to increase the separation between infrastructure managers and service operators.<sup>36</sup> That proposal should ensure non-discrimination in terms of tariff setting, path allocation and traffic management. Track measures, energy supply and signalling systems differ from one Member State to another, as an inheritance from the times in which railways were still national monopolies. This legacy hinders cross-border circulation of trains and increases the cost of rolling-stock used in international operations, which must be equipped to deal with multiple systems. Moreover, rail operators from one Member State are still not allowed to transport passengers on domestic lines within another Member State. At the same time, public service contracts can be awarded directly without open tender and procurement procedures.

Freight shipments over short and medium distances (below some 300 km) will, to a considerable extent, remain on trucks. It is therefore important, besides encouraging alternative transport solutions (rail, waterborne transport), to improve truck efficiency, via the development and the uptake of new engines and cleaner fuels, the use of intelligent transport systems and further measures to enhance market mechanisms. In road transport, national markets have only recently opened to cabotage (i.e. service operated by an undertaking

<sup>&</sup>lt;sup>35</sup> European Commission, *Contribution to the Annual Growth Survey 2014* (COM(2013) 785 final) 13 November 2013, http://eur-lex.europa.eu/LexUriServ/LexUriServ/do?uri=celex:52013dc0785:en:not.

<sup>&</sup>lt;sup>36</sup> European Commission, Communication on the Fourth Railway Package - completing the Single European railway area to foster European competitiveness and growth (COM(2013) 25 final), 30 January 2013, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri =celex:52013dc0025:en:not.

resident in another Member State) to reduce the number of empty trucks.

Over longer distances, options for road de-carbonisation are more limited and freight multimodality has to become economically attractive for shippers (the cargo owners). The EU needs specially developed rail freight corridors optimized in terms of energy use and emissions. Airport capacity needs to be optimised and, where necessary, increased to face growing demand for travel to and from third countries and areas of Europe otherwise poorly connected, which could result in a more than doubling of EU air transport activities by 2050. In other cases, (high-speed) rail should absorb much medium distance traffic.

Europe needs a single integrated airspace. Its aircraft are still obliged to make unnecessary detours rather than take more direct routes and they suffer from air traffic delays, which produce significant economic and environmental damage. Due to the continuing growth of air traffic, the existing air traffic management system is no longer sustainable for reasons of safety and capacity.

Customs formalities for ships travelling between two European ports remain subject to identical customs formalities foreseen for international maritime transport. Therefore, even though simplified administrative procedures for maritime transport have already been introduced by EU legislation, vessels travelling between EU ports still encounter a significant number of complex procedures that put intra-EU shipping at a disadvantage in comparison to other transport modes. The attractiveness of maritime transport is dependent, moreover, on the availability, efficiency and reliability of port services. In a globalised world an integrated approach to the value chain is required. Hence access to ports must be organised in an integrated way.

According to the European Commission's estimates,<sup>37</sup> the cost of completion of the TEN-T network requires about 550 billion euros<sup>38</sup> until 2020. Out of that sum, some 215 billion refers to the removal of the main bottlenecks. This amount requires public and private resources. The selection of projects eligible for EU funding must reflect this vision and put greater emphasis on European added value, especially the "missing links" of the core

<sup>&</sup>lt;sup>37</sup> European Commission, *Roadmap to a Single European Transport Area ...*, cit., par. 55.

<sup>&</sup>lt;sup>38</sup> This does not include investment in vehicles, equipment and charging infrastructure that may require an additional trillion euro to achieve the emission reduction goals for the transport system.

network. Even the regulatory framework could unlock the potential of private finances by restructuring transport charges and taxes to apply the principle of "polluter-pays". The internalisation of externalities<sup>39</sup> is a source of financing<sup>40</sup> and it gives to users the correct economic signal to influence their behaviour when they decide upon a mode, a route or a time to travel. The Commission, in its 2014 Annual Growth Survey proposed that "tax systems should be redesigned by broadening tax bases, and shifting the tax burden away from labour on to tax bases linked to consumption, property and *pollution*."<sup>41</sup> [emphasis added]

Along with market opening, the effectiveness of transport services relies on the quality of human resources (requiring training, certification, proper working conditions), and security (safety systems, passengers' rights). Due to the global nature of transport, market and non-market rules should be strengthened through bilateral and multilateral cooperation via international institutions such as the World Trade Organisation, the International Civil Aviation Organization, and the Organisation for Co-Operation between Railways.

#### 2.4. Communications

All citizens and businesses should have the opportunity to be part of the digital economy since it improves both productivity<sup>42</sup> and cohesion. Europe 2020 Strategy puts digital in-

<sup>&</sup>lt;sup>39</sup> Congestion, accidents, air pollution and noise are generally described as "externalities" as some costs are not included in the prices paid by transport users. The process of bridging this gap is called the internalisation of external costs, which means that someone making a journey should pay the real cost of that journey.

<sup>&</sup>lt;sup>40</sup> The *2010 TEN-T Policy Review* Expert Group 5 acknowledged the difficulties (economic, technical and political) that such a scheme will inevitably encounter. In particular the disparities across Europe as regards pricing, the use of the infrastructure and monetising the externalities, are likely to impair the instalment of a generic and standardised user fee collection framework, unless there is strong political commitment from the Commission. See "Funding Strategy and financing perspectives for the TEN-T", final report of the *2010 TEN-T Policy Review* Expert Group 5, available at http://ec.europa.eu/transport/themes/infrastructure/ten-t-policy/review/expert-groups\_en.htm.

<sup>&</sup>lt;sup>41</sup> European Commission, *Annual Growth Survey 2014* (COM(2013) 800 final), 13 November 2013, p. 7, http://eur-lex.europa.eu/LexUriServ.do?uri=celex:52013dc0800:en:not.

<sup>&</sup>lt;sup>42</sup> According to the Commission "it is estimated that half of all productivity growth derives from investment in ICT", while for McKinsey Global Institute, in a sample of 13 countries (Brazil, Canada, China, France, Germany, India, Italy, Japan, Russia, South Korea, Sweden, UK, US) the Internet contributed 7% of growth over the past 15 years and 11% over the past 5 years. See European Commission, *The Digital Agenda for Europe - Driving European growth digitally* (COM(2012) 784 final), 18 December 2012, p. 3, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=celex:52012dc0784:en:not; Jacques Bughin and James Manyika, *Internet Matters*. *Essays in Digital Transformation*, McKinsey Global Institute, March 2012, http://www.mckinsey.com/insights/business\_technology/essays\_in\_digital\_transformation.

frastructure at the forefront of the flagship initiative "Digital Agenda for Europe".<sup>43</sup> It underlines the need to ensure the roll-out and take-up of broadband for all, at increasing speeds, through both fixed and wireless technologies and to facilitate the necessary investment. The EU approved a quantitative target to achieve by 2020: all Europeans should have access to much higher internet speeds of above 30 Megabit per second (Mbs) and 50% or more of European households should have access to internet connections above 100 Mbps. In this case, the "missing links" are not at the backbone level (such as with the cross-border connection between two national railways). The missing links are at local level, the so-called access network, since the challenge is to connect everyone to an already powerful international backbone. Moreover, this network design - which places everyone upon the same conditions - combines unity with effectiveness since the latter is achieved by connecting everyone.

According to the Commission's estimates,<sup>44</sup> a balanced portfolio of 30 and 100 Mbps projects will cost Member States up to 270 billion euros. That amount is due to the upgrade of the traditional copper lines (eventually replaced by optical fibre lines) and for investment in wireless 3G, 4G, Wimax. To increase the efficiency of this investment, the Commission has proposed a regulation<sup>45</sup> to reduce the cost of civil engineering works (which constitute the dominant part of deploying high-speed electronic communications infrastructure). That proposed regulation is addressed not only to electronic communications network providers but to any owner of physical infrastructure, such as electricity, gas, water and sewage, heating and transport services, which are suitable to host any parts of electronic communications networks. The Commission's proposal provides minimum rights and obligations without prejudice to existing measures adopted at the national and local levels entailing more detailed provisions and conditions, as well as additional measures complementing those rights and obligations.

<sup>&</sup>lt;sup>43</sup> European Commission, *A Digital Agenda for Europe* (COM(2010) 245 final/2), 26 August 2010, http://eur-lex.europa.eu/LexUri-Serv/LexUriServ.do?uri=celex:52010dc0245r%2801%29:en:not.

<sup>&</sup>lt;sup>44</sup> European Commission, *A growth package for integrated European infrastructures* (COM(2011) 676 final), 19 October 2011, p. 5, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=celex:52011dc0676:en:not.

<sup>45</sup> European Commission, *Proposal for a Regulation on measures to reduce the cost of deploying high-speed electronic communications networks* (COM(2013 147 final), 26 March 2013, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=celex:52013pc0147:en: not

This inter-sectoral cooperation - communications which make use of other networks - should be coupled with intra-sectoral cooperation where network operators share infra-structure or pool basic parts of their infrastructure, to avoid expensive duplication. One example is in the United Kingdom where Vodafone and Telefònica (in an agreement signed in June 2012) agreed to share towers and masts and to build new sites needed to extend mobile coverage into rural and remote areas. Another example is in Italy where Telecom Italia and Fastweb (in an agreement signed in September 2012) agreed to cooperate and share investment costs in rolling out two independent parallel fibre networks to street cabinets and offer FTTC<sup>46</sup> services to end customers.

In September 2013, after 26 years of regulation, the Commission proposed new measures for creating a telecommunication single market<sup>47</sup> with the aim of increasing regulatory consistency and predictability across the EU.

By reducing heterogeneity between national rules, procedures and sector-specific regulations, citizens can benefit from an increase in cross-border competition or, at least, from a more contestable market. Once the playing field is levelled it will be easier to undertake cross-border activity. In network industries characterised by economies of scale, size matters to be more competitive, to deliver more welfare for consumers, as well as to find resources to invest in the new access network.

It is worth distinguishing between two worlds: the wired network from the wireless network. The former heavily bears the legacy of decades of investment undertaken by every national government before the liberalisation process. National networks are still different and, even though they are regulated according to the same models, those differences (national orography, network topology, cost of electricity and cost of workforce) naturally lead to different prices at the wholesale and retail levels. Moreover, differences affect each Member State since urban areas usually have a sufficient level of demand to allow competition between different operators with their own infrastructure. So the regulation

<sup>&</sup>lt;sup>46</sup> Fibre-to-the-Cabinet (FTTC) involves running fibre optic cables from the telephone exchange to the street cabinets which then connect, with a copper cable, to a standard phone line to provide broadband.

<sup>&</sup>lt;sup>47</sup> European Commission, *Proposal for a Regulation laying down measures concerning the European single market for electronic communications and to achieve a Connected Continent* ... (COM(2013) 627 final), Brussels, 11 September 2013, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=celex:52013pc0627:en:not.

enabling use of an incumbent operator's essential facility (access to the network) might not be as necessary there as in rural areas where the incumbent's network is the only available infrastructure.

The wireless story, by contrast, is much shorter and, by definition, less influenced by exogenous conditions other than radio spectrum allocation. That allocation, in the Single Market, should follow common regulatory principles applicable to Member States when defining conditions on its use and is harmonised for wireless broadband communications.

In a single market there cannot be any discrimination based upon the nationality of users. Thus service providers should not differentiate their prices - such as international roaming charges - unless objectively justified. The new regulation proposed by the Commission<sup>48</sup> does not permit mobile operators to charge a fee for international roaming. For example, an Italian user travelling in Germany would be using a network (Deutsche Telekom) which does not belong to his/her operator in the Italian's country of origin (Telecom Italia). Thus Telecom Italia should reward Deutsche Telekom for the Italian user making and receiving phone calls in Germany. If the Commission's proposed "roaming like at home" rule, which cancels roaming charges, is approved then operators cannot discriminate between users who travel and users who do not and will be obliged to raise the tariffs of every user to compensate for their inability to charge more for making and receiving calls outside the country of origin.<sup>49</sup> Reducing roaming charges is welcome since it is consistent with the concept of a single market. But it has a social impact: users who do not travel will subsidise those who do travel within the EU.

European users should rely on the same set of rules: for example, rules on contractual terms, transparency, facilitating "switching" operators and rules to prevent the blocking or "throttling" of online services, as part of measures to ensure access to the open internet. However, a Single Market for communications cannot change Member States' legal frameworks which are not completely overlapping and these differences might lead to a fragmentation of consumer rights' safeguards.

<sup>48</sup> Ibid

 $<sup>^{49}</sup>$  This outcome is likely due to unbalanced flows of travellers within the EU.

The European Commission has proposed an evolution of the orthodox network-neutrality, *i.e.* the obligation for providers to supply an unhindered connection to all content, applications or services being accessed by end-users, <sup>50</sup> while regulating the use of traffic management measures by operators in respect of general internet access. Thanks to the Commission's proposal end-users are free to conclude agreements on the provision of specialised services with an enhanced quality of service - relevant for services such as e-Health, cloud-computing, teleconferencing - with their providers of electronic communications.

There is the possibility of transmitting the related data volumes or traffic as specialised services with a defined quality of service or dedicated capacity. But the provision of specialised services shall not impair, in a recurring or continuous manner, the general quality of internet access services. Voice-over-IP and instant messaging are replacing traditional phone calls and SMS and, within this framework, telecom operators sell a commodity (transport of "packets" of information). In these markets, by definition, there is no way to differentiate by charging different rates to internet content providers. With this Commission proposal, network operators are being given more room for manoeuvre to upgrade their role in electronic communications: not just as mere infrastructure operators pushing indistinguishable data, but also as managers of a value-added service. Thus network operators balance their position vis-à-vis over-the-top services (e.g. Google, WhatsApp and Skype) running through the networks "on top" of the basic provision of Internet access. This role enhances effectiveness by letting network operators extract more value from the ICT ecosystem to finance new investments in access networks. Investments are necessary since network capacity risks lagging behind traffic evolution<sup>51</sup> and so leading to congestion, which would reduce service quality.

Along with its geographical dimension, a level playing field in electronic communication should also consider the product and service dimensions. No more than two decades ago, single-purpose devices were the norm, being distinct and therefore separate product markets: a telephone was different to a camera and a TV was different to an ADSL

<sup>&</sup>lt;sup>50</sup> European Commission, *Proposal for a Regulation on measures to reduce the cost of deploying high-speed electronic communications networks*, cit., p. 12. This principle of equal treatment applies to all data packages which may not be discriminated against on the grounds of content, service, application, origin or destination.

<sup>&</sup>lt;sup>51</sup> See European Commission, *The Digital Agenda for Europe - Driving European growth digitally*, cit., p. 3: "Internet traffic is doubling every 2-3 years and mobile internet traffic every year. By 2015 there will be 25 billion wirelessly connected devices globally; doubling to 50 billion in 2020. Mobile data traffic will increase 12-fold between 2012 and 2018, and data traffic on smartphones will increase 14 times by 2018."

service. Sector-specific regulations took different approaches to different services that are now converging towards the single one encompassed by electronic communications. But while we have a fairly comprehensive set of rules for linear television, the field of non-linear audio-visual media services has so far been marginally regulated; internet services delivered via television will fall into the latter category. Cultural diversity, media pluralism and the protection of minors retain their importance to society but are not always enforceable on all new digital platforms. Trumpeted for many years, convergence is becoming a reality as Digital Agenda targets are approached. Even though content broadcasted and demanded online is beyond the scope of this paper,<sup>52</sup> a more effective Europe means that the legal framework must not be regulated differently because the same content is obtained by different means (such as traditional broadcasting vs. the internet).

The Digital Agenda's target of universal coverage of at least 30 Mbs broadband should be coupled with a revision of the universal service obligation. It might be an ineffective investment to give citizens access to powerful infrastructure if some of them cannot afford to use it. As has been the case for traditional telephony up to today, the EU should allow every user to access the broadband service at a reasonable quality and an affordable price.

Finally, the EU should create the right conditions - such as a standard or appropriate interoperability rules - to develop EU-wide services at the root of the Single Market *e.g.* e-Health, e-Justice, e-Payments, e-Commerce, copyright online. EU-based electronic services have, as a prerequisite, the unique identification and authentication of European citizens. These EU-wide services will require common rules on privacy and subsequently on procedure to create and/or to share databases containing the relevant information.

#### 2.5. Infrastructure

In the previous sections, this paper has identified which are the transport and communication services and the relevant infrastructure needed for an effective and united Europe. In a nutshell, the cross-border transport infrastructure gap is becoming more acute in Europe and bottlenecks still exist within the Single Market, notably in the eastern Member

<sup>52</sup> According to art. 2 of Directive 2002/21/EC: "electronic communications service' means a service normally provided for remuneration which consists wholly or mainly in the conveyance of signals on electronic communications networks, including telecommunications services and transmission services in networks used for broadcasting, but exclude services providing, or exercising editorial control over, content transmitted using electronic communications networks and services [...]".

States.<sup>53</sup> While for electronic communications, new infrastructure must be put in place in the eastern and southern Member States<sup>54</sup> and even in the western Member States there is a gap to fill between urban and rural areas.

In what follows, the paper will focus on the financial issue or aspect of infrastructure (since transport and communication infrastructure's effectiveness and unity have been the focus of the previous sections). According to the Commission, the current flow of private finance is not sufficient to address the significant investment needs of infrastructure sectors.<sup>55</sup>

Private finance is not readily available upon conditions and at maturity rates which appropriately reflect the economic life-cycle of commercially viable long-term infrastructure projects. Thus public institutions are in the right position to fund such infrastructure projects: they have a long-term perspective and, in some cases, they can raise financial resources at a lower cost. But due to the "long-tail" of the financial and economic crisis (which reduces both users' willingness and ability to pay and tax sustainability), Member States, and the EU itself, have a reduced fiscal space within which to operate.

According to the Vice-President of the European Commission Olli Rehn "meeting the EU's infrastructure challenge - with investment needs estimated at 1.5 trillion euro up to 2020 in transport, energy and ICT - will require huge upfront financing at times of tight public budgets and on-going balance-sheet consolidation in the banking sector".<sup>56</sup>

Where public support is needed to finance new infrastructure, then the granting authorities should select a company to deploy and/or to operate the subsidised infrastructure

<sup>&</sup>lt;sup>53</sup> For the Commission "large divergences in terms of transport infrastructure remain between eastern and western parts of the EU". See European Commission, *Roadmap to a Single European Transport Area* …, cit., par. 51. However even in the eastern part of the EU, it should not be underestimated that technological progress is putting outside the marketplace large parts of existing infrastructure. For example, ship gigantism - justified in term of economies of scale at sea - is making it impossible to call at many existing ports and so demands huge port investments to replace the existing infrastructure which is becoming obsolete.

<sup>&</sup>lt;sup>54</sup> Citing a 2013 Eurobarometer survey, some experts point out that "[a]ccess to Internet at home, and specifically access to broadband Internet at home, varies greatly among EU Member States [...]. Both east-west and north-south divides are clearly in evidence". J. Scott Marcus et al., How to Build a Ubiquitous EU Digital Society, cit., p. 45.

 $<sup>^{55} \ \ \</sup>text{European Commission, A growth package for integrated European infrastructures, cit., p. 7.}$ 

<sup>56</sup> Speech at the European Policy Centre: Europe's growth challenge and innovative infrastructure financing, Brussels, 7 November 2012, http://europa.eu/rapid/press-release\_SPEECH-12-789\_en.htm.

and ensure the process is transparent for all investors wishing to bid for the implementation and/or management of the subsidised project. Equal and non-discriminatory treatment of all bidders and objective evaluation criteria are indispensable conditions. The competitive tender is a method to reduce budgetary costs and to minimise the potential amount of State aid involved.

Against this background, the European Commission, along with its proposal to increase efficiency in investments,<sup>57</sup> has proposed the Connecting Europe Facility<sup>58</sup> to finance projects that fill the missing links in Europe's energy, transport and digital backbones. The Connecting Europe Facility (CEF) has two main types of instruments: participations in equity funds which provide risk capital to activities contributing to projects of common interest; loans and/or guarantees to projects of common interest facilitated by risk sharing instruments, including enhancement mechanisms for long-term bank lending and for project bonds issued by project companies. EU level intervention, through grants and financial instruments, will focus on initiatives that eliminate or reduce market fragmentation, increase European security, and on infrastructure with a considerable growth enhancement potential and/or socio-economic benefits which cannot be captured or monetised at the project level.

The CEF, combined with the structural funds, cannot cover the overall cost of investment required; but it should work as a guarantee for private investments and a driver to stimulate the combination of public-private partnerships. However if a comparison is made between the original Commission proposal and the Council-Parliament agreement<sup>59</sup> for the CEF, it is clear there is a difference between transport and communication infrastructure and the EU's added value. Given the estimated investment required for transport and communications are respectively 215 and 270 billion euro, the CEF's coverage is 12%, a mere 0.4% of what is required.

<sup>&</sup>lt;sup>57</sup> E.g. the Proposal for a Regulation on measures to reduce the cost of deploying high-speed electronic communications networks, cit.

<sup>&</sup>lt;sup>58</sup> European Commission, A growth package for integrated European infrastructures, cit.

<sup>&</sup>lt;sup>59</sup> The political agreement on the Multiannual Financial Framework 2014-2020 dates 10 July 2013. Figures in table 1 refer to the European Parliament *Resolution on the proposal for a regulation of the European Parliament and of the Council establishing the Connecting Europe Facility* (P7\_TA-PROV(2013)0463), 19 November 2013, http://www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P7-TA-2013-0463&language=EN.

The rationale behind these different gaps between infrastructure needs and respective financial interventions is faultless. If there is a missing-link in the middle of the TEN-T priority project number 6 (the Railway axis Lyon - Trieste - Divača/Koper - Divača - Ljubljana - Budapest - Ukrainian border), then the effectiveness of the corridor would be seriously jeopardised. Whereas, if a Member State's population cannot access the broadband service, the European digital society is not going to experience significant damage. This is why the CEF in communications will mostly go to developing re-usable platforms for the delivery of public services online, rather than investing in physical networks in underserved areas.

**Table 1**: Infrastructure for transport and communication networks (billion euro)

		Connecting Europe Facility		
	Investment required	Commission's proposal	Council and Parliament agreement	
Energy	200*	9.1	5.85	
Transport	215**	31.7	26.25	
Communications	270	9.2	1.14	

<sup>\*</sup>The amount needed for electricity and gas networks of European importance alone.

Even if the CEF should work as a lever to attract private investment, the gaps in Table 1 shows that if the EU wants to meet the challenges set by Europe 2020, then some other instruments are needed. These supplemental instruments could include:

• Investments by the incumbent financed by "regulated" profits? The Commission has proposed a model for electronic communications<sup>60</sup> in which the national incumbent should be allowed extra-profits in regulated wholesale services (such as the traditional local loop unbundling) to finance investments in brand new fibre networks. This potential cross-subsidisation leads to discrimination against competitors buying, more expensive, wholesale services still used by consumers such as the traditional DSL.<sup>61</sup> The same cross-subsidisation is however only theoretical since, in a market economy, a public authority cannot enter into the decision-making of an incumbent, unless it

<sup>\*\*</sup>This figure refers only to the removal of the main bottlenecks of the TEN-T.

<sup>&</sup>lt;sup>60</sup> European Commission, *Recommendation on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment* (2013/466/EU), 11 September 2013, http://eur-lex.europa.eu/LexUriServ.do?uri=celex:32013h0466:en:not.

<sup>&</sup>lt;sup>61</sup> Digital Subscriber Line (DSL) technology enables fast data transmission over copper telephone lines.

is State-controlled, to impose investment decisions to prevent the dispersal of such extra-profits as dividends. For the European Parliament it is not just the incumbent which is called to invest since it is the competition that spurs investments.<sup>62</sup> The network is a strategic asset for the EU and the EU itself should finance it where private investors find no business case to build new networks and/or to upgrade the existing ones.

- A deeper EU financial involvement? An increase in the EU budget currently about 1% of the EU GNI would place a heavier burden on the shoulders of the already-over-indebted Member States since the EU budget is 75% financed by the Member States themselves.<sup>63</sup>
- A golden rule for the Stability and Growth Pact<sup>64</sup> ("SGP")? The achievement of a budget position "close to balance or in surplus", at the basis of the coordination of national fiscal policies, implies that most capital expenditure will have to be funded from current revenues. Hence it is not possible to spread the cost of an investment project over all the generations of taxpayers who benefit from it. Thus a golden rule for the SGP might exclude investment spending in EU infrastructure from the computation of the fiscal parameters relevant to the Excessive Deficits Procedure. A similar proposal was criticised in the early 2000s<sup>65</sup> but the same proposal might gain *momentum* in a feebler economic background and with a strictly-defined framework that constrains the less virtuous Member States' opportunistic behaviour.
- EU debt on top of existing national debts? The Commission launched a consultation 66 to assess the feasibility of common issuance of sovereign bonds among the Member States of the euro area. This would mean a pooling of sovereign issuance among the Member States and the sharing of associated revenue flows and debt-servicing

European Parliament, Resolution on the Digital Agenda for Growth, Mobility and Employment: time to move up a gear (P7\_TA(2013)0377), 12 September 2013, http://www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P7-TA-2013-0377&language=EN.

<sup>63</sup> In the EU budget 2012's share of own resources based on Gross National Income.

<sup>64</sup> Art. 121 and art. 126 of the TFEU provide the legal basis of the SGP: respectively the preventive arm, which seeks to ensure that fiscal policy is conducted in a sustainable manner over the cycle, and the corrective arm, which sets out the framework for countries to take corrective action in the case of an excessive deficit. Protocol 12 defines the reference values of 3% of GDP for public deficit and 60% of GDP for public debt.

<sup>&</sup>lt;sup>65</sup> See, for example, Fabrizio Balassone and Daniele Franco, "Public Investment, the Stability Pact and the 'Golden Rule'", in *Fiscal Studies*, Vol. 21, No. 2 (June 2000), p. 207-229, http://www.ifs.org.uk/fs/articles/0023a.pdf.

European Commission, *Green paper on the feasibility of introducing Stability Bonds* (COM(2011) 818 final), 23 November 2011, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=celex:52011dc0818:en:not.

costs. The absence of concrete steps after that consultation demonstrates that Eurobonds are not feasible in the short-run and, above all, without a "leapfrog" step in EU integration. This scepticism is justified by the fact that the most virtuous Member States would have to accept partly diluting their superior sovereign risk premium into common forms of debt, in exchange for the acceptance, by the beneficiary (and less virtuous) Member States, of stricter forms of public finance controls, with centralised powers of control able to overrule the sovereignty of those Member States.

• Emission of bonds devoted to finance a specific EU infrastructure? The Commission has already launched a pilot phase in 2012 of the Project Bond Initiative<sup>67</sup> with the aim of attracting institutional investors by enhancing the credit standing - through an EU/EIB financed loan or guarantee - of private entities needing to raise private funds for the infrastructure projects which they are promoting. In 2012 and 2013 the Project Bond Initiative mobilised 230 million euro, enabling the financing of a total infrastructure investment volume of some 4.5 billion euros. But that amount of money demonstrates, if there is the need, that just one instrument cannot solve by itself the financial issue for infrastructure.

#### 3. The core group

The steps towards the establishment of a more united and effective transport and communications sectors are at the heart of the Single Market. Being a part of the core group<sup>68</sup> of Member States wanting to push ahead in the integration process in this policy area means supporting the Single Market as the basis of the EU project. After more than fifty years, the Single Market has confirmed its role as the "common denominator" of all the members which are part of the EU project. The Single Market has imitations in every conner of the globe<sup>69</sup> and attracts European and non-European countries which are part of the EU network of bilateral and multilateral agreements signed to liberalise trade.

<sup>&</sup>lt;sup>67</sup> Regulation (EU) No 670/2012 of the European Parliament and of the Council of 11 July 2012 amending Decision No 1639/2006/ EC establishing a Competitiveness and Innovation Framework Programme (2007-2013) and Regulation (EC) No 680/2007 laying down general rules for the granting of Community financial aid in the field of the trans-European transport and energy networks.

<sup>&</sup>lt;sup>68</sup> As understood in Nathalie Tocci and Giovanni Faleg, "Towards a More United and Effective Europe: A Framework for Analysis", in *Imagining Europe*, No.1 (October 2013), http://www.iai.it/content.asp?langid=2&contentid=992.

<sup>&</sup>lt;sup>69</sup> See, for example, the Common Market for Eastern and Southern Africa (COMESA), the Gulf Cooperation Council (GCC), the Association of Southeast Asian Nations (ASEAN), the Mercosur, and the North American Free Trade Agreement (NAFTA).

But the Single Market project is not fully complete<sup>70</sup> and even the European Parliament, the EU institution representing citizens, displayed concern that the re-emergence of economic protectionism at the national level would most probably result in fragmentation of the Single Market and therefore should be avoided.<sup>71</sup>

There are many quantitative estimates of the cost of an incomplete Single Market.<sup>72</sup> But the qualitative opinion of Monti might be more useful: "given the very limited margins available for budgetary stimuli, making the single market more efficient is Europe's best endogenous source of growth and job creation."<sup>73</sup> This endogenous source has got an external connection due to the "increased integration of EU industries into global value chains which will help strengthen Europe's industrial base and requires open and interconnected product and services markets."<sup>74</sup>

Competitiveness is not an option anymore as it was in 2000 when the EU started the tenyear Lisbon Strategy. Now it is about defending the European social market economy model since the crisis could have a lasting effect on potential growth and unemployment.<sup>75</sup>

To be competitive, the EU should be a leader in a globalised economy. Indeed the EU is one of the pillars of a multipolar world and worldwide agreements are often based on an understanding between the US and the EU<sup>76</sup> thanks to their combined economic weight.

 $<sup>^{70}</sup>$  European Commission, Contribution to the Annual Growth Survey 2014, cit.

<sup>&</sup>lt;sup>71</sup> European Parliament, *Report on delivering a Single Market to consumers and citizens* (A7-0132/2010), 3 May 2010, http://www.europarl.europa.eu/sides/getDoc.do?reference=P7-TA-2013-0377&language=EN.

<sup>&</sup>lt;sup>72</sup> See, for example, London Economics and PwC, Study on 'The cost of non-Europe: the untapped potential of the European Single Market', April 2013, http://londoneconomics.co.uk/?p=1664.

<sup>&</sup>lt;sup>73</sup> Mario Monti, A new strategy for the Single Market ..., cit., p. 9-10.

<sup>&</sup>lt;sup>74</sup> European Commission, *Annual Growth Survey 2014*, cit., p. 10.

<sup>&</sup>lt;sup>75</sup> In his foreword to the Commission's Communication to the 2005 Spring European Council, President Barroso affirms that the challenges the EU faces are even more urgent then in 2000 "in the face of an ageing population and global competition. Unless we reinforce our commitment to meeting them, with a renewed drive and focus, our model for European society, our pensions, our quality of life will rapidly be called into question." European Commission, *Working together for growth and jobs. A new start for the Lisbon Strategy* (COM(2005) 24 final), 2 February 2005, p. 4, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=celex:52005 dc0024:en:not.

<sup>&</sup>lt;sup>76</sup> Sabino Cassese, "Introduction: Im Zweifel für Europa", in Stefano Micossi and Gian Luigi Tosato (eds.), *The European Union in the 21st Century, Perspectives from the Lisbon Treaty*, Brussels, Centre for European Policy Studies (CEPS), 2009, p. 1-5, http://www.ceps. be/node/2770.

However Cassese's view comes in the middle of a clear downturn in the EU's economic position (see Table 2 below).

**Table 2**: Gross domestic product based on purchasing-power-parity (% of world total)

	2000	2018	%
EU-28	24.8	16.7	-32.5
Germany	5.0	3.3	-34.6
United Kingdom	3.5	2.5	-29.2
France	3.6	2.3	-34.7
Italy	3.3	1.8	-44.6
United States	24.0	18.6	-22.5
China	7.0	17.9	+153.8
India	3.7	6.4	+71.9
Japan	7.6	4.8	-37.4
Russia	2.6	2.9	+9.8
Brazil	2.9	2.7	-6.6
South Korea	1.8	1.9	+6.0

Source: IMF, World Economic Outlook Database, October 2013.

The linkage between the Single Market and competitiveness should not be understood only in GDP terms. According to Gill and Raiser, Europe is a "convergence machine" taking in poor countries and helping them become high-income economies thanks to trade in goods and services, and thus to the Single Market.<sup>77</sup>

Still the Single Market facilitates intra-EU labour mobility to avoid unfilled job vacancies as well as to give business opportunities on a wider scale. Labour mobility is also one of the conditions needed for an optimal currency area.<sup>78</sup> Moreover, the Single Market is in line with the principle of sustainable growth by making use of efficient transport and communication networks which move goods and people using lower polluting resources and/or

<sup>&</sup>lt;sup>77</sup> Indermit S. Gill and Martin Raiser, *Golden Growth. Restoring the Lustre of the European Economic Model*, Wahington, World Bank, April 2012, http://documents.worldbank.org/curated/en/2012/04/16234385.

<sup>&</sup>lt;sup>78</sup> Robert Mundell, "A Theory of Optimum Currency Areas", in *The American Economic Review*, Vol. 51, No. 4 (September 1961), p. 657-665. An optimal currency area is a geographical region in which sharing a single currency would maximise economic efficiency. But these areas - without national monetary policy and with fixed exchange rates - are likely suffer large asymmetrical shocks (e.g. a recession which only affects some members of a group) without sufficient labour mobility. For example, if Country A is affected by a recession and its unemployed workforce can move to Country B, where excess demand for labour pushes wages up, then this mobility eliminates the need to push wages up in Country B and wages down in country A. In country A unemployment disappears and Country B no longer suffers from inflationary pressures.

which moves digital files avoiding in toto any polluting transportation.<sup>79</sup>

The incentives for a Member State to be part of the core group that wish to push ahead in the integration process in transport and communications, as part of a wider Single Market project, are:

- To take part in the decision-making designing the European networks and service conditions. Especially for transport, size and geography matters in network design. The network design will be most efficient when the map identifying the relevant nodes is at its widest and most complete. For this reason the current design of TEN-T comprises Switzerland and the Western Balkans and rail and road networks take into account the core nodes beyond the EU's eastern border (such as to Ankara and Kiev).
- Funding the relevant infrastructure at a cost that might be below the market rate thanks to EU-supported financial instruments.
- Being part of a more integrated market which might be welfare-improving for consumers thanks both to new services (such as high-speed rail links and an e-Health service available abroad) and to economies of scale enjoyed by operators in network economies.
- Enjoying a stronger bargaining power in bilateral and multilateral bodies when international rules need to be set (*e.g.* safety systems for transport, international roaming charges paid by users, traffic management) thanks to the size, and the components, of the core group.

The governance model, as already indicated in section 2.2, should be inspired by a more centralised regulation once national heterogeneity decreases. This model is not a discontinuity with the current EU framework but it is a natural evolution, where "natural" refers to the path drawn by the Treaty of Rome.

#### 4. The non-core group

A Member State may decide to remain in the Single Market but not to progress in the integration of transport and communications. That rationale might be due to either a lack

<sup>&</sup>lt;sup>79</sup> Examples range from the elimination of the physical formats of music and video products, to the reduction in the level of business travel thanks to videoconferencing.

of financial resources caused by national budget constraints or an evaluation according to which the national investment required is higher than the estimated national pay-offs, even in political terms (such as when NIMBY advocates have the power to determine national decisions).

Fiscal problems might be an obstacle for Member States in progressing towards more effective transport, communications and infrastructure; this is why at the EU level there is an on-going debate about the financial solutions listed above.

The option of not taking part in the core group or leaving the Single Market altogether, is not significant for communications effectiveness since the network which requires an expensive upgrade is mainly local and the EU is not going to be negatively affected by a missing Member State. While, if the core group starts to build its core transport network without a particular Member State, this missing partner might lead to a sub-optimal network design. Connecting core group relevant nodes and extending the transport network beyond EU borders might be less efficient due both to "holes" in the map (e.g. connecting by high-speed train Rotterdam to Warsaw or Berlin to Istanbul might be tricky - and thus inefficient - if respectively Germany and Bulgaria decide not to be part of the core group), and to missing strategic nodes (e.g. there are not equivalent alternatives - in the short-medium term - to the Rotterdam and Hamburg ports if they are not components of the core group).

Even in this case, no special governance model is needed. The requirement is that developed services and infrastructure of the core group should interconnect with the traditional services and infrastructure of the non-core group (e.g. a train can move from a core country to a non-core one, but in the latter should reduce its speed, cross-modal operations might be slower in non-core countries rather than in core countries).

However, new instruments are needed since there might be two types of opportunistic behaviours by Member States.

Firstly, a Member State may decide to leave the core group once the network infrastructure has been completed and once the national infrastructure has been financed at a cost below the market rate (e.g. a loan guaranteed by EU institutions/instruments with a

higher credit worthiness). That country might use that infrastructure once it decided to leave the core group, or even the EU. Such a scenario would leave a suboptimal service for the operators belonging to the core-group countries since, for example, a country with a new port or rail infrastructure leaves the core group and do not allow cross-modality or high-speed services as originally planned by core members.

Secondly, a Member State may decide to exit the core group when its national section of the network infrastructure is not completed, even though it showed a firm commitment in realising it, while neighbouring countries have already undertaken relevant investments. The cost, in this case, might be huge: what is the value of a tunnel dug for half of its length? Since the network with that missing link might reduce dramatically its effectiveness, other Member States which are part of the core group might find it valuable to finance themselves that relevant part which is located in a now non-core Member State. Thus the latter could opportunistically wait for this situation to happen so that it would enjoy a new transport service without bearing the full cost of the relevant infrastructure.

In both cases, Member States still part of the core group, or of the EU, could not grab the benefits of this new infrastructure either because it would be completed but not operating to its full potential, or because it would not be completed.

Opportunistic behaviours undertaken by one or a few Members States would be one-off in nature. All types of transaction in the international economy are part of a repeated, continuing game. Theoretically a player can cheat only once, then it would face the negative consequences of a lack of cooperation and even of retaliatory measures (as already foreseen by international institutions such as the WTO<sup>80</sup>).

A big risk is that the policy cycle is aligned with the electoral cycle, which is too short compared to the long-term perspective needed for cooperative behaviour. Thus a solution might be that the core group, before starting investments in infrastructure, should define penalties for Member States not fulfilling their commitments.

 $<sup>^{80}</sup>$  The Dispute Settlement Body has the power to authorise retaliation when a country does not comply with a ruling.

#### 5. Out of the Single Market, out of the EU

The exit from the Single Market might be a legitimate decision since, as stated in the already mentioned EP report, integration "is not an irreversible process and that the continued existence of the single market should not be taken for granted".<sup>81</sup>

A Member State may decide to leave the Single Market, thus abandoning the integration process in transport and communications for different reasons such as:

- playing by rules that are less restrictive (e.g. on pollution) than the ones adopted by other European countries in the Single Market;
- protecting national transport and communication undertakings by adopting the "infant industry" argument revamped by Chang,<sup>82</sup>
- heeding the voices<sup>83</sup> of those who oppose international trade and information and communication technologies as drivers to improve human welfare.

Liberalisation and competition, though drivers of an effective Europe, create discontinuities and these have a negative impact on the social side of the EU economic model and on the unity dimension. The immediate social costs of the Single Market, and of the globalisation, are more vibrant compared to the opportunities and the long-term benefit. In addition, the EP report goes on to state that: "the already existing antipathy felt by consumers, citizens and SMEs towards the single market prior to the crisis, has post crisis been transformed into antagonism".<sup>84</sup>

According to Gill and Raiser,<sup>85</sup> among the reasons which have exacerbated this reaction in some countries and in some parts of society might be found in: a premature adoption of the euro by southern economies; the too quick enlargement towards formerly communist countries; the fragmented economic structure in some countries since small compe-

<sup>&</sup>lt;sup>81</sup> European Parliament, Report on delivering a single market to consumers and citizens, cit.

<sup>&</sup>lt;sup>82</sup> Ha-Joon Chang, *Bad Samaritans Rich Nations, Poor Policies, and the Threat to the Developing World*, London, Random House Business, 2007.

Woice" should be understood as one of way to express concern or to communicate a change proposal. See Albert O. Hirschman, Exit, Voice, and Loyalty. Responses to Decline in Firms, Organizations, and States, Cambridge, Harvard University Press, 1970.

<sup>&</sup>lt;sup>84</sup> European Parliament, Report on delivering a single market to consumers and citizens, cit.

<sup>85</sup> Indermit S. Gill and Martin Raiser, Golden Growth, cit.

titors are not suited for a big market.

As table 2 clearly shows, there is no significant role in the global economy, even for the biggest EU countries, out of the Single Market. The UK Prime Minister, in a speech about a referendum on British membership of the EU, affirmed that "at the core of the European Union must be, as it is now, the single market. Britain is at the heart of that single market, and must remain so. But when the single market remains incomplete in services, energy and digital - the very sectors that are the engines of a modern economy - it is only half the success it could be. It is nonsense that people shopping online in some parts of Europe are unable to access the best deals because of where they live. I want completing the single market to be our driving mission."<sup>86</sup>

However, it is difficult to figure out how a Member State that decides to leave the Single Market can still be part of the EU since the Single Market is the cornerstone of the EU.

If a country decides to leave the Single Market without damaging other Member States, the governance model is not new since it might be the same as that which the EU already has with third countries as far as transports and communications are concerned.

#### 6. Conclusions

Transport, communications and infrastructure are tightly connected to the Single Market or, better, are the backbone of it. The Single Market is the endogenous strength the EU can use to boost its competitiveness, since competition - the key rule of the Single Market - is a driver of competitiveness.

The Single Market has the potential to combine effectiveness and unity: it increases the "size of the cake" (competitiveness) and it allows every component of the EU to eat a "slice" of it (thanks to diffused and efficient network connections). However, a trade-off might be faced in the short-term when sector-specific progress is mainly focused on liberalisation and competition. This asymmetric progress is perceived as a space of opportunity for many and risks for the few ones protected by national legal fences.

<sup>&</sup>lt;sup>86</sup> David Cameron, *EU speech at Bloomberg*, 23 January 2013, https://www.gov.uk/government/speeches/eu-speech-at-bloomberg.

According to the EP "the EU and its Member States must intensively promote the possibilities that result from European economic integration, and change popular perceptions of the single market by making people aware of and able to understand the benefits it offers them and the ways of effectively claiming their rights".<sup>87</sup>

The Single Market displays its potential in the long term, when resources re-allocation, after stronger competition, increases the effectiveness of the EU economic model. In the short term, those negatively affected by new EU developments are echoed by media and breed local discontent which might be perceived as a widespread loss in confidence in the Single Market, thus jeopardising the unity of Europe.

Given the effectiveness of the Single Market for the entire EU project, there are two solutions to achieve a more united Europe:

- EU leaders should indicate the future benefits for all coming from a fully functioning Single Market; benefits which will overcome the short-term restructuring costs.
- The Single Market process should be comprehensive in order to be perceived as fair; a sector-specific approach might empower the voices of the few negatively affected by the process.

Up to now, it seems unlikely that a Member State, after comparing the costs and benefits, would find a net incentive to be part of the non-core group in this policy area or even to exit the Single Market project. The Single Market for services has been and still is difficult to build (the Bolkestein directive saga in 2004 is a clear example): many vested interests still operate against full market integration. On the contrary there is a strong common interest in building efficient EU infrastructure networks and this common interest acts as a powerful tool to European integration.

However, Member States might, in theory, find an incentive towards opportunistic behaviours by financing new infrastructure at a lower cost (without sharing its value with its core partners), or by leading other Member States in the core group to finance that missing part of the network within its own territory to achieve the effectiveness of the

<sup>87</sup> European Parliament, Report on delivering a single market to consumers and citizens, cit.

entire project. To reduce this incentive, a clear system of penalties should be put in place. When the penalties cannot repay the damage to the other Member States, then a suitable sanction, such as the expulsion out of the EU, should be used.

Regulation, though second-best to competition policy, would be needed due to the persistence of bottlenecks (e.g. railways and access communication networks). The Single Market project would require a more homogenous regulation in which the balance of power shifts from national authorities to the EU-level, with the institution of a unique EU regulator. However, a price convergence cannot be expected or imposed until there is a convergence process involving every single cost component (e.g. taxation).

Regulation cannot be shaped to foster investments where the market fails. The EU should avoid the model in which an incumbent is allowed extra-profits in regulated wholesale services and so can finance new infrastructure. Public resources should be allocated only where market fails in order to avoid "crowding-out" effects. Where public support is needed to finance new infrastructure, then a competitive tender is necessary to reduce budgetary costs and to minimise State aid. The granting authorities should select a company to deploy and/or to operate the subsidised infrastructure ensuring that the process is transparent for all investors wishing to bid for the implementation and/or management of the subsidised project. In this way the EU might grab the benefits of a strong competition for the market when competition in the market is not foreseeable.

Perhaps it is time for a golden rule for the Stability and Growth Pact to exclude investment spending in EU infrastructure from the computation of the fiscal parameters relevant to the Excessive Deficits Procedure. It would be irrational to set challenging aims for Europe 2020 and beyond, while keeping indebted Member States unable to raise adequate resources under the stress of the financial markets.

The EU should create the framework to foster cooperation and infrastructure sharing only if competition at the retail level is guaranteed. Notwithstanding a shared destiny due to technological evolution, the respective aims of the two policies - transport and communications - require a distinct analysis especially with reference to their relevant infrastructure.

An effective transport policy requires a network that joins the disparate regions of the EU and connects them with the rest of the world. The size of the core group is important as well as the geography of the group since "holes" in the map and "missing links" along the corridors might lead to a suboptimal design of the network. Since the network shapes mobility, the design should be coupled with a multimodality approach, which conveys the flow of goods and people in an efficient way by reducing congestion and pollution.

An effective communication policy means giving the opportunity to every citizen to access the internet at a speed which allows them to make use of new services (e.g. cloud computing, e-Health) with sufficient safeguards for users to guarantee their privacy. By contrast to the transport case, in which massive infrastructure can trigger NIMBY reactions, no neo-luddism has emerged in the EU as far as electronic communications are concerned. At the same time, missing States from the core group do not affect dramatically the effectiveness and the efficiency of electronic communications.

Even though infrastructure is located in the European continent, the policy area has a relevant international dimension. The EU is not a fortress and thus transport and communications are the instruments to grab the benefits from the globalisation process.

The EU needs sufficient bargaining power to shape the international "rules of the game". Europe as a "single market" is not enough anymore. The aim should be "a single Europe in the global market" where unity is intertwined with effectiveness since a critical mass is needed, and not even big Member States have that mass on their own. A small core group might be the "Rond-point Schuman" solution to an *impasse*, but global markets might not take in account, the *avant-gardistes* proposals.

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#### Imagining Europe

As the unprecedented financial crisis and ensuing economic recession push Europe to the brink, a critical question arises as to what the foreseeable trajectories for EU governance are in the decades ahead. The crisis has already accelerated EU policy and institutional evolution in key policy areas, but the integration project remains torn apart by centrifugal political and economic forces. The "Imagining Europe" series aims at delineating what kind of governance models the EU could head towards, and which of these models is best suited for the purpose of a more united, effective and legitimate EU. In particular, the research sheds light on the degree and nature of integration at the "core" of Europe and the relationship of that core with those member states (current and future) which opt to remain outside it. It does so by exploring five policy areas: fiscal and monetary policy, infrastructure and communications, security and defence, migration and citizenship, and energy and environment.