TENT-T priority projects. Where do we stand?

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Abstract*: TEN-T is intended to provide the single market with integrated modern transport networks, but infrastructure investment per se has other important effects. Besides reviewing the different reasons that justify public investment in infrastructure capital, the paper focuses the existing obstacles to a full implementation of TEN-T and, in particular, the funding gap, which has always been the most evident obstacle of them. Prospects and possible remedies are also briefly considered.*

Keywords: *Transport, Infrastructure, Funding, Financing*

1. Introduction

It is also in the quality and extension of networked transport infrastructures, although not only in this, that the character of a State can be assessed. With the single market in existence and the single currency in circulation, the progress made by the EU and its Member States in transport networks appears limited if the results are compared with the original ambitions and programs. It is, therefore, worth asking what the problems and the perspectives are of TEN-T, i.e. the core Trans European Transport Network. Section 2 provides a short overview of its main steps and achievements. The paper then focuses the funding gap, i.e. the most evident TEN-T problem (Section 3), the differences between infrastructure capital and public investment and their relations with economic growth (Section 4)

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and the funding implications of long-term real interest rates (Section 5). The profitability issue (Section 6) and the budgeting issue of infrastructure investment (Section 7) are also considered. Section 8 is dedicated to the governance aspects with special reference to the Italian case. Section 9 briefly concludes.

2. Pan-European Corridors, TENs, TEN-T

Pan-European transport corridors are new modern routes in Central and Eastern Europe envisaged to speed up integration in the European Community, which in the early 1990s was already set to enlarge. The European Transport Network (TENT-T) was planned as part of the Trans European Networks (TENs), i.e. the infrastructure policy embedded in the Maastricht Treaty (1992). In both cases the aim basically was to allow goods and people to circulate quickly and easily across borders, and the realization of a single, multimodal network, in particular, was intended to parallel the completion of the single market and the start of the process expected to lead to the launch of the single currency.

The TEN-T network was planned to comprise traditional infrastructure and equipment as well as innovative management transport systems. In December 1993 the European Council established a group of representatives chaired by the Commission Vice-President H. Cristophersen to identify a limited number of concrete projects of major importance for the EU-12. The selected 14 projects were chosen on the basis of relevance and a number of other criteria, but even then the available financial resources appeared limited. In 1994, after the completion of the internal market, at the start of Stage 2 of the convergence process to the euro and the then foreseen acceleration in the enlargement process in the east, the ten Pan-European Corridors and the TEN-T network coalesced into a single large program of infrastructure building. In 2004, i.e. just after the accession of ten new member countries, the list of priority projects was extended to 30 in order to take into account two further new entrants to what is now known as the EU-27. The series of 30 axes had already been identified in late 2004 on the basis of proposals from the Member States and was devised by concentrating on major projects capable of completing those implemented at national level. Indeed, the network was intended to deepen European integration and completion was planned for 2020.

Ten years later, L. Barrot, Vice-President of the EC with responsibility for transport in the EU-25 (Barrot, 2005) unambiguously remarked that the results had fallen short of the original ambitions largely because the amount of resources required was huge. Indeed, a true trans-European network for the then still enlarging EU-25 had been estimated to amount to €900bn over the period 1996-2020 (EC-DG TREN, 2010). The 30 TEN-T priority projects form the first layer of the European network of rail, road, internal waterways and sea waterway axes. The estimated cost was €415bn. The priority projects basically pursue interconnection between national networks since road, rail and air traffic management systems or horizontal projects were added. The second layer is the comprehensive network which is formed by existing rail, road, water links and nodes. New links or the upgrading of existing links are expected to cost more than €500bn and consist of thousands of kilometers of conventional railways and particularly HSR[†]. While Priority Projects can benefit from Community resources and coordination, the completion of the comprehensive layer rests almost entirely with the Member States both financially and in terms of coordination. Each priority project is eligible to receive EU grants from only one source chosen among the TEN-T Programme, Cohesion funds, ERDF and the Research Framework Programme. Priority projects are co-financed and may benefit from loans and guarantees from the European Investment Bank.

The resources available under the 2000-2006 financial perspective were largely insufficient to match such efforts and in 2005, the EC appointed six coordinators to promote a coherent framework and to look for financing schemes alternative to those found in the EU and the national budgets. In 2006, the EU further established the Trans-European Transport Network Agency (TEN-T EA)[‡] to manage the Community action in the Priority Projects. For these projects, the TEN-T EA executive agency has now obtained full responsibility for the management and monitoring of projects.

[†] An HSR network is supposed to be formed by links of 300km minimum for trains running at 250km/h at least.

[‡] The TEN-T maps are downloadable from: http://tentea.ec.europa.eu/en/ten-t_projects/, or: http://ec.europa.eu/transport/infrastructure/maps/maps_en.htm

With the current financial perspective 2007-2013, the EU has made a strategic choice based on the concentration of its infrastructure investments in the Priority Projects and in particular as regards cross-border sections, bottlenecks and access routes. The resources for the TEN-T provided by the EU amount to little more than €8bn, 80-85% of which are available for the 30 Priority Projects and for the horizontal priorities. These resources are intended to lever on national public funding and on private funding as well. The next financial perspective (2014-2021) is expected to change the current dual-layer strategy into one formed by a priority network − largely HSR − and a "conceptual pillar" to help integrate the various transport policies and infrastructure, i.e. something very difficult to figure out in practical terms (EC, 2009).

3. A funding gap

The internal market was thought from the start to be in need of modernization in basically all networks, from transport and energy to communication, but the EU and the European national governments faced and continue to face the problem of finding adequate financial resources to make the estimated infrastructure investments. The divergence between the need for infrastructure investments and available funds in the old Member Countries, i.e. the funding gap, was evident from the early Nineties, but it has widened over the years since EU enlargement has compounded the effects of deepening internal integration on the demand for infrastructure capital. On one side, it was thought that the fast-enlarging internal market needed more infrastructure capital to work properly and deliver; on the other, available funding has not grown at the same rate. This can be seen from the figures for the comprehensive network reported in Table 1. The effect of enlargement can be seen in the first section of the Table, which shows that the average annual cost in the TEN-T comprehensive network in the EU-27 (from the 1996-1999 to the current 2007-2013 financial perspective) increased by 263%; while it decreased to 71% in the old EU-15 Member Countries. As regards the financial sources, it can be noted that over the three financial perspectives, the funds provided by the Cohesion Fund rose by 302% and those in the TENT-T Programme increased by 257%. The funds for regional development (ERDF) actually decreased to 89%. The nature of the resources is dealt with in the last section of Table 1. Grants made available by the EU increased by 206%, i.e. more than those in the loans offered by BIS (169%). In sum, financial resources contributed by the EU rose by 169% only, i.e. less than the total cost of the comprehensive TEN-T network (263%).

Table 1 - TENT-T Comprehensive Network Costs (€bn) (Annual average per financial perspective and ratio)

	A 1996-1999	B 2000-2006	C 2007-2013	Ratio C/A
TEN-T old Member Countries	63,6	39,29	45,43	0,71
TEN-T comprehensive network	21,2	43,14	55,71	2,63
Programme TEN-T	0,446	0,63	1,14	2,57
Cohesion Fund	1,646	2,36	4,97	3,02
European Regional Dev. Fund	1,502	1,23	1,34	0,89
European Investment Bank	5,3	5,91	7,57	1,43
Total Community contribution	8,894	10,13	15,03	1,69
Grants	3,612	4,22	7,46	2,06
Grants and loans	8,912	10,13	15,03	1,69

Own elaborations on EC-DG TREN (2010) data source

The current contraction in public funding in national projects clearly reflects the need for consolidation in public finances at the national level. This need was already obvious in the early Nineties, but it definitely accelerated in 2010, when the global financial crisis turned into the euro crisis. The limited investment made by the private sector in infrastructure reflects the fact that investment in non-transport infrastructure, such as rolling stock and other mobile goods, is held to be more profitable than that in infrastructure. Accordingly, public investment, which is essential in infrastructure investment, remained scarce while private investment, which, although present in infrastructure investment (such as motorways and airports), has continued to prefer non-infrastructure investment. This is far from being a European specificity. Indeed, only a small part of global long-term investment is devoted to infrastructure investment (Monti, 2010).

Table 2 provides a basis for a discussion of the trend in the annual average cost in the 30 Priority Projects and across the last three financial perspectives. The available estimate shows that the average annual cost increased by 472% over the years. The annual average amount of EU resources and their nature are also displayed in Table 2. Only the resources available under the TEN-T Programme have grown slightly in a comparable way to costs (i.e. 400% vis-à-vis 472%). The Community contribution has neither increased cohesion funds sufficiently (321%) nor those of regional development funds (ERDF) (322%). Financing from the EIB grew even less (256%).

Table 2 - TENT-T Priority Projects Costs (€bn)
(Annual average per financial perspective and ratio)

	A 1996-1999	B 2000-2006	C 2007-2013	Ratio C/A
TEN-T Priority Projects	6,53	18,74	30,8	4,72
Programme TEN-T	0,27	0,56	1,08	4,00
Cohesion Fund	0,766	1,4	2,46	3,21
European Regional Dev. Fund	0,292	0,962	0,94	3,22
European Investment Bank	1,956	3,22	5	2,56
Total Community contribution	3,284	6,142	9,48	2,89
Grants	1,328	2,922	4,48	3,37
Grants and loans	3,284	6,142	9,48	2,89

Own elaborations on EC-DG TREN (2010) data source

By 2004, the comprehensive network was estimated to cost about €900bn over the period 1996-2020; while the total cost of the 30 Priority Projects was €415bn. Assuming the estimate as a valid reference value, Table 3 shows the level of attainment expected by the end of 2013. Results in the 30 priority projects are expected to reach a level (0,67) lower than those in the comprehensive network (89%) even though funding and financing from the EU and EIB are going to be slightly more abundant in the former case (59% against 55%). This indicates that the scarce Community resources have actually been concentrated on the priority projects, while the remaining projects of the whole network have largely been left to national public and private resources (116% vis-à-vis 0,73).

Table 3 - TEN-T Costs (€bn)

	1996-2013	1996-2020	Ratio
Comprehensive network	798	900	0,89
EU and EIB	220	400	0,55
Private sector	578	500	1,16
Priority projects	280	415	0,67
EU and EIB	95	162	0,59
Private sector	185	253	0,73

Elaborations on EC-DG TREN (2010) data source

Indeed, besides providing EU funds directly to major projects in the comprehensive network and in the priority links, the TENs and TEN-T initiatives aimed to leverage on national public funds and thus promote public funding overall for infrastructure investment. This strategy, however, seems to have not delivered as expected because the funding gap in infrastructure investment has remained unchanged from one financial perspective to the next. Future prospects are by no means better. First of all, fiscal stabilization is bound to make the scarcity of public funds more severe than it is now. Unlike China, India and also the United States, which tackled the credit crisis by increasing infrastructure spending considerably, the EU and the Member Countries have not inflated public expenditure in infrastructure. Secondly, global capital markets are expected to invert the past trend and make real long-term interest rates increase in relation to the on- going surge in infrastructure investment and the contraction of saving in emerging economies. This means Europe must learn to face intensified competition for equity and finance capital from the emerging economies.

4. Infrastructure, public investment and growth

Economic growth cannot be sustained without adequate net fixed capital formation. The expansion of economic infrastructure capital in transport, communications and in the different utilities is surely a necessary condition for economic growth. The same is largely true for social capital (hospitals, schools, etc.), but economic growth also critically depends on countless mobile capital goods, i.e. equipment— software included— and other intangible capital goods. As is obvious, in any knowledge-based economy, innovation contributes to growth if it lets productive knowledge accumulate in the system. It is for the same reason that depreciation allowances, which are basically made to compensate for the consumption of capital goods, can contribute to growth if they make it possible to exploit technical progress. With the exclusion of changes in inventories and new residential real estate, therefore, basically all gross fixed tangible and intangible capital formation contributes to per capita GDP growth. Mature and emerging economies, nevertheless, behave differently.

The stock of capital to output ratio has the property of being rather uniform across countries as it ranges between 2 and 3, whatever the level of their per capita GDP (e.g. McKinsey, 2010). This means that to increase per capita GDP any country must keep the GDP rate of growth g and the stock

rate of growth $\beta = K_t / K_{t-1} - 1$ in balance: $\beta \approx g$. At the same time there is statistical evidence showing that the capital/output ratio K_t / y_t increases with respect to the investment rate I_t / y_t (e.g. Jones, 2008) although the investment rate is neither stable over time nor across countries. Indeed, to get an additional percentage point of GDP, a country needs not make a fixed amount of gross investment each year. In this regard mature economies and emerging economies behave differently. Even for extended periods of time, mature economies decrease their rate of investment as if they preferred to grow by increasing internal consumption rather than investment, and particularly infrastructure investment. In these economies the capital-output ratio is already high and the labour force barely grows, thus making opportunities for private investors less abundant. The equation $I_t / y_t = (g + \delta) K_{t-1} / y_t$ [§] shows that a low rate of output growth and sluggish maintenance keep the investment rate low, at the given capital/output ratio. Emerging economies do just the opposite as they typically take off by increasing exports and investment to accelerate the growth in domestic consumption only later on. To increase per capita GDP, the emerging economies need to increase the rate of investment and During the recent crisis they have further raised the investment rate and seem determined to continue to do so. Unfortunately, in order to increase consumption they are expected to reduce the supply of saving (McKinsey, 2010). These tendencies will surely weigh on the demand and supply of saving at the global scale and are predicted to make the cost of capital higher in real terms[**].

Since infrastructure investments are a powerful anti-cyclical demand factor, some countries have not failed to take stock of this property to counter the slump in demand in 2008 and 2009 with suitable fiscal stimuli. China and India, but also the United States, have tackled the slump by increasing infrastructure spending considerably. China, in particular,

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[§] The equation $I_t / y_t = (g + \delta) K_{t-1} / y_t$ where y_t is the GDP and δ is the required rate of maintenance investment, is easily derived from the definition $I_t + (1 - \delta) K_{t-1} = K_t$ and from the assumption $\beta \approx g$.

[**] This helps to preserve dynamic efficiency in the economy, i.e. a return rate on capital higher than the growth rate.

introduced a substantial fiscal stimulus in 2008 ($500bn) devoting a large portion to infrastructure, especially railways and China is currently held to have the largest HSR network and to have planned to nearly triple it to more than 16.000km over the next decade. This will be made possible by a steady public investment flow as the largest contribution to infrastructure investment and by an increasing amount of bank loans. Indeed, if the celebrated Keynesian effect of deficit spending really exists, this is surely the case of infrastructure. In the effort to counter a slump in real demand through the provision of low-return new infrastructure capital, the role of government is of key importance because the private sector − while being able to increase high-return non-infrastructure investment − has no incentive to make low-return infrastructure investment. The combination of low-return public investment in social infrastructure and high-return private investment can have the biggest impact on both demand and overall competitiveness. Since it is public investment that has such a strategic role, public expenditure in infrastructure investment should merit special treatment in budget policy (see Section 7) in the EU and the Member Countries. From the point of view of the financial cost of infrastructure investment, China and the other big infrastructure spenders have certainly made a clever choice in exploiting the low level of long-term real interest rates in the capital market during the last two decades.

5. Funding, financing and real interest rates

Low real capital costs have formed the backdrop to investors' decisions for at least the last twenty years all over the world. Real long-term interest rates started falling substantially from their peak in the early 1980s, but they became low by historical standards during the 1990s, and dipped further during the global financial crisis (Martellato, 2010). The descending trend in real interest rates has been ascribed not only to the gradual fading out of the effects of past inflation on nominal interest rates, an effect which dates back to the 1980s, but also to the excess of saving over investment at the global level which emerged later on. Bernanke (2005) famously defined this secular trend the "saving glut". It is natural to think that the two forces of inflation expectations under the present conditions of extraordinary loose monetary policy and heightened infrastructure investment in emerging economies could make real long-term interest rates go into reverse and start increasing again.

The briefly described scenario has certainly created a potentially favorable environment for long-term investment during the past decade at least, but it was not able to avoid the lowering investment rate in mature economies, the EU included. As a result, a large amount of capital is currently required at global level to recover the historical ratio between capital and output in the mature economies and to bring emerging economies to the same level. Investment projects in the EU have to compete with similar projects in mature economies to fund or finance the investment with the resources available in the global capital markets. This means that the difficulties encountered so far in funding and financing TENs with private resources are probably bound to increase in the coming years.

A further obstacle is the uneven creditworthiness of national governments in the EU. The euro crisis in 2010 and the ensuing decision to recover austerity in the national budgets under the Stability Growth Pact are leading to a reduction in government infrastructure spending. The reduction is obviously extremely dangerous for those countries where the accumulation of economic capital has been limited in the past. Indeed, prolonged underinvestment in infrastructure amid accelerated investment in competitor countries will feed negatively back on private investment in the same countries and will inevitably end up by making permanent the current gap in labour productivity, output and employment growth. Therefore, if the low creditworthiness reflects doubts about debt sustainability, low creditworthiness will end up feeding back on itself through low capital formation.

The sudden and rapid increases in bond spreads observed in May and November 2010 inside in the EU-EMU clearly reveal that in some countries public debt is perceived as risky. It does not matter if the State is directly issuing bonds or simply giving guarantees to the agency in charge of running the project. The real interest rate paid on bonds can go higher when the State becomes less creditworthy even if the international risk-free interest rate gets lower. Thus the highly indebted European countries face risks which are particularly high.

The first victim of the 2008-2209 credit crisis was obviously bank financing, which made regular project financing and private-public partnerships lose ground. Capital constraints together with the reduced willingness of banks to extend credit in large amounts and for longer maturities will continue to make the financing of larger infrastructure projects particularly challenging. The combination of low profitability and high project costs is obviously impairing the possibility of some projects to

have access to long-term financing. In reviewing the various strategic possibilities of financing the TEN-T (EIB, 2009) a working group consisting of DG TREN and DG ECFIN and EIB representatives observed that PPP programmes should be enhanced; but also that the difficult market conditions squeeze traditional sources of senior debt thus constraining such programmes. This forced the governments in the countries where large projects are under way to provide new emergency guarantee/lending facilities in 2009. As is obvious, since TENT-T is a long-term endeavour requiring long-term finance that bank credit can no longer provide, capital market access has to be improved.

The capital market could provide finance in various ways. Infrastructure bonds are one old[††] and obvious possibility which could be particularly interesting if the EU, instead of national States, decided to directly issue euro-denominated debentures. This would create a new integrated bond market larger and more liquid than any other existing national market for bond-denominated national bonds. Unfortunately, this idea has never received sufficient political support in the European Council and the absence of an integrated bond market is thus making the full realization of the European network a difficult task under the current conditions of tight credit.

Other forms of financing are possible. Specialized loans/instruments as an alternative to standard EIB loans have already been used by the EIB (EIB, 2009). Listed infrastructure stocks are traded on the open market and require that the project capability to offer an attractive return. Existing infrastructure stocks in Europe and all other continents include business such as toll roads, airports, port operators, energy and utilities that are long-term assets based on monopolistic positions in markets where demand is high. They form a distinct global asset class which is credited with a low correlation with other asset classes and their specific index (e.g. S&P, 2009). Infrastructure funds are typically open to institutional investors. The 2020 European Fund for Energy, Climate Change and Infrastructure, also known as the Marguerite Fund, was established in 2009 to reach €1.5bn in 2011. It is sponsored by the EIB and another five national institutions from France, Italy, Germany, Spain and Poland. It is expected to be a model of risk-sharing for other public and private funds.

[††] Italy issued infrastructure bonds in 1963. The EC suggested it in the White Paper on Growth, Competitiveness and Employment (1993).

6. Profitability of infrastructure investment

Six expert groups were appointed to support the EC in addressing the funding and financing issue because the implementation of the vast majority of the TENT-T project has always been critically dependent on public funds. While the cost of capital has not been a major obstacle to the TENs and TEN-T, at least so far, the low profitability of many TEN-T projects has certainly deterred private investors from taking part in them, thus making their implementation totally dependent on public funding. The single projects cannot be appraised solely in financial terms because many benefits − typically those of reduced environmental costs − cannot be recouped in the form of fare revenue. In a purely financial appraisal, some projects would then be left out; while in a full cost-benefit analysis they would probably not be if the economic rate of return resulting from a cost-benefit analysis were higher than the financial rate of return. This is the case of rail projects in general and, in particular, of the cross-border links that are vital for the operability of the network and thus for the EU as such. Rail projects are coherently held to merit priority inside the Commission.

TEN-T is at best the aggregation of transport corridors rather than a network (EC, 2010b), but current rail priority projects envisage an HSR network whose hub is centered on Paris with spokes going towards London, Amsterdam, Frankfurt, Metz and Lyon-Marseilles. The subsystems in Spain, Italy and Germany are still largely disconnected from the core and in some cases peripheral. The basic economic motivation for building HSR infrastructure is the existence of a commercial demand for high speed connection and a gap in the capacity. However, in many instances, the willingness to pay for HSR service is certainly not sufficient to cover construction, maintenance and operating costs, which are variable and often very high[‡‡], nor is it clear whether social benefits are able to compensate for those costs everywhere.

The motivation, therefore, cannot be found either on purely financial or economic grounds. It probably lies in the will of the national rail companies to compete with air and car transport to regain lost market share, and in the

[‡‡] De Rus – Nash (2007) demonstrated why HSR infrastructure should be justified on the basis of number of travellers and their willingness to pay on a single link.

interest of the largest national companies to develop a proprietary HSR technology. Subsidiary to this is the strategic choice of the EU to create a protected market large enough to allow European manufacturers to maintain and possibly foster their competitive edge in HSR technology. Operators, who often run both tracks and services on many links, seek to use innovation strategically. To gain market share in the global HSR market they need to gain and retain control in the domestic market and to use it to promote their own technology. Indeed, large integrated European companies such as SNCF (and affiliates) and DB increasingly compete with their own individual HSR technologies (TGV, Eurostar, ICE, TAV, etc.) for the service on the tracks of the European network, where patronage is highest, and also with Canadian, Japanese and, more recently, Chinese competitors to gain market penetration in the networks that are fast growing in large economies such as China (Wright, 2010).

7. Fiscal consolidation and public investment

The 2008-9 credit crisis forced European governments to raise the average budget deficit in the euro area from 2% to 6.3% and the average debt to GDP ratio from 69.4% to 78.7% in 2009 (Eurostat, 2010). The worsening, which by no means reflects efforts to increase infrastructure investment, has made debt spreads widen dramatically, impairing the ability of peripheral countries to face debt obligations. The initial deterioration and the ensuing worsening of market conditions, therefore, have severely reduced the capacity of governments to invest in infrastructure either with public resources such as tax revenues and debt finance. The reaction of the EU to the crisis in 2010 consisted in the introduction firstly of a temporary rescue scheme (the EFSF until 2013) and subsequently with a permanent rescue scheme (EMS since 2013). Such schemes imply loans to the country hit by a surge in debt spreads (as was the case of Greece and Ireland in 2010). A further decision was about strengthening the Stability and Growth pact, i.e. the surveillance mechanism on the budget and debt position of the Member Countries. The ECB itself started intervening in specific segments of the bond market (Greece, Ireland, Portugal in 2010). There is, therefore, a danger that a tough and prolonged fiscal consolidation would end up worsening the traditional bias against net investment and particularly infrastructure investment everywhere in Europe.

To eliminate this bias, the so-called golden rule in fiscal policy has been advocated at least from the early years of adoption of the SGP (e.g.

Blanchard, 2004). According to this rule, the public budget does not impose a burden on future generations if public current spending is paired by current receipts. Net investment, therefore, could be financed by raising debt. To make government pursue the golden rule, the SGP should then keep the current budget separate from the capital budget and penalize only a current budget deficit. Thus a government should be asked to keep current expenses (depreciation allowances and interest payment included) balanced with current receipts, at least on average along the cycle[§§] and allowed to finance only net investment.. The goal pursued with this budget rule is to avoid mounting pressure on public debt reduction ending up worsening the underinvestment trend observed in the European countries in the last decades. The positive effect of this rule could be increased if the debt were issued by the EU directly or by the Member Countries under the guarantee offered by the EU in order to limit its effects on the spreads.

8. The governance issue

Central and local governments often have different agendas and the two do not necessarily match. In all democratic systems, therefore, a balance between the instances of the different levels of government must be found to reach the common good. When governance is not up to the needs, such a result is lacking and projects are destined to flounder, caught in a web of overlapping central and local competencies. Also citizens have their own preferences and usually only some of them benefit while others lose from infrastructure building, particularly in the case of HSR. Equity, therefore, calls for some form of compensation, which in turn requires determining whether the willingness to pay of the beneficiaries really exceeds the compensation due to the losers. Specific procedures and mechanisms such as the *enquête publique* and the *débat publique* in France and the public inquiry in Britain have been devised to find equilibrium.

Italy is a case of unclear and not shared division of responsibilities over the location of infrastructure. On one side, there is a potential increase in the role of local administrations over development strategy and policy as shown by the institutions of ordinary regions (1970), non-ordinary regions and

[§§] Current expenditure must be lower than current receipts if the debt has to be reduced

autonomous provinces (1972) and, lately, fiscal federalism. On the other side, there is the will to increase the role of the central government as regards major infrastructures. The Target Bill[***] (2001) was purposely introduced to promote strategic infrastructures by shifting the balance from local to central government and by increasing the role of private capital. Its very existence demonstrates that governance is a big issue in Italy. So far, the bill has not been able to increase funding and financing adequately and speed up planning and implementation (Signorini, 2009). Governance is a common problem and is a further hurdle to progress in the TEN-T. There is no general rule or paradigm since each country has its own governance, but the EC through the Expert Group 1 has recently tried to fix ideas about objectives and methodologies in transport network planning (EC Expert Group 1, 2010) to be used in the different political contexts

9. Summary and conclusions

The realization of a single multimodal transport network (TEN-T) as a part of Trans European networks (TENs) is the translation of the infrastructure policy envisaged in the Maastricht Treaty (1992). Together with the single currency, these networks were intended to deepen internal integration and thus to derive full benefit from the single market and the single currency. HSR and modern transport management systems, which absorb the larger part of available resources, aim to qualitatively improve infrastructure capital and also to permit the biggest European integrated transport companies and manufacturers to use their control on the domestic

[***] The Target Bill (Legge Obiettivo) is backed by the Public Contract Code (Codice dei contratti pubblici, 2006) and a number of special execution procedures. It failed to indicate priorities and did not indicate any useful criteria for identifying them in the long list of projects. While diminishing the role of local authorities and Communities, the Target Bill gives the biggest role to the Treasury and the Transport and Infrastructure Ministry (CIPE). A parallel initiative was the introduction of the Emergence Decree (Decreto sulle Emergenze, 2008) giving large resources and a major role to the Civil Protection Department, that is to the Head of government, in matters such as major emergencies and major events. The government, however, failed to find approval for the bill transforming the Department into a limited liability private company.

market to improve technology and thus to compete in the global market more effectively. From a purely macroeconomic point of view, infrastructure investment and public capital also represent an effort to make the stock of capital increase faster than GDP, i.e. to reverse the downtrend in investment-to-GDP which is a typical feature of mature economies. From the same point of view, infrastructure investment has failed to be used as an instrument to counter a slump in real demand.

Good reasons to promote infrastructure investment are not in short supply. Nevertheless, the EU, the national governments and the private investors, although for different reasons, have not been able to cooperate to make TEN-T and, in particular, Priority Projects progress as hoped, at least so far. The funding gap has always been and remains the most evident obstacle to the actual full implementation of TEN-T. There is evidence that EU enlargement has compounded the effects of deepening internal integration on the demand of infrastructure capital. The saving glut of the past and the related low average level of long-term real interest rates created a very favourable scenario during the past twenty years, but have not been able to match the increase in the demand for infrastructure capital implied by TEN-T with an increase of funds. These favourable conditions are predicted to weaken considerably in the coming years. Also the fiscal rules of the European monetary union and the ongoing fiscal consolidation are deemed to reduce the ability of governments to fund infrastructure investment, although the golden rule of fiscal policy offers the possibility to avoid this hurdle. These are by no means the sole obstacles to the completion of TEN-T. The credit crunch, the technical difficulties of some specific links, the low profitability of many projects and the governance issue are other problematic aspects touched on in the paper.

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