

1 Old Myths and New Realities of Transport Infrastructure Assessment: Implications for EU Interventions in Central Europe*

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Transport has long been considered central to urban and regional development, and to the concept of economic growth in general. The establishment of trade routes is an essential prerequisite for the expansion of market ranges. And as settlements grow, an efficient internal organisation of infrastructures is key to facilitate the efficient movements of people and goods. Distance and density remain the two most fundamental concepts in urban development theory. But of course today's cities and regions are vastly different from the places we used to live in as little as fifty years ago and consequently the relationship between transport infrastructures and economic development has been dramatically redefined over the last half century. As we have moved from Fordist to post-Fordist and post-industrial production and consumption structures, wealth creation as a whole has become an increasingly complex and de-materialised concept. Successful modern economies are less and less based on heavy production industries dependent on large-scale flow of material goods and bulk production. Instead, they rely on complex webs of inter-dependent service sector industries that are much more dependent on flexible, small

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batch production and just-in time delivery. Technological innovations have also vastly expanded the range of transport options, with traditional land-based modes of transportation such as road and rail now intensely competing both among themselves and with water and air transport.

Of course not everyone has drawn the same conclusions from the new realities unfolding around us. While everyone seems to agree that investments into physical rail and road infrastructures will remain crucially important even in the information age, opinions about investment priorities differ widely. This focuses on transport investment priorities in the European Union. One of the ambitions is to lay to rest the notion that a concentration of investments on large-scale links will provide economic development benefits for all of Europe and foster greater cohesion across the continent. In particular, the article evaluates European Union regional policy debates that erupted after the adoption of the Trans-European Networks (TENs) concept. The TENs are masterplans of large-scale road and rail infrastructure links that are to connect all major regional agglomerations in the European Union. The European Commission argued that the completion of the TENs was essential for making Europe globally competitive and for enhancing the development potential of Europe's peripheral regions. This first discusses general theories on the economic aspects of transport investments and then traces the recent disputes over the TENs and over European regional development policy as a whole.

Macroeconomic (non-spatial) Aspects of Transport Investments

Much confusion persists over the true growth potentials of infrastructure investments. The simplistic notion that regions will necessarily grow stronger with increased trade and interaction does not carefully enough distinguish between the economic interests of (a) existing businesses in a particular region whose production and service costs will be affected by the improvement of infrastructures; (b) consumers / employees inside the region; (c) businesses outside the region who supply the region with products and services and/or receive products, services or labour from it (or wish to do so in the future), and (d) consumers / labourers outside the region. All too often, economic growth potential is only assessed in terms of the benefits accrued by local firms, not residents. It is thus worth considering several macro-economic dynamics in more detail:

Reduction of Transport Cost

Traditionally, the reduction of travel costs has been the most important factor by which economists calculated the economic benefits of road improvements. In theory, road investments are supposed to lead to an overall lowering of transport costs, most notably through the reduction of delivery and access times. Improved transport conditions increase the market range for producers. However, in mature economies such as Western Europe and the US, this has rarely proven to be a significant factor in production patterns (SACTRA, 1999). Even the European Commission now admits that transport costs represent less than five percent of the total production cost of goods and services in Europe (CEC, 1999). Button (1993) also stresses the declining importance of transport costs and estimates that they now account for as little as two to three percent of total costs. For the U.S. context, Boarnet (1997) also points out that previous studies often overestimated the macroeconomic effects of road investments by counting in both the reduced travel costs for producers and the resulting lower consumer prices, hence in effect double-counting the benefit.

An even more important point is that, in post-industrial societies, products are increasingly high-value goods and the resulting transport cost component is relatively low. This does not mean that transport infrastructures overall are less important. But the point is that the demand for higher quality, faster infrastructure is more important than a quantitative improvement of infrastructures per se. It should also be noted that the rise of telecommunication has not necessarily replaced travel with electronic transactions but in many instances even created new demand for movement.

Even in cases where production costs are lowered due to a fall in transport costs caused by infrastructure investment, the output effect depends on whether the fall in costs is passed through to prices and, if it is, on the price elasticity of demand. Thus market elasticity and competitive conditions in the transport-using sector are critical determinants of the outcome.

Inter-Regional Trade Theory

In some cases, poor accessibility may actually benefit and protect businesses in weaker regions. In these cases, better transport connections

open local markets to the increased competition of larger businesses outside the regions that produce a greater variety of products at lower prices. In other words, the regional monopoly power of existing businesses is reduced. This is a key component of the 'wider economic benefits' story. In these cases, local consumers benefit, but the region as a whole may be negatively affected by the local non-competitive businesses who struggle and begin to fail. The negative employment effects from failing local businesses are likely to outweigh consumer benefits from lower prices. Opening the region up to intra-regional competition therefore requires at least some local sectors to be strong enough to survive the competition. Given the increasing integration of European economies both within current Member States and with Central Eastern European countries, regional isolation is increasingly a non-option for European regions, but regional economists need to carefully analyse the particular strengths and weaknesses of the region in question before transport-investment-led economic development strategies can be successfully employed. Otherwise, investments might exacerbate existing divergence. As P. Martin (1999, p.12) notes: 'recent models of geographic economics show that regional integration, by reducing transaction costs between the regions, may lead to self-sustaining inequality.'

Production Function Studies: 'Is Public Expenditure Productive?'

In the late eighties, especially in the U.S., the discussion over transport infrastructure benefits shifted away from individual project analysis to studies that sought to assess the larger relationship between total infrastructure stock in a region and its economic performance. This production function approach was inspired by the larger debate spawned by Aschauer's (1989) provocative public capital hypothesis. His core argument was that public investments created benefits that spilled over to many areas distant from the actual project. These spillover benefits, it was believed, could be demonstrated by taking a more network-oriented approach, that looks at how a particular road (or rail) investment changes accessibility dynamics in other parts of the road (or rail) network.

The argument obviously has large political implications. If a general relationship between infrastructure investment and economic wealth could be plausibly demonstrated, then an expanded government role in stimulating investment into public capital was justified. The narrower neo-classical approaches focusing on cost-benefit analyses at the project level

then could be said to underestimate the economic effects of public investments.

In the specific context of the U.S., Aschauer, and others after him, argued that the downturn in economic productivity in the U.S. in the early seventies could largely be explained by the overall decrease in (public) infrastructure investment since the mid-sixties. Consequently, they argued, only a pro-public investment approach would be able to bring growth rates in the U.S. back up to previous levels. So the supposed positive relationship between increases in public infrastructure stock and the productivity of private sector capital was largely asserted through negative deduction. Aschauer's conclusions were immediately contradicted by a number of authors, both on empirical and more ideological grounds. Interestingly, while several authors arrived at similar results as Aschauer, Ford and Poret (1991) employed a similar methodology but expanded the study to include longer data over longer time periods and for several additional OECD countries and they end up rejecting the public capital hypothesis. Other authors have attacked Aschauer on methodological grounds. Aschauer's focus on total capital stock, i.e. an exclusive focus on quantitative infrastructure measures, versus the qualitative aspects of the infrastructure in question is especially problematic. Gramlich (1994) presents an important review essay on the debates. Boarnet's (1997) more recent review article on highways and economic productivity also discusses implications for policy reform in the U.S. context. R. Martin (1999, p.143ff) discusses several mid-nineties studies that lend support to Aschauer's hypothesis for the EU context. In particular, Seitz and Licht (1995) look at the West German *Länder* during the 1971 and 1988 period, and Mas *et al* (1996) look at Spain. However, the specific emphasis in these studies is on whether public capital has cost-reducing and productivity-enhancing effects on the private sector. In other words, their interest is only in whether private firms benefit, not the resident populations. Wherever these studies find evidence for positive inter-regional spillover effects from network enhancement, they also find that these effects decline over time.

In the end, Aschauer, while providing an important ideological boost to pro-investment professionals and politicians, is not very useful for helping decision-makers with either the location or even the concrete nature of the investments. And as Boarnet (1997) noted: 'The most reasonable interpretation of the production function literature is that the U.S. infrastructure stock is well developed, such that further public capital

investment will have little additional economic impact.’ By limiting the discussion to an aggregate analysis of total investment stock, we learn nothing about whether, for example, road investments are more ‘productive’ than rail investments or whether investments are more ‘productive’ in core or peripheral regions. These questions, however, lie at the heart of EU regional development policy.

Transport Investment and Regional Development in the EU: Past Trends

The European Union has a legal obligation to promote balanced economic development within its territory. As the Treaty on the European Community specifies:

In order to promote its overall harmonious development, the Community shall develop and pursue its actions leading to the strengthening of its economic and social cohesion. In particular, the Community shall aim at reducing disparities between the levels of development of the various regions and the backwardness of the least favoured regions or islands, including rural areas.¹

The Treaty also specifies that every three years, the European Commission has to submit a report to the Parliament and the Council on ‘the progress made towards achieving economic and social cohesion and on the manner in which the various means provided for in this article have contributed to it.’²

From the start, EU regional policy was strongly inspired by the notion that investments in transport infrastructures could help weaker regions to converge towards average levels of income in the EU. Several Commission-funded research projects assessed a strong relationship between higher transport infrastructure endowment and regional wealth as measured by GDP per capita (see especially Biehl, 1986).³ Consequently, official EU documents, with the Commission White Paper on Growth, Competitiveness and Employment being the most prominent among them, were ostensibly justified in assuming a strong link between new infrastructure investment, growth and employment. According to this logic, an expansion in a region’s infrastructure stock would result in better economic performance. And, as hinted above, stressing the macro-economic effects of infrastructure investments was also a convenient way for pro-investment politicians to avoid more extensive and more specific

discussions over the particular benefits of infrastructure projects (or rather their costs and externalities). Despite the instant controversiality of the concept (and although he is usually not referred to by name), Aschauer's public capital hypothesis boosted pro-investment thinking in the EU. In particular, official EU policy soon asserted that large spillover effects and network benefits would arise from the elimination of so-called missing links and bottlenecks, particularly in border regions.

The EU Structural Funds had begun to account for an increasing share of the overall EU budget since the nineteen-eighties, and even before the advent of the TEN, transport infrastructure funding was a key element in these funds. As a Commission communication on the Common Transport Policy (CEC, 1995) put it:

Efficient and sustainable transport systems play a key role in regional development. Structural policies and the CTP complement one another and therefore promote a more balanced and sustainable development of the Union's territory, particularly by improving accessibility and the situation of weaker regions and disadvantaged social groups.

Between 1975 and 1993, transport sector allocations through the European Regional Development and Cohesion Funds (i.e. the Structural Funds) amounted to 13.6 billion ECU in the EU. In the post-Maastricht era, transport funding increased even more substantially with the emergence of the TEN master plans. In the 1994-1999 programming period, TENs projects alone received grant support from European Regional Development Fund (ERDF) Objective 1 and Cohesion Fund grant allocations totalling 3.5 and 5 billion ECU in the 1994-1999 programming period, respectively. Another 1.34 billion were allocated through a special TEN budget line between 1995-1998. Additionally, the European Investment Bank (EIB), the house bank of the European Union, concluded loan agreements in the amount of 14.2 billion for TEN transport projects within EU territory in the period from 1994-1997 (all figures quoted in CEC, 1999). For the period from 2000 to 2006, the Commission expects TEN budget allocation to be around 5 billion ECU.

Although public-private partnership was encouraged from the start, the TENs were always at least in part supposed to be financed by the European Union. In fact, the EU itself saw its own role as indispensable:

Only the European Union can make the integrated transport network a reality in time to avoid the environmental and mobility crisis which faces us. (...) An integrated Trans-European transport network will bring economic and social benefits to all of Europe. It will play an important part in easing the long-

term job crisis, it will be good for the environment, and it will improve the quality of people's lives. (EC, The Trans-European Networks, Conclusion, 1995).

With reference to the TENs, several additional arguments were made. The European Investment Bank even used the clearly temporally limited employment effect of new construction as an argument for the TENs. According to the EIB, the TENs are 'a sound investment' for the following reasons:⁴

- (1) Secure and new jobs – lower transport costs, close economic co-operation, and better development prospects for outlying regions increase Europe's prosperity and, during the construction phases of Trans-European networks, create new jobs.
- (2) Greater traffic safety – modern traffic management systems and the removal of traffic bottlenecks will ensure a smooth flow of traffic and reduce the number of accidents.
- (3) Less traffic congestion – less traffic congestion reduces stress, delays, costs, excessive energy consumption and pollution.
- (4) Less pollution – switching traffic from roads to Trans-European rail and also waterway networks reduces pollution.
- (5) Greater choice for travellers – high-speed trains cut journey times by half and offer a safe, time-saving and environmentally friendly alternative to private cars and intra-Community air travel.
[...] These benefits are compelling. The European Union, together with the European Investment Bank and the European Investment Fund, wants to develop these Trans-European networks as swiftly as possible, for the benefit of all citizens of the European Union.

As discussed in this paper, these assumed benefits are certainly questionable to both environmentalists and even mainstream economists. As a matter of fact, the EIB's own Chief Economist's Department has just published a double issue essay collection that rethinks notions of regional development and convergence in Europe.⁵ The employment effects of road and rail construction are clearly temporary and hence not able to bring permanent employment benefits to a region. Safety improvements may occur, but the early TENs visions were primarily geared at expansion, not technical upgrading of networks. As for congestion and pollution effects, the overall aim of the TENs was clearly to accommodate increasing transport volumes, which means increasing emissions overall, regardless of the fact that traffic flow improvements at bottlenecks might ease the situation at particular places. And since the supposed modal shift from road to rail is a purely rhetorical statement contradicted by the record of

actual investments, it seems fair to say that the TENs in fact perpetuated road dependency in Europe, thus clearly contradicting recent EU commitments to increase the shares of rail and combined transport. In particular, the European Union's new Sustainable Development Strategy, released just in time for the Gothenburg European Summit in June 2001, included very specific goals for the transport sector. Among other things, the EU proposed to shift from road to rail, water and public transport 'so that the share of road transport in 2010 is no greater than in 1998' (CEC, 2001, p.12). There is thus rising awareness within the EU that transport has become too dependent on road travel. Another issue is the fact that increased possibilities for travel also encourage greater overall mobility, hence further increasing the overall vehicle miles travelled. Unless these additional miles travelled also result in concrete social or economic benefits that are not outweighed by additional environmental impacts, this additional kind of mobility 'for the sake of mobility' is unwelcome. In fact, the above-mentioned Sustainable Development Strategy is the first key EU document to go even one step further by making the de-coupling of transport growth from GDP growth the first headline objective for the transport sector as a whole.

Prioritising Investments at the European, National and Regional Level

From a public welfare perspective, the key consideration for an investment is the optimal use of public funds to the greatest possibly benefit of all populations in the affected regions. One therefore also has to ask the question whether new investment into transport infrastructures should be the priority strategy at all. Other investments, especially road upgrading and maintenance often promise greater economic returns (World Bank, 1996). Here, regional interest may collide with national interests. For example, local residents may consider an upgrading of the local road or rail system much more important and preferable than the construction of an additional long-distance freeway routed through their region, especially if the project cuts through valuable nature reserves. Yet, national priority projects are typically not based on the specific needs of the regions, but rather on a more general national master plan. Large-scale links often receive priority primarily not because they can be justified either through careful cost-benefit analysis or production function calculations but simply for political reasons. In the case of Germany, a large number of national priority transport projects were developed for former East Germany. And

although there was indeed a large infrastructure deficit in the new *Länder*, and much investment was needed, individual projects were not necessarily responding to carefully evaluated regional needs. The demand for new infrastructure or added capacity is of course typically highest in regions with higher population densities, i.e. in core regions. Since cost benefit analyses continue to calculate the bulk of their benefits from time saving from the users, investments in these more urbanised, higher density core regions will always show greater benefits than in lower density regions. In other words, if investments were to simply follow existing demand, then peripheral regions, that are typically more rural in character, would be unlikely to receive priority investments. There is an obvious dilemma here and it demonstrates that transport policy has to be developed in consistency with spatial and regional policies. Despite efficiency arguments favouring investments in agglomerations in the core, the EU is likely to continue to be committed to developing rural and peripheral regions, and will therefore continue to finance rural transport infrastructures, which are primarily road-based. It should be clear, however, that this is first and foremost a political commitment, and not an efficiency decision. With populations and economic activity necessarily being more dispersed in peripheral regions, higher per capita investments are needed there. And given current political dynamics, with non-central regions gaining rather than losing political influence in Brussels, the EU is unlikely to discourage rural development for efficiency reasons in the near future.

Finally there is the simple and legitimate option of non-transport infrastructure investments. Especially in the mature economies of the European Union, it often makes much sense to concentrate on other aspects. For example, in order to attract the kind of highly educated labour force that the new telecommunications and computer industries require, place-factors such as cultural institutions etc. may be more important than additional access roads.

Rethinking the Theory on Transport Investments

State-of-the-art regional development theory, including most recent research funded by the EU itself, now offers a much more careful assessment of the economic benefits of transport investments than it did ten years ago. This is not only due to the overall rethinking of regional policy, but also relates to an earlier shift in emphasis from merely large-

scale infrastructure investments to high-quality ones. The EU's recognition that the greatest economic benefits were likely to result from closing gaps in infrastructure connections in (centrally located) border regions rather than from a higher endowment of infrastructure stock in peripheral regions already indicated a significant shift in thinking away from a merely quantitative approach to a more qualitative one.

Additionally, recent empirical studies emerging from a variety of EU countries, particularly from those countries that have received large sums of Cohesion Fund aid for road construction, provide strong counter-evidence against the notion that large-scale transport infrastructures are a panacea for regional development. Even early on, some European researchers warned that correlation between transport endowment and regional wealth were more likely to point to a historical relationship due to long-term agglomeration processes and did not necessarily reflect recent infrastructure investments (Brocker and Peschel, 1988). A London School of Economics study on the socio-economic impacts of transport projects financed by the Cohesion Fund found that the actual impacts varied widely, even for carefully selected infrastructure investments.

Several recent studies in particular cast serious doubt on the notion that weaker regions always benefit from transport investments (see especially Vickerman, Spiekermann and Wegener, 1999). Even those scholars who continue to believe that transport investments are a key trigger for economic benefits increasingly admit that these benefits will not necessarily be reaped by the majority of inhabitants in the disadvantaged regions.

In its important recent Communication on Cohesion and Transport (CEC, 1999), the Commission thus still stresses the link between economic development and transport, but then goes on to admit that the link requires close examination. Even the European Commission recently acknowledged that the Italian Mezzogiorno presents a strong counterexample of a lagging region where a relatively high endowment with transport infrastructure has not as of yet resulted in a significant rise of local incomes, thereby strengthening the frequent assertion that other socio-economic factors are more important.

Meanwhile, the Nordic countries present the opposite case of highly successful regions with high average incomes and relatively low-density transport infrastructures. In fact, the Nordic countries are an interesting reminder that transport is a derived demand and that the key comparison for inter-regional or international comparisons is infrastructure endowment

per capita, rather than per square mile or kilometre. Comparing the Nordic countries to the EU 15 average, it is obvious that the Nordic countries have significantly less roads and railways per square kilometre, a fact easily explained by the lower population densities (see figure 3.1). However, both passenger and freight mileage per year are larger in the Nordic countries, owing to the simple fact that larger distances must be overcome. Interestingly, the so-called peripheral countries in the North also have higher GDPs per capita than the EU average.

In examining the difficult question whether investments into large-scale transport links bring economic benefits, both costs and benefits therefore need to be carefully assessed on a case-by-case basis. Even if an investment comes up positive in the end, this still only means that from the perspective of the project promoters, the benefits were greater than the costs. There still might be losers. And depending on the inclusiveness of the cost-benefit methodologies employed, significant losses may be externalised. Often economic benefits are reaped at the expense of greater environmental impacts, such as air pollution, which raise health care expenditures.

Interestingly, the narrowness of cost-benefit approaches has been attacked from a number of different camps, and often for opposite political reasons. Environmental externality scholars attack cost benefit analysis not for the benefits but for the costs that remain unaccounted for in traditional analyses. In the case of new toll roads, for example, environmentalists attempting to block investments will point to increasing traffic congestion and raising pollution on parallel networks due to shifted traffic onto (toll-free) roads. Meanwhile, investment boosters attempting to leverage additional highway investments that cannot be justified by narrow project analysis alone will attack cost-benefit analysis for not counting macro benefits. Rural politicians are still particularly prone to hold on to the mistaken notion that roads alleviate poverty by automatically bringing employment and growth.

It should also be noted that as long as the external costs of transport, particularly for freight, remain as highly externalised as in Europe (see especially Teufel, 1989), easier transport access is likely to allow manufacturers to use production inputs from ever far away places. The longer the distances travelled, the larger the environmental impact. The irrationality of using increasingly diverse inputs was underscored by Böge (1995), who demonstrated that if all product relationships were examined, i.e. if one included all the distances the different ingredients and packaging

materials have to travel in order to deliver the finished product, one ‘theoretical’ truck of simple 150g strawberry yoghurt pots was moved over a thousand kilometres to supply her study area in Southern Germany.

Böge’s analysis shatters another often-heard pro-investment argument, namely that large-scale investments will bring about a more ‘rational’ land use system by reorganising production and distribution systems in more efficient ways. This statement typically triggers a heated debate over what exactly an ‘optimal’ organisation of a land use and transportation system would be – a debate that we can scarcely afford to enter at length here. However, the following key issues should be kept in mind with respect to regional transport infrastructure investments:

First, a particular investment might ease congestion costs and hence improve travel times in the short run. However, by making travel cheaper, the investment is then also likely to encourage longer journey-making in the medium to long-term, hence inducing additional travel. And again, additional travel without concrete additional benefits is increasingly seen as undesirable. Depending on its nature, an investment might either encourage a greater clustering of activities around certain locations (agglomeration effects) or encourage a greater dispersal of economic activity (sprawl effect). The latter is generally considered to be both less efficient from a land-use perspective and responsible for more externalities. Effects can be contradictory, however. Another key analytical question is whether the investment triggers an overall increase of economic activity (win-win situation) or a just re-location of economic activity from one place to another (win-lose situation). The latter case is the essence of the so-called two-way road argument, which warns that ‘improved accessibility between two countries (and similarly, between cities, areas or regions) may sometimes benefit one of them to the disbenefit of the other.’ (SACTRA, 1999a, p.2). Finally, there is one last non-resolvable methodological challenge that brings us full circle and goes beyond challenging the productivity of transport investments to give recognition to the simple fact that travel itself can be both productive or unproductive, so that, depending on its nature, either an encouragement or a discouragement of movement is in order. This dilemma is most succinctly summarised in the comprehensive SACTRA report (1999a, pp.2-3), which is worth quoting at length:

[The authors of the study] have not found it possible or helpful to define an absolute distinction between ‘productive’ and ‘unproductive’ classes of vehicles or traveller. [T]heory suggests that there are a number of important

mechanisms by which (...) transport improvement could, in principle, improve economic performance. (...) In the search for empirical evidence, we find that direct statistical and case-study evidence on the size and nature of the effects of transport costs changes is limited. (...) The state of the art of this important field is poorly developed and the results do not offer convincing general evidence of the size, nature or direction of local economic impacts. (...) Our studies underline the conclusion that generalisations about the effects of transport on the economy are subject to strong dependence on specific local circumstances and conditions.

The Paradox of European Regional Policy

The accession of several lower income countries into the EU in the 1980s made it politically necessary to institute a system of regional transfers. Resources for regional policies from the EU increased almost tenfold from 3.7 billion ECU in 1985 to 33 billion in 1999, amounting to 0.45 percent of the EU's total GDP (P. Martin, 1999, p.11). Despite this enormous commitment, the actual economic justifications behind these substantial transfers remain contested. For one, neo-classical theorists, who assume perfect competition, would argue that policy interventions in favour of lagging regions are not justified since the process of integration itself will sufficiently accelerate convergence between regions. In other words, neo-classical theories of international trade would argue that even regions with lower level of productivity would still gain from trade based on comparative advantage. This argument is contradicted by new theories of economic geography and of endogenous growth (see especially Krugman, 1991) and by the two-way roads argument in particular. These theories emphasise the importance of economies of scale, imperfect competition and the localised nature of spillover effects. Yet ironically, new economic geography ends up challenging the validity of regional transfers in a much more troubling manner. The question is whether cohesion really is still a desirable goal even if it might jeopardise European competitiveness in the long run. This forces decision-makers to clarify their objectives. Using slightly inaccessible economic language, Philippe Martin's (1999, p.12) recent prize winning essay summarises the key dilemma:

If economies of scale and localised spillovers explain phenomena of increased regional inequalities, this necessarily implies that efficiency gains accrue from the existence of economic agglomeration. The existence of these beneficial effects of agglomeration suggest rather that, in certain respects,

Europe's economic geography is insufficiently agglomerated and specialised (for example in comparison with American geography). *It is therefore illogical to claim that the diminution of regional inequalities supposedly facilitated by regional policies will generate efficiency gains at pan-European level.* To oppose concentration and geographical specialisation is also to renounce their beneficial effects.

The key point is that a more equal distribution of economic activity across space would ultimately mean foregoing the very benefits that urban and regional agglomerations provide. In other words, although hugely problematic from an equity perspective, the argument is that Europe as a whole may be better off economically if it kept concentrating infrastructure investments in the Blue Banana core of Europe, with certain peripheral exceptions. Martin is thus making an efficiency argument that the EU, for political reasons, could never heed.⁶ Ironically, the catchy Blue⁷ Banana image of an economic backbone corridor in Europe reaching from London across the channel through the Benelux countries, Northern France, Switzerland and Southern Germany to Northern Italy was first developed by French spatial analysts in the late 1980s precisely in order to point out the need to develop an alternative, more polycentric structure (also see figure 3.2). This need certainly has also been the focus of the European Spatial Development Perspective (ESDP) document that features the ambitious subtitle 'Towards Balanced and Sustainable Development of the Territory of the EU.' The ESDP was developed following the adoption of the so-called Leipzig Principles by European ministers in 1994. The principles call for: (a) a balanced and polycentric city system and a new urban-rural partnership, (b) parity of access to infrastructure and knowledge, and (c) sustainable development, prudent management and protection of nature and cultural heritage (listed in Faludi, 2000, p.8). The two different visions of Europe are nicely illustrated in Kunzmann's sketch of the European Blue Banana versus the European Grape (figure 3.3).

To suggest that the very idea of EU Cohesion and/or Spatial Development policy, namely to achieve a more balanced distribution of infrastructure across space, is contradictory to what the EU's own house bank and main lending institution (i.e. the EIB) now considers state of the art economic rationality is indeed a deeply troubling thought, especially since the EIB itself has been the main funding institution for those very TEN networks that supposedly will be developed 'for the benefit of all citizens of the European Union'.⁸ The contrasting visions also explain the recurring dilemma of all decision-making surrounding large-scale

infrastructures: by definition, all 'backbone networks' – be they located along the Blue Banana or along any of the ten chosen Helsinki Pan-European corridors – privilege connections between large cities and bypass agglomerations of lesser importance. (And the bypass effect is certainly much greater in the case of high-speed rail than for roads.) This means losers are scattered along the way, and, according to the SACTRA experts, even possibly also at one of the two ends. This latter point becomes particularly important when we consider the EU's ambitions to extend the TENs into Central and Eastern Europe.

Modal Bias in the TENs: Road continues to win over Rail

Another myth about the TENs was the idea that they would primarily be focusing on high-speed rail links. By favouring rail over road, transport systems would supposedly become more sustainable. Leaving aside for the moment the argument that, depending on how the accounting is done and which costs and benefits are included, new high-speed trains are not necessarily more energy efficient or environmentally friendly than road traffic, the Commission's rhetoric of actively pursuing a modal shift from road to rail is simply not backed up by reality. In fact, data analysis on transport investments shows the Commission until now has failed to meet its own recommendation to promote environmentally friendlier modes:

It is true that 9 out of the EU's 14 TEN priority projects were high-speed rail projects (see figure 3.8). Also, over 60 percent (827 out of 1344 million ECU) from the TEN special budget line went towards (high speed) rail. However, figure 3.4 also indicates that the vast majority of transport spending under the more sizeable Cohesion and EDRF Funds went towards roads, tipping the overall balance about two-thirds in favour of roads and highways. From 1994-1999, over 70 percent of the 13.7 available EDRF Objective 1 funding went to roads.⁹ The imbalance was equally pronounced in the case of the Cohesion Fund. From 1993 to 1999, TEN-related priority transport investments to the four poorest member states (Greece, Ireland, Portugal and Spain) accounted for over 5 billion Ecu, of which 69 percent went to roads (see figure 3.5).

The Empty Rhetoric of Cohesion and Sustainability

EU development goals remain deeply conflicted and contested. EU transport sector investments continue to have to satisfy different aims related to economic growth, regional cohesion and sustainability. Environmental concerns often take a back seat to mainstream economic development interests, and the politically most influential core regions continue to be able to attract a significant amount of infrastructure funding at the expense of less economically advanced peripheral areas. The TENs priority projects fundamentally violate cohesion goals and sustainable development by concentrating investments in already privileged areas. And despite a rhetorical favouring of rail, the majority of investments still went towards road projects. One of the key reasons why lending and grant making remained so heavily biased towards road, was the failing commitment of the recipient governments to more actively pursue a modal shift towards rail. And in the cases of the chosen fourteen TEN priority projects, which were determined at the 1995 Essen Council meeting of the EU, most of the high-profile road and rail projects were in fact long-standing pet industry projects that had been heavily promoted by the industrial lobby for some time (also see below).

Finally and perhaps most importantly, the diminished faith in transport investments as triggers of economic growth in lagging regions must be seen in the larger context of the recent re-evaluation of the possibilities of regional policy as a whole. In Europe, empirical evidence in the 1990s has been used to support both supporters and dissenters of the view that regional policies can help poorer regions catch up with wealthier ones. Many commentators argue that the economic forces leading to an increasing divergence between regions are simply too strong for regional policies to counteract them. According to this view, infrastructure investments in poorer regions appear as pure income transfers that are unlikely to seriously narrow the productivity gap between poorer and richer regions. In fact, improved transport connections may even accelerate out-migration in poor regions and thus widen the gap rather than narrow it. Alternatively, one might argue that these types of transfers negatively affect overall growth. As Philippe Maystadt (2000, p.4), the president of the EIB, recently noted: 'Indeed, [regional spending] may lead to lower overall prosperity if it drains resources from those wealthy and innovative regions that are the main engines of economic growth. If this is the case, we face a trade-off between equality and growth.'

While this may seem like news to neo-classical economists, it is a truth that political economists have long emphasised. And an increasing number of scholars concerned about the increasing environmental burden that our transport systems impose upon us would throw in ecology for good measure, arguing that it is really a three-way trade off. In sum, we are once again faced with the fact that the goal of sustainable development, regional or otherwise, is always struggling to balance three at times incompatible dimensions: economic growth, equity and the environment.

EU Realities: Lobbying Power Explains the Rapid Adoption of the TEN concept

As above discussion shows, the TENs concept was obviously not backed up by unequivocal economic reasoning. So how could the TENs so quickly advance from a mere paper tiger to a multi-billion Euro investment programme? The best explanation is that decisions were highly political. The rapid adoption of the TENs concept in the early 1990s is primarily due to their timeliness and the ability of the concept to respond to both urgent industry and high-level political needs.

The pro-investment infrastructure & construction lobby and the EU joined forces on the idea of the TENs. In some ways, it may be even more accurate to say that most official European Union transport infrastructure investment proposals, and the priority Trans-European Network projects in particular, originated as industry lobby proposals that were only later transformed into EU policy. There are several key reports prepared for the European Roundtable of Industrialists (ERT) which resemble future Commission proposals in startling ways. The ERT's 1984 report called 'Missing Links' outlining three specific proposals for a 'Channel link between England and France,' a 'Scanlink' plan for road and rail connections in Scandinavia, and a 'Trans-European network of high-speed trains' is certainly the boldest and most forceful document, urging billions of dollar of investments.¹⁰

The similarity of even this early proposal with the list of TEN priority projects adopted ten years later at the Essen Summit in 1994 is striking (figures 3.6 and 3.8). Not only did the 1994 EU list end up including the Channel tunnel and the Oeresund road-rail bridge as individual priority projects, but both were also integrated into a network of high-speed rail links that picked up most of the connections originally proposed by ERT ten years earlier. Interestingly, ERT soon created the myth that 'not only

are such projects desirable in terms of their economic and social impact, but they are affordable, and can be profitable, environmentally acceptable and financeable without heavy extra commitments to public spending' (p.1). In fact, ERT claimed, some of the link projects

could be financed in very large measure by the private sector. If governments were prepared to set the right investment climate in terms of fiscal incentives and operating licences, the money could be raised. Although Europe has become culturally programmed to see large transport infrastructure projects as the preserve of government, there is no reason why this should be so.

Corporate watchdog organisations such as ASEED Europe acknowledge the immense success of the ERT in influencing future EU transport policy. As Doherty and Hoedeman (1994, p.137) note:

Through its intensive lobbying of European transport ministers, and also the support of French Prime Minister Laurent Fabius, the ERT was astonishingly successful in introducing European power brokers to its vision of a future infrastructure. In 1985, Volvo's Pehr Gyllenhammer could report to ERT members that the Italian government, 'on behalf of all the ministers of transportation within the community, is referring to the Missing Links as a master plan for European infrastructure.'

Richardson (1997, p.337) also provides a strong case that decisions were influenced by the privileged access that industry decision-makers had to key Commission working groups:

Proposals for the Trans-European Road Network (...) were developed by the Motorway Working Group (MGW) of the Commission's Transport Infrastructure Committee [which included] a number of private sector interests including the European Round Table (ERT), the Association des Constructeurs Europeens d'Automobile, and the International Road Transport Union. The Committee was overwhelmingly dominated by transport and infrastructure interests, with a notable absence of environmental interests. (...) It appears that the debate within this key decision-making arena was largely political. The institutional power of the infrastructure lobby demonstrated here was strengthened by ready access to top-ranking EC and member-state politicians.

ERT lobbying for the missing links was heavily stepped up before the passing of the Maastricht Treaty, with three more ERT publications further underlining previous calls for Trans-European networks. Already two years after the ERT proposal, the European Conference of Ministers of

Transport published a curious sketch-like map of Europe that showed a list of 'missing links' in European road and rail infrastructure (figure 3.7).

Yet while there are serious objections to the TEN on both environmental and social, and even on economic grounds, several important arguments worked in favour of the TENs from the point of view of the Commission. Besides the strong pressures from the industry in the form of the Round Table of European Industrialists, there was internal pressure in the form of what Turro (1999, p.102) calls the 'bicycle theory.' According to this theory, the European Union is constantly forced to 'keep pedalling to avoid falling off' i.e. it has to push and explore new areas of co-operation and increase political and economic co-operation in order to keep the union alive. And in the particular context of the early 1990s, embarking on the TENs served several strategic objectives for the Commission: First, it provided a new 'safe' field of co-operation at a time where it was too early to seriously push common defence and foreign policy or monetary unification. Second and more importantly, Trans-European infrastructures could be used to justify an important increase in the Community budget and a reduction of the excessive share of the overall budget that was spent on the Common Agricultural Policy (CAP). Since the implementation of the projects would remain a national responsibility, no substantial expansion of the EU bureaucracy was needed. Turro (1999, p.103) also points out that

under these conditions, the transfer of investment from the national to the Community budget could be of interest to Finance Ministers needing to improve the appearance of their public debt and national deficit figures to comply with the EMU conditions. [T]he TENs concept had the rare virtue of combining national and common interests and to be timely and mostly non-controversial. (...) This explains its quick progress in relation to the normal pace of European policy-building.

While common interests and timeliness provide practical explanations for the rapid increase in TEN financing inside the EU, they of course do not provide a justification for the lack of strategic and environmental assessment that accompanied the TEN planning process.

Richardson (1997) nicely documents the institutional battle between the Council, which was largely supportive of the Commission's TEN proposal, and the European Parliament, which fought to integrate a number of key environmental provisions into the proposal, most notably a requirement for doing a Strategic Environmental Assessment (SEA) on the TENs. Although much progress has been made on developing SEA

methodologies in general, the actual issue of doing a full-scale SEA on the TENs remains unresolved to date.

Expanding the TENs to Central Eastern Europe: A Whole Different Can of Worms

When it comes to Central Eastern Europe (CEE) and enlargement, neither bicycle-theory nor lobby-power necessarily fully explain the form and function of EU interventions related to Trans-European Network expansion outside current EU territory. Conflicts of interests surrounding EU-CEE links are even more complex than in the case of internal EU connections between member states, and prospects for environmentally sustainable, transparent infrastructure decision-making are bleaker in the case of the candidate countries.

European Transport Ministers from both EU and Central Eastern European countries met for the first post-transition, Pan-European Ministers of Transport Conference in Prague in 1993. The first set of nine international priority corridors was subsequently adopted at the Pan-European Transport Conference in Crete in 1995.¹¹ One additional corridor was added during the next Pan-European conference in Helsinki in June 1997, completing what is now commonly referred to as the **Helsinki Corridors**.

Much like the TEN priority projects adopted in Essen, the Helsinki Corridors do not necessarily have their basis in detailed traffic counts and forecasts but were rather determined at a high political level. Not all corridors are of equal importance to Trans-European transport flows, since they largely had to be determined by what would be politically acceptable to all stakeholders. It was politically necessary to make sure that each capital city was included in at least one of the corridors. So although they are given equal weight on the resulting maps, the section of corridor II linking Berlin and Warsaw is obviously of much greater importance to Pan-European trade and traffic flows than the stretch of corridor VII linking Durrës to Tirana, for example.¹²

In order to put the highly politicised process of corridor ‘prioritisation’ on an ostensibly more scientific and more objective footing, the European Commission, in co-operation with the candidate states, and with financial assistance from the EU Phare Program and the City of Vienna, launched the so-called ‘Transport Infrastructure Needs Assessment (TINA)’ process. Even the European Commission itself

readily admitted that the Helsinki Corridors largely reflected EU strategic interests, and that a larger needs assessment for the candidate countries was necessary. The first official mention of a Transport Infrastructure Needs Assessment (TINA) for the CEE candidate countries process was made at the first structured dialogue between the European Union Transport Council (of Ministers) and the relevant transport ministers of the candidate countries in 1995. At the time, the main goal was an identification of the transport-sector investments required to bring transport infrastructures in CEE countries up to EU standards and to ensure adequate linkage between CEE and EU infrastructures.

It is important to note that the TINA infrastructures are divided into a first-order backbone network that consists of an amended version of the Helsinki corridors, and a denser, second-order network that includes infrastructure of national importance. Since it is the most comprehensive and most high-profile exercise in Pan-European infrastructure assessment, TINA was always expected to form the basis for subsequent pre-accession funds in the transport sector, which explains why national governments had a strong interest in making sure all infrastructures of national importance were reflected in these maps.¹³ Figures 3.9 and 3.10 show how original proposals for the Pan-European corridors further reinforced the already over-centralised Hungarian (rail) network, while subsequent inclusions of additional corridors proposed by TINA participants ensured a slightly more balanced approach to the Hungarian rail system.

The status of TINA as the guiding tool for EU investment in CEE transport infrastructure remains problematic (and actually somewhat disputed even within the Commission itself). It is also important to note that at present, in contrast to the Crete and Helsinki corridors, the TINA network has only been adopted by a senior officials group and not by any higher, i.e. ministerial level, and thus has no formal legal base within the EU.¹⁴ The total needs listed under TINA are enormous, and meeting the investment schedule under the 2010 time horizon would involve spending more than 1.5 percent of the country' GDP in some of the candidate countries.¹⁵

An SEA on TINA? The Challenge of Strategically Assessing a 'Needs Assessment'

Due to the politicised nature of the process, TINA was never really an objective needs assessment. Also, the TINA corridor maps ended up

becoming a key outcome in addition to the investment charts. It should also be noted that with a time horizon of over 15 years, estimations on expected traffic flows were necessarily highly speculative.

There were several voices that called for a timely Strategic Environmental Assessment (SEA) on the TEN extensions, especially after chances to do one for the TENs were missed. In particular, the ECMT/OECD workshop on SEA in the Transport Sector called for the priority application of SEA for transport infrastructure development plans laid down in TINA recommendations (ECMT/OECD, 1999, conclusions).

The Commission subsequently commissioned an 'Environmental Scoping' on the Multi-Modal Transport Corridor VI from Warsaw to Budapest, organised by the Regional Environmental Centre (REC) in Szentendre, Hungary. It was a partial if limited response to the ECMT's somewhat ambiguously formulated call. It can hardly be regarded as an acceptable shorthand version of a strategic assessment of TINA, however.

As was to be expected, the most problematic aspect of the REC study was to decide the appropriate scope. While the original aim was to assess the environmental impacts all the transport policies in the entire CEE region, i.e. do a full 'SEA of the TINA network', this ambitious aim was quickly scaled down. As the Italian SEA expert Olivia Bina (1999) already noted during the Warsaw SEA conference: '[it is] not feasible (...) to attempt to complete a full assessment of the impacts of the network at this large scale of analysis.'

The compromise solution that was found was to focus on one multi-modal corridor instead. It was believed that "a well chosen corridor would provide, if not representative, at least indicative evidence of the potential environmental problems faced by the rest of the region." The general objectives of the study were defined as follows (REC, 2000, p.2):

- ?? to identify potential impacts of the proposed development of transport infrastructure in CEE on environmental commitments of CEE countries,
- ?? to suggest suitable tools for integration of environment and transport (with specific focus on potential application of SEA for international transport planning in CEE),
- ?? to suggest practical provisions for effective co-ordination of environmental and transport planning on CEE regional level [sic].

However, the report also clearly acknowledged the impossibility of doing any real ex-ante evaluation, since the corridor is already a designated Pan-European corridor and as such part of the priority investment list of both national and international planning documents. The scoping therefore

was to be carried out as an *ad interim* assessment, focusing on existing environmental and transport policy contexts.

The final synthesis report of the exercise begins by noting that ‘the EU Accession Process is the main driver of change in Central and Eastern Europe’ (REC, 2000, p.1). The EU Accession process has indeed already fundamentally transformed the environmental and transportation policies in the CEE candidate countries.¹⁶ Several conclusions that emerged from the REC exercise are revealing. For example, the report notes that urban air pollution and loss of habitat are two major impacts directly related to rising traffic volumes, which is in turn related to higher incomes and accelerated trade between East and West.

Much more importantly, the synthesis report authors come to the clear conclusion that ‘*the Community support for the TENs [extensions in CEE] is drawing the limited national resources primarily towards construction of long distance infrastructure, primarily highways*’ (REC, 2000, p.9, my emphasis).

REC researchers found that now that the backbone network of the Trans-European network extensions has been determined in the form of the Helsinki corridors, CEE in-country representatives frequently (and often purposely) misinterpret the TEN-extensions and the entire TINA exercise as an agreed and consultative international agreement that now needs to be implemented at the national level. The argument is often made in conjunction with the myth that the TINA backbone network is something that will largely be funded by the EU (i.e. ISPA) and the IFIs. Consequently anyone who now opposes the content and priority networks contained in TINA appears as someone who is jeopardising international funding and assistance for their countries (Dusik, 2000).¹⁷ And since, so the interpretation frequently goes, EU and IFI co-financing is mostly available for backbone infrastructures, national priorities should consequently be redirected in the same direction, regardless of actual independently assessed needs. The reports then also support the corollary finding that TINA effectively overrode national transport policies in the sense that national-level priorities were changed according to what the TINA final report stated (Fleischer, 2000).

Finally, the reports also pointed to the fact that since ISPA is modelled on the Cohesion Fund, EU transport sector grant assistance currently cannot be given for much needed urban public transit improvements, thereby further exacerbating detrimental disinvestment trends.

The Challenge of Sustainable Infrastructure Lending in Central Eastern Europe

Current developments in Central Eastern Europe regarding the likely over-prioritisation of large-scale EU-CEE road connections to the detriment of other key national infrastructure needs may be in part a tragedy of unintended consequences. This does not make it any less problematic.

On a positive note, even if the true reality of transport corridor assessment in the 'New Europe' is likely to continue to be dominated by political opportunism and geo-strategic thinking, significant strides in developing better environmental, social and financial assessment methodologies for large-scale infrastructure investments have been made. Unfortunately, EAs, SEAs and EIAs are not always carefully and extensively enough applied, especially when it comes to EU-funded transport projects in CEE. Also, project officers at the International Financial Institutions, and at the EIB in particular, are under great pressure to perform environmental, economic and financial appraisals in extremely time-constrained situations, and officers candidly admit that even if more sophisticated and elaborate appraisal methods were available to them, most of them would likely not be applied on a regular basis unless the assessments could be completed in the necessary time frame available during a regular project cycle. Project officers are sometimes responsible for as many as 25 projects at the same time. Overall, the lending practices of the European Investment Bank have been strongly critiqued by environmentalists and civil society organisations, and by independent transport experts. EU parliamentarians, EU member state governments and international organisations are also increasingly concerned about the lack of public accountability at the EIB and are beginning to take action.¹⁸ Considering the tremendously important role the EIB is taking on in financing TENs and TEN extensions in CEE, it is imperative that the EIB's environmental and social assessment methodologies and their public information disclosure practices become at least comparable to those of the World Bank.¹⁹ In the end, newly developed state-of-the-art assessment methodologies are useless unless they are also rigorously applied in practice.

References

- Amin, A. and Tomaney J. (eds) (1995), *Behind the Myth of the European Union – Prospects for Cohesion*, New York, Routledge.
- Aschauer, D.A. and Federal Reserve Bank of Chicago, (1988), *Is public expenditure productive?* Chicago, IL, Federal Reserve Bank of Chicago.
- Biehl, D.E. (1986), *The Contribution of Infrastructure to Regional Development. Final Report of the Infrastructure Studies Group to the Commission of the European Communities*, Luxembourg., Office for Official Publications of the European Communities.
- Bina, O. (1999), *SEA to Date, Recent Advances and Current Priorities for Development*, OECD/ECMT Conference on SEA for Transport, Warsaw, 14-15 October.
- Boarnet, M. (1997), 'Highways and Economic Productivity: Interpreting recent evidence,' *Journal of Planning Literature*, Vol. 11, No. 4, pp.476-486.
- Boege, S. (1995), *The Well Traveled Yogurt Pot: Lessons for new freight transport policies and regional production*, *World Transport Policies and Practice* Vol. 1 No. 1, pp.7-11.
- Brocker, J. and Peschel, K. (1988), Trade, *Regional Impact of Community Policies in Europe*, Molle W. and Cappelin R., Avebury, Aldershot pp.127-151.
- Button, K.J. (1993), *Transport Economics*, Aldershot, Hants, England, and Brookfield, Vt., Elgar.
- CEE Bankwatch Network (1999), *The European Investment Bank: Accountable Only to the Market?* Brussels, Heinrich Böll Foundation.
- Commission of the European Communities (CEC, 2001), *A Sustainable Europe for Better World, A European Union Strategy for Sustainable Development*, Brussels, European Commission.
- Commission of the European Communities and European Commission (1999), *Cohesion and Transport* Brussels, European Commission.
- De la Fuente, A. (2000), *Convergence across Countries and Regions, Theory and Empirics*, *EIB Papers/Cahiers BEI*, Vol. 5, No. 2, pp.25-36.
- Doherty, A. and Hoedeman, O. (1994), *Misshaping Europe, The European Round Table of Industrialists*, *The Ecologist* Vol. 24, No. 4, (July/August) pp.135-141.
- Dusik, J. (2000), *Interview at the REC Centre in Szentendre*, August 2nd, European Commission (1995), *The Trans-European Networks*.
- European Round Table of Industrialists (1984), *Missing Links – Upgrading Europe's Transborder Ground Transport Infrastructure*, Brussels, European Round Table of Industrialists.
- European Round Table of Industrialists (1989), *Need for Renewing Transport Infrastructure in Europe*, Brussels, European Round Table of Industrialists.
- European Round Table of Industrialists (1991), *Missing Networks, a European Challenge – Proposals for the Renewal of Europe's Infrastructure*, Brussels, European Round Table of Industrialists.
- European Round Table of Industrialists (1992), *Growing together, One Infrastructure for Europe*, Brussels, European Round Table of Industrialists.
- European Union (1997), *Treaty establishing the European Community, Consolidated Version incorporating the changes made in the Treaty of Amsterdam, Official Journal*, C 340, pp.173-308.
- Faludi, A. (2000), *Fools dare where Angels fear to tread?* Paper presented at the Annual ACSP Conference, Atlanta, USA, November 1-5.

- Fleischer, T. (2000), *Initial Scoping Phase of a Strategic Environmental Assessment (SEA) of the Multi-Modal Transport Corridor Warsaw-Budapest*, Final Draft of In-country Scoping Report, Hungary, Szentendre, REC.
- Ford, R. and Poret, P. (1991), 'Infrastructure and Private Sector Productivity', *Economic Studies* Vol. 17, pp.63-98.
- Glimstedt, H. and Mariussen, A. (1998), *Introduction, Moving Beyond Convergency Theory, Nordic Institutions and Regional Development in a Globalised World*, Mariussen, A., Stockholm, Nordregio.
- Gramlich, E. (1994), *Infrastructure Investment, A Review Essay*, *Journal of Economic Literature* Vol. 17, pp.1176-1196.
- Hey, Ch., Pfeiffer, T. and Topan, A. (1996), *The Economic Impact of Motorways in the Peripheral Regions of the EU – A Literature Survey for the Royal Society for the Protection of Birds and Bird Life International*, Freiburg: EURES, Institute for Regional Studies in Europe.
- Hook, W., Peters, D., Stoczkiwicz, M. and Suchorzewsky, W. (1999), *Transport Sector Investment Decision-Making in the Baltic Sea Region*, Berlin, German Federal Environmental Agency (Umweltbundesamt) (online under www.ITDP.org/pub.html).
- Hook, W. (1996), *Counting on Cars, Counting Out People, A Critique of the World Bank's Economic Assessment Procedures for the Transport Sector and their Environmental Implications*, New York, Institute for Transportation and Development Policy.
- Hurst, C., Thisse, J.F. et al (2000), *What diagnosis for Europe's Ailing Regions?* EIB Papers/Cahiers BEI, Vol. 5, No. 2, pp.9-30.
- Krugman, P. (1991), *Geography and Trade*, Cambridge, MA, MIT Press.
- Martin, P. (1999), *Are European regional policies delivering?* EIB papers/Cahiers BEI, Vol. 4, No. 2, pp.11-23.
- Martin, P. (2000), *The Role of Public Policy in the Process of Regional Convergence*, EIB Papers/Cahiers BEI, Vol. 5, No. 2, pp.69-80.
- Martin, R. (1999), *The Regional Dimension in European Public Policy, Convergence or Divergence*, London and New York, MacMillan and St Martin's Press.
- Mas, M. et al (1996), *Infrastructure and Productivity in the Spanish Regions*, *Regional Studies*, Vol. 7, No. 30, pp.641-9.
- Maystadt, P. (2000), *Preface [Special issue 'Regional development in Europe', An Assessment of Policy Strategies]*, EIB Papers/Cahiers, BEI, Vol. 5, No. 1, pp.4-5.
- Mikulic, N. and Dusik, J. (1999), *Recent Developments in SEA in CEE*, OECD/ECMT Conference on SEA for Transport, Warsaw, 14-15 October.
- Moucque, D. (2000), *A survey of Socio-Economic Disparities between the Regions of the EU*, EIB Papers/Cahiers, BEI, Vol. 5, No. 2, pp.13-24.
- NSPA (National Spatial Planning Agency, Dutch Ministry of Housing, Spatial Planning & the Environment), (2000), *Spatial Perspectives in Europe*, The Hague, NSPA.
- Pinder, D., (1983) *Regional Economic Development and Policy, Theory and Practice in the European Community*, London, Allen G. and Unwin.
- Quehenberger, M. (2000), *Ten Years After, Eastern Germany's Convergence at a halt?* EIB Papers/Cahiers, BEI, Vol. 5, No. 1, pp.117-136.
- Regional Environmental Centre for CEE (REC), Sofia EIA Initiative (2000), *SEA of VI. Multi-Modal Transport Corridor Warsaw-Budapest, Scoping of Environmental Issues*, Regional Synthesis Report, Final Draft, Szentendre, REC.
- Richardson, T. (1997), 'The Trans-European Transport Network: Environmental Policy Integration in the European Union', *European Urban & Regional Studies*, Vol. 4, No.

- 4, pp.333-346.
- Rosset, B. (2000), 'Contributing to regional development through project selection', EIB Papers/Cahiers, BEI, Vol. 5, No. 1, pp.137-148.
- Rzeszot, U., et al. (2000), *SEA of Multimodal Transport Corridor Warszawa-Budapeszt Initial Scoping*, In-Country Scoping Report, Poland, Szentendre, REC.
- Seitz, H and Licht, G. (1995), 'The Impact of Public Infrastructure Capital on Regional Manufacturing Production Cost', Regional Studies, Vol. 3, No. 29, pp.231-40.
- Standing Advisory Committee on Trunk Road Assessment (SACTRA) (1999), *Transport Investment, Transport Intensity and Economic Growth*, London, UK Government Publications and <http://www.detr.gov.uk/heta/sactra>.
- Teufel, D. (1989), *Gesellschaftliche Kosten des Strassengueterverkehrs (The Social Costs of Road Freight Transport)*, UPI Bericht Nr. 14, Heidelberg, Umwelt- und Prognose-Institut Heidelberg (UPI).
- Thisse, J.F. (2000), 'Agglomeration and Regional Imbalance, Why? And is it bad?' EIB Papers/Cahiers, BEI, Vol. 5, No. 2, pp.47-68.
- TINA Secretariat (1999), *TINA Final Report*, Vienna, TINA Secretariat.
- Turro, M. (1999), *Going Trans-European, Planning and Financing Transport Networks for Europe*, Oxford, Pergamon.
- Vanhoudt, P. Mathae, T. and Smid, B. (2000), 'How productive are capital investments in Europe?', EIB Papers/Cahiers, BEI, Vol. 5, No. 2, pp.81-105.
- Vickerman, R.W. (1995), 'Regional impacts of trans-European networks', *Annals of Regional Science, an International Journal of Urban, Regional and Environmental Research and Policy*, Vol. 29, No. 2, pp.237-54.
- Vickerman, R.K. (ed.) (1991), *Infrastructure and Regional Development*, London, Pion.
- Vickerman, R.K. Spiekermann, K. and Wegener, M. (1999), 'Accessibility and Economic Development in Europe', *Regional Studies*, Vol. 33, No.1, pp.1-15.
- World Bank (1996), *Sustainable Transport, Priorities for Policy Reform*, Washington, D.C., World Bank.

Notes

- 1 Title XVII (ex Title XIV) 'Economic and Social Cohesion,' Article 158 (ex Article 130s) of the Treaty establishing the European Community, consolidated version incorporating the changes made in the Treaty of Amsterdam, published in the Official Journal C 340, 10.11.1997, pp.173-308 and online under <http://www.europa.eu.int/eur-lex/en/treaties/>
- 2 *ibid.* Article 159. The report also goes to the Economic and Social Committee and the Committee and the Regions.
- 3 Note that the Nordic countries, which have below-average urbanisation rates but above-average national incomes, were not part of the EU in the eighties. The case of the Nordic countries also makes clear how important it is to differentiate between infrastructure endowment per square kilometre, which would be comparatively low in the Nordic countries, and infrastructure endowment per person, which would be comparatively high in rural areas.
- 4 Source: EIB Website (www.eib.org), data retrieved September 2000.

- 5 See the essays in *EIB Papers*, 2000, volume 5, number 1 ('Regional Development in Europe: An Assessment of policy strategies') and number 2 ('Regional convergence in Europe: theory and empirical evidence').
- 6 It should be noted, however, that current rethinking of regional policy as a whole does not necessarily challenge the sense of using road and rail investments as tools for economic development, since neither market-led economic integration nor diversification can be achieved without first physically linking the infrastructures of countries or regions. What it does, challenge, however, is previous simplistic assertions (made both by the Commission and others) that improved road and rail connection will automatically reduce regional disparities.
- 7 What makes the banana blue? I always assumed that this was the colour used in the original maps produced by Brunet et al in their 1989 DATAR study, but I have been unable to verify this first hand.
- 8 Much important *grant* funding for TEN networks particularly in the four lower income EU member countries has come from the EU Cohesion Fund. However, a much larger part of the TENs was financed through favourable *loans* from the EIB, as well as through public-private partnerships and national government funds.
- 9 Objective 1 funding is designated for the least developed regions of the EU, i.e. regions where GDP per capita is below 75 percent of the EU average.
- 10 The full title is *Missing Links – Upgrading Europe's Trans-Border Ground Transport Infrastructure: A Report for the Roundtable of European Industrialists*. The glossy report (black and white copies are available at no charge from the Roundtable's Paris or London offices) contains the following stunning note in an appendix: 'The working group aimed to provide a concise and readable report. For this reason, data sources and references are conspicuously absent from the text, charts and tables. The group's report is compiled from the following written [internally commissioned] submissions and reports: [List reports] The 'pedigree' of the facts and figures quoted in the *Missing Links* report is finely detailed in the written submissions and reports listed above. Questions on the pedigree of facts and figures [--note: not orders for the pedigree itself!--] should be addressed to Michael Hinks-Edwards at the Roundtable Secretariat Paris Office (see address below).' In other words: the bold ERT proposal was based on data that is neither independently accessible nor verifiable.
- 11 The Dutch Ministry had been the first one to suggest that representatives focus on developing a map of transport priority corridors connecting the European Union to its eastern and southern neighbours. Thus the corridor concept was born, partly for want of any other equally appealing proposal.
- 12 In fact, this latter corridor in particular was added for purely political reasons.
- 13 However, added corridors normally did not become part of the backbone, but rather of the general TINA network. The distinction between the two (as well as the prioritisation of ISPA funding for the backbone networks rather than TINA infrastructures in general) remains a point of contention and confusion both in the EU and CEE, especially since the corridor concept as a whole is being abandoned inside the EU.
- 14 DG Transport & Energy representatives plan to change this status by attaching the TINA report as an annex to the planned revision of the TEN guidelines, which are formal EU law. Since these TEN guidelines are part of the so-called transport

Acquis, i.e. the transport-specific sections of the Acquis Communautaire, which form the basis of the accession treaties, they thereby become binding legislation for the accession countries as well.

- 15 Senior Commission representatives consider this a very realistic and doable investment plan, and pride themselves in having lowered overly elevated infrastructure building cost estimates on the part of the candidate countries. In the case of Poland, Commission-hired consultants supposedly found cost estimates for a variety of road infrastructure schemes to be lower than Polish supplied data by a factor of 2.
- 16 Most CEE countries have by now adopted National Environmental Policies, National Environmental Action Programs, and National Transport Policies that take into account EU requirements and regulations, as well as strategic objectives.
- 17 Another key issue from a procedural perspective is that TINA was still largely a 'closed room assessment' in the sense that the process only involved the transport ministries, and excluded decision-makers from the Ministries of Finance, Environment or Regional Development as well as civil society stakeholders.
- 18 The Central European NGO-Network Bankwatch prepared a highly critical study on the EIB for the German Heinrich Boell Foundation (see CEE Bankwatch Network 1999). On November 9-10, 2000, Green EU Parliamentarians organised a conference with the lengthy title 'Invisible Hands Shaping Europe – A closer look at the European Investment Bank's policies and projects from an environmental, access to information and public participation perspective.' Finally, the recent international workshop 'FIST – Financing Sustainable Transport Infrastructure and Technology focussing on CEEC and NIS' organised by the Austrian Ministries of Transport and Environment, the UN and the OECD's Central European Initiative produced an officially endorsed input paper for the 9th. UN Commission on Sustainable Development meeting in New York in April 2001 that contains a series of specific recommendations for improving the social and environmental accountability for transport infrastructure lending at the international financial institutions (IFIs).
- 19 Hook, Peters *et al* (1999) prepared an extensive comparative assessment of transport lending practices at the World Bank, EBRD and the EIB (written under the auspices of the German Federal Environmental Agency). Unlike the World Bank or the European Bank for Reconstruction and Development (EBRD), the EIB has not developed any internal transport-sector policies to guide its lending activities. The EIB has repeatedly claimed that such internal lending guidelines are not necessary since the EIB is supposedly guided by EU laws and policies. However, EIB staff does not feel bound by EU policies or practices when lending outside current EU territory. Also, while the World Bank makes all of its EIAs; sector and policy papers; staff appraisal reports; project summaries and country strategies available to the public, the EBRD only makes EIAs, sector papers, project summaries and press releases available. All the EIB provides to the public are press releases. Finally, it should be noted that even the World Bank, who, responding to NGO pressure, has extensively reformed its environmental, social and public information policies in the last decade, still uses financial and economic assessment criteria that bias lending in favour of road over rail (see especially Hook, 1996).