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TRANSPORT TRENDS AND ECONOMICS

Studies on transport economics and track costs undertaken by other organizations

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CONCLUSIONS ON ROUND TABLE 124: "TRANSPORT AND SPATIAL POLICIES"

1. On 7 and 8 November 2002, the ECMT held its 124th Round Table on Transport Economics, on the theme of *"Transport and Spatial Policies"*. Chaired by G. Wolfgang Heinze (D), the Round Table was introduced with papers by Axel Priebs and Andrea Dittrich-Wesbuer (D), Carlo Sessa (I), David Banister (UK) and Susan Handy (USA).

2. Below is a brief summary of the Round Table's main conclusions.

1. INTRODUCTION

3. It almost goes without saying that transport and spatial policies strongly impact on each other. Given this general agreement, it is striking that transport and spatial policymaking appears to be institutionally and conceptually fragmented. What lies behind the interrelationship between transport and spatial policies? Do answers to this question inform us about how the interrelationship should be organised? What are the comparative merits of regulatory and fiscal measures to achieve possibly joint objectives or to solve trade-offs between these policy areas? These questions were addressed by the Round Table reports and discussions aiming at proposals for coherent and effective policies.

4. Before entering the policy discussion, it might help to look at the basis of the interrelationship between urban form or development and transport. If autonomous location decisions of households and firms would lead to homogeneous, highly localised patterns of business and household locations, the demand for passenger and freight transport would be minimal. The obvious fact that the spatial structure is highly inhomogeneous implies that it is not just driven by avoiding transport cost. Rather, the existence of cities and suburban structures is a consequence of the existence of agglomeration economies. That is, firms experience the increase of productivity by locating close to other firms, or households like to live in close community with other households of particular social characteristics. The agglomerative forces on the production side derive from a large number of determinants, the most prominent one being increasing returns to scale in production, the only local availability of a specialised labour force, or the need for face-to-face communication between business partners.

5. If the economic "advantage of nearness" is stronger for the producers than for households, a "central business district" will form. According to the basic model of urban studies, households choose residential locations around such a centre, weighing relatively high rents and low transport costs close to the city centre against the lower rents and higher transport costs associated with greater distance from employment and shopping opportunities.

2. TRENDS IN URBAN STRUCTURAL DEVELOPMENT

6. This trade-off between land rents and transport costs lies at the heart of the interrelationship between transport and spatial policies: the more transport policies manage to decrease transport costs, the more households will decide to live at greater distances from the centre, with greater lot sizes and bearing greater transport costs. Empirical studies on urban form and transport costs confirm that there is a strong decline of rents from the city centres to the outskirts of cities. What is more, the steepness of this rent gradient has strongly declined over time. Is this to say, as some analysts of spatial and transport developments claim, that these observations reflect a market equilibrium, leaving little need for corrective intervention for spatial and/or transport policy?

7. Associated with these trends is an enormous increase in car ownership and distances travelled and the enormous sprawl of urban areas. The down side of these developments is the huge increase in congestion, environmental damage, traffic noise and accident risks, as well as the degradation of inner cities and the destruction of natural landscapes by urban sprawl.

8. What complicates the picture is the fact that the monocentric urban structure changes to a polycentric structure. Were the subcentres to replicate the economic structure of the traditional centre, we could expect a decrease in travel demand, as consumers and workers might live shorter distances from the newly-emerging subcentres. The phenomenon that the subcentres are often highly specialised, i.e. that specific service supplies and employment opportunities relocate to subcentres, implies that accessibility problems multiply and overall transport demand increases.

9. What is more, results of empirical studies of urban structure have been at odds with the thinking on the mono- and polycentric developments of cities: residential locations of households are not radially distributed around traditional city centres, balancing the effect of decreasing land rents and higher transport costs. In fact, actual commuter travel was found to be seven times as high as predicted by the monocentric model and three times as high as would be expected using the polycentric reference.

10. The explanation for these results has to be seen in the heterogeneous idiosyncratic tastes of individuals and specific localised supplies of public amenities, which might cause and drive a social segregation of the urban population. In addition, employment was even locally dispersed.

3. TRANSPORT POLICIES AND THEIR IMPACT ON SPATIAL STRUCTURE

11. The instruments assigned to transport policy are, first of all, those to restrict private car use. Indeed, the negative consequences for car use call for appropriate pricing measures that signal the costs the individual car user imposes on others: congestion pricing, costing of parking, taxing pollution or fuel, etc.

12. One reason why measures to make urban transport in general and private car use more costly to correct for external costs have found relatively low support among the population and policymakers, might be seen in the fact that it has possibly strong effects on the land market. The more expensive urban transport is and the more this succeeds in reducing urban sprawl, the higher will be the upward pressure on urban rents. Given the distribution of social groups across urban space, this will in many cases entail negative distributional consequences, given the patterns of social segregation in many urban areas. To diffuse the pressure on land rents, policies to restrain private car use have to be accompanied by infrastructure policies that take account of the relative costs and benefits of the different modal options of transport. This will, in many cases, require a stronger emphasis on public transport, i.e. infrastructure investment for public transport, privileges for buses, etc. The tendency towards the location of specialised economic activities in urban subcentres, and the fact that this development is likely to be accelerated by

increasing the costs of urban transport, do however limit the possibilities of meeting the transport demand by favouring public transport.

4. SPATIAL POLICIES AND THEIR IMPACT ON TRANSPORT DEMAND

13. A natural conclusion for spatial policies seems to be to influence the sectoral structure of the emerging subcentres or edge cities. A broad sectoral mix of goods supply and employment opportunities would obviate many of the transport needs. To the extent that such a policy could be successful, even residential locations within cycling or walking distances from business locations appear conceivable. Whether such concepts of urban development and the costs of implementing them are accepted depends on the difficult answer to the question of what determines business location decisions. There are the competing hypotheses that firms benefit either from locating near other producers of similar goods and services or rather from locating close to a large variety of other industries. Aggregate empirical studies do not allow for a rejection of any of these hypotheses, pointing to the fact that agglomeration economies are of a different kind for different industries.

14. On a more general level, the pricing measure against damage to natural landscapes would be a tax on newly-developed land. A similar effect could result from the subsidisation of housing around urban centres. Such a policy could also counteract the devaluation of housing stock in inner cities which is caused by often implicit subsidies granted to the development of new settlements at the outskirts of cities and the erosion of the cultural heritage represented by inner-city architecture.

15. Non-fiscal measures proposed by normative concepts have aggravated urban transportation problems. Urban planning has expended much effort to avoid what is called “incompatible urban land uses”. As pricing measures to correct the negative externalities (e.g. noise, smells, demands on the sewage system) would be very costly to implement, planners have resorted to zoning and location restrictions. In some cases, the zoning prescriptions, for example, by completely separating retail and residential land uses, have considerably contributed to an increase in travel demand.

16. The same holds for policies to preserve open space. While few would deny that green belts provide valuable public goods, they have also contributed to travel demand, to opportunity costs in the form of higher rents and to urban sprawl.

17. Suburban municipalities have, at times, adopted policies of exclusionary zoning, largely in order to exclude lower-income residents who would pay less communal taxes while benefiting from the local public infrastructure. It is likely that exclusionary zoning has considerably strengthened the decentralisation of inner cities and increased the problems of spatial mismatch on the labour market. This, in turn, can to some extent explain the long distances of commuting trips and their striking geographic patterns.

5. INSTITUTIONAL DESIGN

18. The latter argument points to a more general problem concerning the jurisdictional structure of spatial policies: with the spatial extension of urban areas, jurisdictional boundaries which have been inherited from the past become more and more dysfunctional. As jurisdictions which have historically had a high level of independence become interdependent through changes in settlement patterns, the neglect of interdependence due to purely local legitimacy creates major problems, not least with respect to urban transport policies.

19. A first line of argument concerns the neglect of interregional spillovers in a process of interjurisdictional competition. As local governments respond to the demands of the local population, they are expected to neglect benefits that citizens from other communities might have from local transport and spatial policies. An example of such a bias could be the under-investment in interjurisdictional infrastructure.

20. A second argument, and this seems to be of greater importance given the typical urban transport problems, emphasizes interjurisdictional competition to attract certain types of household and certain types of industry. Such a process of "cream-skimming" tends to lead to a waste of public funds. As far as transport policy is concerned, it will entail over-investment in public infrastructure, and lead to a structure of spatial and transport policies which is distorted towards those firms and households that the community wants to attract, normally, those who are expected to ensure high tax receipts relative to expenditure for publicly provided goods.

21. All kinds of agglomeration economies give reason to such locational competition. Beyond the economic costs of distorted land and transport prices, larger communities necessarily have a competitive advantage, leading to the neglect of smaller communities. In addition to the negative distributional consequences this might have, it will lead to an overall spatial structure with high transport demand.

22. The Round Table reports and the discussion made detailed proposals on how to improve the defects of the jurisdictional fragmentation. As jurisdictional boundaries have historical reasons, and their modification is often restricted by constitutional barriers, they have to be taken as given in almost all cases.

23. A first step to deal with community policymaking could consist of creating supra-jurisdictional planning institutions. As long as political autonomy at the local level is high, the planning carried out by such institutions cannot be but indicative, also informing the political process at the local level. In this way, the dangers of political confinement by local decisionmakers might also be reduced.

24. The integration of planning across jurisdictions wins more importance if it is combined with fiscal incentive mechanisms which correct the co-ordination failures between jurisdictions.

Fiscal redistribution systems, as discussed during the Round Table, must reward policies that aim at improving the economic situation of the overall system of jurisdictions, instead of pursuing the interests of the individual community.

6. SUMMARY

25. Awareness of the mutual impact of spatial and transport policies has to be increased for the public, organised interests, planning institutions and policymakers. A first step could consist of a formal co-ordination of transport and spatial planning between communities whose economies and settlement patterns are highly interdependent. Given the interrelationship between spatial and transport policies, such an integrated planning helps to assess the overall costs and benefits of achieving a sustainable transport system and to define operational objectives for both subsectors of urban policy.

26. Overcoming the disciplinary fragmentation of policy design requires, however, that policymakers have incentives to take account of the effects of interjurisdictional interactions. Fiscal redistribution mechanisms are to be designed to provide such incentives.

27. A rationalisation of the institutional structures of spatial and transport policymaking is expected to provide a major contribution to a sustainable transport sector.
