

FROM A FICTION TO THE IMPLEMENTATION: REGIONAL TRANSPORT

Ferenc Erdősi

In connection with the EU accession of Hungary special attention was devoted to transportation, a sector, which besides environment protection requires the most derogation. The sectoral ministry is mainly concerned about the improvement of transport in technical-technological terms (modernisation and decreasing the average of the motor vehicle stock and matching its emission with the EU norms and increasing the capacity of roads). Therefore the ministry is unable to pay adequate attention to the regionalisation of transport, i.e. to regional transportation. The National Transport Network Development Concept mentions the regional dimension only incidentally in terms of the preference of mass transport in the backward regions, but transportation received in the Nation Development Plan much less space than its real importance and even this was focused on the sub-sectors. Yet, the matter is not only the arrangement of activities of the productive and servicing sectors within regional frameworks, but also the establishment of a regional transport network able to intermediate interactions and manage the migration of persons and goods in a new territorial context, which is unavoidable.

Criteria of regional transport

Prior to the definition of regional transport and its functions, we are eager to clarify, that the transport of a region is identical with regional transport, it only means the portion of the varying territorial transport systems of the country (main road network, system of accessory roads, local, etc.), falling on the given region. At the same time, the transport concept, development plan and programme of a region should not exclusively elaborate the regional transport but all territorial and sub-sectoral elements of transport within the region.

The essence of regional transport is determined on basis of the economy of scale of the territory by two strictly connected factors – the scale and the function. Therefore, even based on the economy of scale regional transport is the a medium tier, since it is equipped with threshold values, which are beyond the capacity of the counties in terms of the establishment and efficient maintenance of a transport infrastructure of given kind and technical capacity.

Within the historically developed space hierarchical system of transport networks and services, regional transport is in several non-federal states (such as Hungary) due to lack of traditions an absent category. Up to a certain extent this lack is connected with the territorial arrangement of state administration (i.e. the breakdown of the country by administrative units) and the level of centralism. The administrative tiers shaped the spatial structure of Hungary's modern age transport network besides the Austrian imperial will, basically already during the establishment of the railway network (as the basic sub-sector influencing the structure of sub-sectors) alongside the unique interests connected with them:

- The national interests pushed the establishment of the main line network converging in the capital city
- The thousand year old institutions of territorial administration with rights “engraved into stone tablet”; tried – according to their interests – to concentrate the network to the county seats but at the same time they reacted enviously to the attempts of the neighbouring counties which attempted through the construction of railways, roads and ports to detach the neighbouring peripheries.

As a result the transport network of the country (in some sense following the model of Christaller) has basically a twofold mono-centric structure. The moderate influence of the local forces was sufficient for only partial track modification of mainly accessory lines and micro-regional and local road systems.

Some larger towns within the territory of historical Hungary had already at the turn of the century such economic, servicing and cultural importance, which went beyond the county frameworks and therefore the gravitation of these counties covers in terms of certain roles larger territories, than their county. The chambers of industry and commerce articulated the interests of these “quasi-regions”, having decades long a sphere of operation covering more than one county. They tried to go beyond individual interests of the counties and to formulate the common interests of larger territorial units, and even to represent these in the course of the complicated process of the arrangement of the transport networks which was accompanied by several conflicts of interests. Theoretically, all territorial chambers had the opportunity of interest representation, yet not all of them became the combative representative of macro-regional

(which means territorial) interests. However, the town of Debrecen grew into a centre of a wide range of action, seeking the hegemony over the north–east territory of the county, which in competition with the nearby Nagyvárad (Oradea), tried to influence the direction of accessory railroad tracks, which actually concerning several counties of course according to its own interests.

According to its scale regional transport is a new hierarchic category between the national and county transport, which:

- is inferior to the national level
- and superior to the county tier.

The basic target of regional transport is to satisfy transport demands deriving from the special scale of functional (economic/ administrative) regions (which are accordingly larger than the county scale):

- First of all through the strengthening of the internal regional cohesion between the areas as well as between the centres and sub-centres of the given region;
- Considering the interests of the entire region through strengthening of economic and environmental relationships to insure the transit traffic in such way, that its advantages surpass the negative impacts;
- Third, regional transport must serve the improvement of relationships with the neighbouring – and for some extent with distant and foreign – regions. The importance of this aspect is always more emphasised by the globalisation. *Figure 1.* describes linkages of intra- and inter-regional transport.

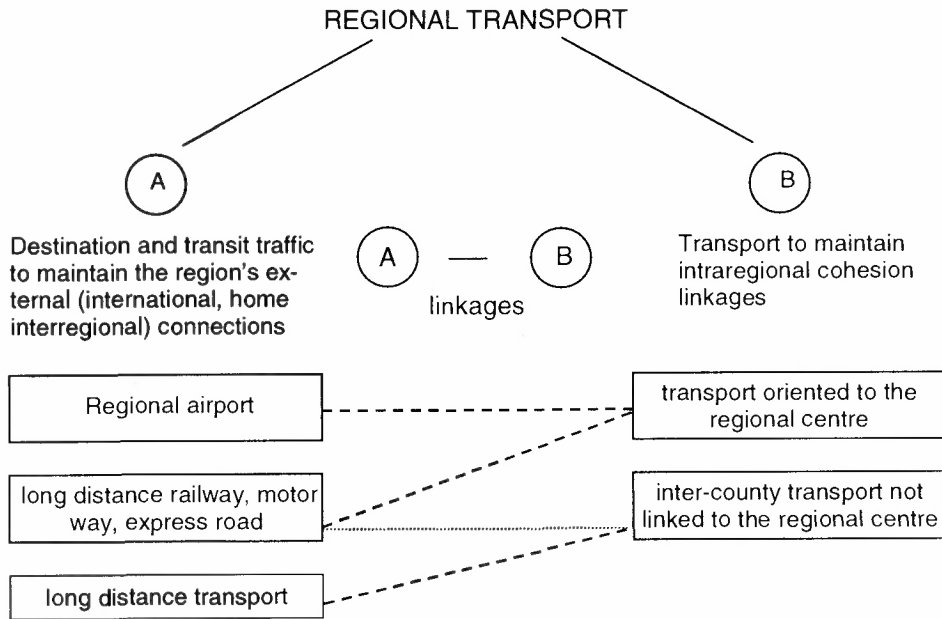
From the aspect of the inhabitants, economic, social and other actors – among others the organising–managing apparatus – of the “real” region, the most important requirement against the future regional transport is to provide for better conditions for the intra-regional, inter–county and inter county seat transportation of people and goods. Further, it may contribute to the development of the productive co-operation within the region and encourage the use of professional specialised services mainly located and provided for in the regional seats. But it is important also for the improvement of the mobility deriving from administrative work, the functioning of production within units that are above threshold of efficient and economical functioning, and the cluster building increasing efficiency.

In the current phase of development, as in the interest of the country's consolidation the privileged aspects are the encouragement of the foreign capital input and the orientation towards foreign markets, the economic actors of the regions obviously prioritise the external linkages rather than the intra-regional transport. Following the economic consolidation of the country the completing

of the intra-regional transport will have better chances. Therefore subsequent to the establishment of the regional network of publicly used transport the regional scale, infrastructure with special destination and of special technological type may be carried out.

Figure 1

The networking linkages of intra- and interregional transport



Source: edited by Erdösi, F.

The structure and elements of regional transport: one centre or multiple centres?

The structure of regional transport has primary importance from the point of internal cohesion and intraregional transport links. This fact raises the issue of the role and location of regional centres too. Regional centres are essential for the functioning of an organic regional system, even if – in Hungarian context – their role as an administrative centre should be less important than as the role of county seats ‘heading’ their county. Without hierarchy a country cannot build up its spatial system. (The ‘post-modern’ model of network without centres – such as the Internet for example – is not relevant to physical linear infrastruc-

ture. Although the application of 'just in time' logistic model with its 'from manufacturer to home' delivery systems does not require hubs but 'hub and spoke' systems, generating a greater volume of goods traffic, cannot exist without them. In hierarchical systems, on the basis of internal communication interactions, through the performance of superior functions, regions may be regarded as major agglomeration areas served by their centres. (These central locations with their magnitudes are called 'superior centres' in Christaller's urban network model still used in West European and German but abolished in the Hungarian regional science terminology.)

The major requirements from a regional centre are as follows:

- It should be an ideal organisational centre of economic activities undergoing through modernisation, globalisation and networking (primarily performed by multinational and other firms that deal with manufacturing, commerce, services etc.)
- It should be the most appropriate site for exclusive services to be rendered for a small number of customers
- It should be the most important centre of transport/telecommunication and logistics
- The location of a regional centre in the proximity of institutes of higher education and research through the increased efficiency of brainwork may create such chances for synergic advantages that regions – even in the age of Internet – should never miss.

Another essential issue from the point of transportation networks is the consideration, whether institutions serving for the wider interests of a region (or sometimes even of a larger area than a region) should be concentrated in the regional centre only, or should be divided among the cities of region. Practice generally follows the single-centre model especially in regions having been historical i.e. provincial administrative centres for several centuries with large cities regarded as traditional 'capitals' of the region. The division of functions may support a multi-centre model, in which simultaneously with the traditional, cultural city situated in peripheral position within the region, separate economic/commercial 'modern' centres operate on a more favourable transport geographic location, having a larger influence on regional economic activities.

What relationship should intraregional transport have with regional centre(s)?

- Within the *single-centre regional model* the most important routes of regional (thus intraregional) transport – connecting different areas (counties) within a region – generally go through regional centres and the orientation for central places has priority in development processes.

- *Regions with two regional centres* may face the dilemma whether the transport routes heading towards traditional (cultural) centres should be developed or those leading to the emerging economic centres should be favoured in development processes. The relocation of transport centre generally will terminate the dualistic feature of regional development and the regional development forces of communication will turn the region into a monocentric spatial formation.

The major elements of monocentric intraregional transport are as follows:

- The intraregional sections of national/international mainline routes (major railway lines, motorways, main roads)
- Secondary railway lines, major railway sideways (or railway line chains), secondary roads serving exclusively for monocentric regional transport
- Regional level services based on previously mentioned linear infrastructures (transregional accelerated trains connecting different areas, 'red letter' fast coach services connecting county seats mainly).

Transversal communication connecting microregions situated outside the magnitude of regional centres and urban agglomerations is also an important component of the regional transport system even if it is used only to connect two parts within the region.

The intraregional sections of national/international *transit routes* are also parts of regional transport. Their best routing should not necessarily coincide with the main direction and traffic flow pattern of intraregional communication. Naturally, some parts of transit traffic (with the goods transported) may be 'kept within' and switched into the 'blood circulation' of the regional economy but the chances for this are usually very small.

The elements serving for the establishment of transportation linkages with other regions belong to the third category of regional transport. Although these elements do not increase the level of internal regional cohesion the whole region may benefit from the access they create to the regional division of labour and markets. Good interregional linkages may generate good chances for the expansion of regional economy and may serve as a basis for the establishment of further interregional relations at a later phase of regional development.

The *major elements* of interregional transport connections are as follows: major railway routes connecting the regional centre with the capital city, or other regional centres (intercity, fast train, fast cargo train services), coach ('red letter plate' bus services necessary for transversal connection between rural regional centres). In Germany the Interregio Zug intercity trains – because of more stops provide a special service with special cars and longer travel time on middle-term distance level.

Regional airport as a major element of regional transport services

The interpretation of the meaning of the term ‘*regional airport*’ is ambiguous.

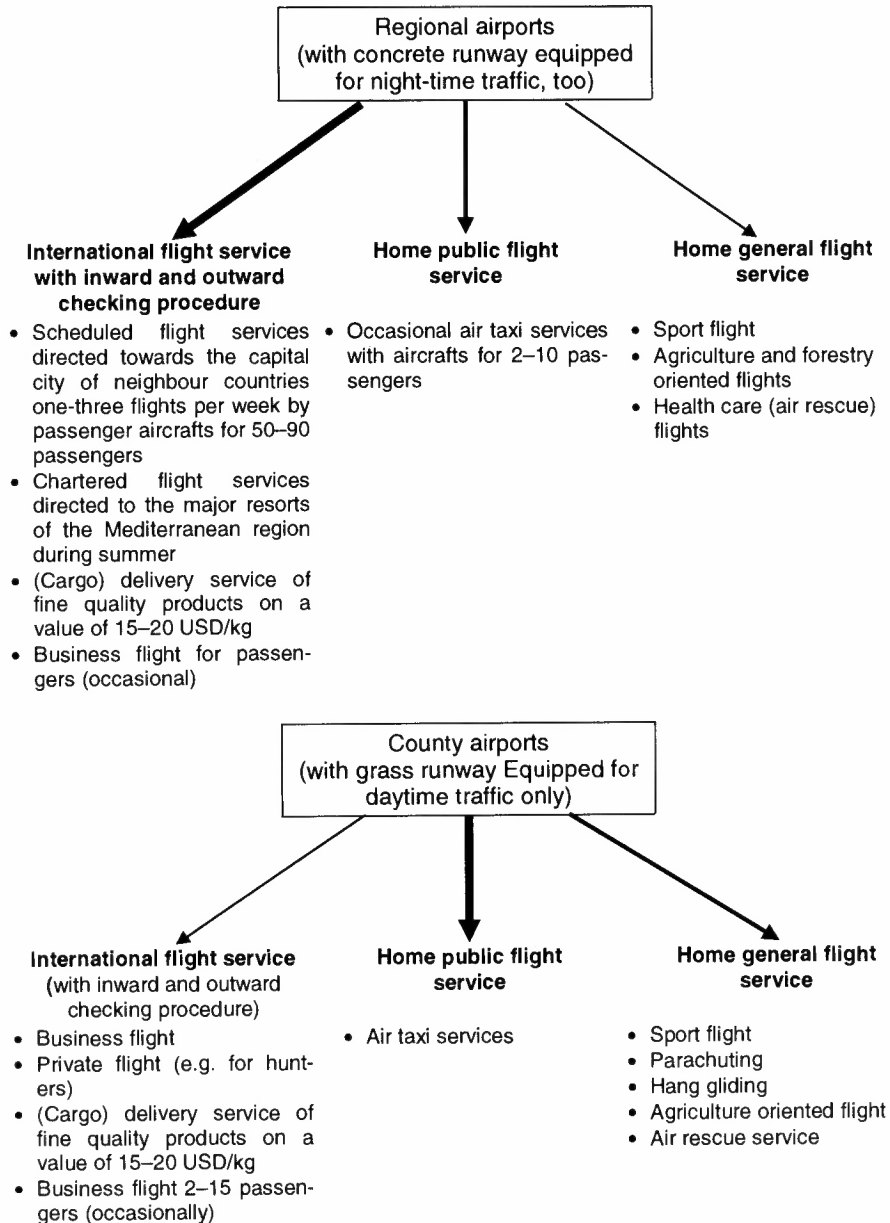
- In everyday context it is understood as an airport serving for the air traffic of a whole region.
- In air traffic professionals’ interpretation such airports – located in the capital city or metropolises – are called ‘regional’ that are connected to international (transcontinental, intercontinental or transnational air service for a travel distance of longer than 1500–2000 km, with the provision of ‘regional services’ by small (50–90 person capacity) jet planes, either in the form of home airline service (in large countries) or of short-distance international flight services (naturally, in case of small countries, this latter is the most typical – see *Figure 2*)

According to the air professionals’ interpretation – and to the European practice – regional airports serve not primarily for home air traffic. They are used for international (or ‘quasi international’, short international) air traffic between two countries (with the exception of large countries). With regard for the introduction of motorway/dual carriageway and railway intercity systems and the current development level of market economy in such a small country as Hungary, practically there are no chances for the reconstruction of scheduled home air traffic services even in case Hungarian living conditions turn better. Today only the very expensive air taxi system may carry passengers in home air service. Thus, for a long time the low demand may force ‘regional airports’ to connect rural cities and their surroundings with the neighbour country only. (for business or recreational purposes). This may establish a direct air connection between rural cities and foreign countries without the use of Budapest Ferihegy Airport.

During the selection of the site of regional airports there is a strong clash of interests between candidate cities, because they think a regional airport is a great challenge of opportunity for them. Almost every county seat is planning to build a public airport because they expect (through the quick accessibility from European countries the airports provide) a larger volume of foreign investments and economic development. We are on the opinion that the demand for cross-border flight services departing from rural airports is so low that two or three regional airports are by far enough for the handling of their traffic. Because of the low volume of air traffic the profitable operation of more than two or three regional airports would be impossible. Nearly 100–200 thousand passengers are needed for the cost effective operation of a regional airport (equipped with a minimal level of avionic and navigation instruments and a

Figure 2

The potential functions of airports on different levels of spatial hierarchy in Hungary



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constant presence of border guard authorities). For this reason the majority of county seats can expect small aircrafts for 6–10 passengers transporting delegations or 1–3 person private aircrafts only landing on their grass runway in daytime period. Compared to rural grass runway airports, the abandoned airports of the Soviet and Hungarian military air forces (equipped with concrete runway and appropriate navigation instruments) are relatively in a better position. However, their remote location from cities and major economic centres, the primary sources of the demand for transportation services is a great obstacle in their conversion into civil airports (Debrecen airport is the only exception from this rule). These military airports may serve as cargo airports only, provided that a fair amount of goods to be transported are available within a 100 km radius. The chances for this are very small. The chances are small for military airports (such as Taszár near the city of Kaposvár) to operate as regional airports because of their long flight permission procedure taking 1 week for civil aircrafts. This is an unfortunate situation, because airports authorised by law for multipurpose utilisation are generally located in favourable transport geographic position with central location within the region. However, their utilisation value is often limited by their long distance from the county seat.

Regional railways

The term 'regional railways' used in West European terminology has a different meaning in Hungarian context. Instead of terminating, the Hungarian government is going to let out the abandoned, poor quality, loss-producing rail sideways to regional railway companies. According to concepts, the activity of a railway company would cover a territory of half county size, including some short railway lines connecting some microregions. However, the greatest problem is not with the naming. The problem is in the realisation of plans.

Because of poor economic conditions county governments, local municipalities and firms of regional interest are unable to invest significant resources into regional railway systems. (The Hungarian rural population's living conditions, population density, relative mobility and transportation demand indicators totally differ from the English, German and Swiss counterparts. Thus, the practice of these countries cannot be followed automatically. The municipalities' contribution to railway development is manifested in some small things only, such as the renovation of stations, greening the station's surroundings, or just repainting the waiting room).

However excellent and aggressive is the marketing of 'regional railway systems', working as separate units only within MÁV, the Hungarian State Railway Company, they can increase the demand for transportation by a small

degree only. This is still far below the level needed for a cost effective operation. Even by a 20–25 per cent of running costs (which is hard to achieve) regional railways will be unable to compete with the flexible (from manufacturer to doorstep) road delivery system concerning cargo delivery tariffs.

The finance of the cohesion oriented infrastructure

One of the greatest dilemmas of our time is whether regional transport may be standardised and if so, what requirements it should meet in the areas of network structure, service routes, servicing quality (the frequency of services, speed, comfort etc.). In the 20th century almost every Hungarian governments were setting up a concept for the replacement of Budapest-centred monocentric railway structure with a transversal system to connect rural areas. Due to financial problems or centralisation policy none of them has been carried out in practice. Today regional transport may follow only a radial structure and the routing of Pan-European corridors will coincide with this model. The number of high quality road and railway lines being suitable for regional communication, is very small. It is not sure, whether financial resources will be available for the construction of the missing elements regional transport systems, and what mechanism will co-ordinate the different interests during the formation of the spatial system of regional transport networks. As long as regions are left without independent financial resources, the central government should provide primary financial assistance to regional transport systems. It is not taken for granted that municipalities (even through the system of municipal associations) will be able to finance these projects because they are overloaded with the financial problems of road construction and maintenance having been forced to 'take over' these tasks from the central government's duties. Taking loans or letting out the duties of regional transport into concession do not seem to be appropriate financial solutions for the problem.

From the point of cohesion the selection settlements and areas to have direct public transport connections with the centre of region has primary importance. As 12–45 per cent of settlements have no direct bus or train connections with their county seat, the demand for direct connection may only be approved only for a limited number of settlements. In areas situated outside the core of region only those cities or major villages may have direct connections with the centre that are situated along intraregional road and railway routes.

The administrative/functional region and the area of regional transport

The spatial structure of transportation networks – in some cases due to their special history of development – may have a different shape from that marked by the border of region. (This is much more true in those regions that have been formed as a synthesis of administrative districts). This may result in a stronger interregional co-operation between cities situated at the opposing sides of regional border than between the peripheral cities and the centre or core cities within the region.

There are several examples for this phenomenon such as Siófok at the border of South Transdanubia having more intensive interactions and transport connections with Enying in the Middle-Transdanubian region. Also Baja in the South Hungarian Plain has stronger relationships in the Southern Transdanubian region than with Szeged. Marcali is more strongly bound to Keszthely than to Kaposvár or Pécs. A similar pattern, regarding cross-regional border co-operation, applies to Csurgó with Nagykanizsa, Kunszentmiklós with Budapest, Simontornya with Sárbogárd, Bátaszék with Baja, Jászfényszaru with Hatvan and Polgár with Tiszaújváros.

Thus, regional borders should be regarded as mainframes only to which regional transports systems should be tailored to but there are overlapping areas on both sides of the border. In some cases these ‘buffer zones’ may have a width of 25–40 kms.

For all that, regional borders are still important elements of regional transport because the existing regional transport systems are too rigid within the regional system to follow the formation of a new regional structure. There are some opinions disregarding the importance of regional borders and not excluding the chances for the spatial redistribution of Hungary’s regional system. However, if the number of regions and consequently the regional borders are changed, the regional transport system should follow these changes in all (mainly financial) aspects.

Regional policymakers (especially in Eastern Europe) may overestimate the importance of infrastructure and transport in regional economic development. Pure transport infrastructure has no ‘magic power’ to generate economic development. Transport has only a complementary force, as an addition to other favourable economic factors of regional development. The current cyclic phase of the economy is also an important factor in the intensity of changes transportation effects may generate. In an economic recession period motorway construction alone is unable to generate significant economic development within a region but in a booming economic period high capacity traffic routes may significantly intensify economic development processes.

References

- Armstrong, H. W.–Wickermann, R. W. 1995: *Convergence and divergence among European regions*. London, Pion.
- Autobahnbau fist keine Strukturpolitik. Studie empfiehlt 'kleinräumigen Ausbau des regionalen Straßennetzes'. 1987: FAZ, Nr. 208. 9. Sept. pp. 14–33.
- Bokor, Z. 1998: A rövid távú vasúti személyszállítás regionalizálása Németországban. (The regionalisation of short-distance passenger railway transport). – *Városi Közlekedés*. 3. pp. 176–182.
- Bonnafous, A. 1995: Nachgeordnete Netze und integrierter Verkehr: Förderung einer ausgewogenen Raumordnung. – *Ruhrgebiet*. 3. pp. 50–59.
- Erdősi, F. 1994: A közúti beruházások regionális hatásainak értékelése. (The evaluation of the regional impacts of public road investments). – *Közlekedés-, Építés- és Mélyépítéstudományi Szemle*. 12. pp. 509–514.
- Erdősi, F. 1999: A repülőterek terület- és településfejlesztő hatásai. (The impacts of airports on regional and urban development) – *Tér és Társadalom*. 4. pp. 45–76.
- Erdősi, F. 2000: *Kommunikáció és regionális fejlődés. (Communication and regional development)*. Budapest, Földművelésügyi és Vidékfejlesztési Minisztérium-VÁTI.
- Halmos, B. 1996: A vasút részvételi lehetőségei a települések és a térségek közforgalmú közlekedésének fejlesztésében. (The chances of railway to contribute to the development of local and regional transport systems). – *Városi Közlekedés*. 4. pp. 231–234.
- Linneker, B.–Spence, N. 1996: Road transport, infrastructure and regional economic development. – *Journal of Transport Geography*. 2. pp. 77–92.
- Rixer, A. 1998: A vasúti regionalizálás európai gyakorlata és hazai irányai. (European practice and Hungarian trends in the regionalisation of railway transport systems). – *Közlekedéstudományi Szemle*. 5. pp. 167–170.
- Wolf, F. K. 1994: Neue Verkehrskonzepte aus regionaler Sicht. Rhein-Mainische Forschungen, 15. Düsseldorf.