

THE CHANGE IN THE URBAN STRUCTURE OF PÉCS, A RURAL REGIONAL CENTRE, AND ITS IMPACT ON LOCAL PUBLIC TRANSPORT IN THE SECOND HALF OF THE 20TH CENTURY

DÁVID NAGY¹

ABSTRACT - Pécs is the central settlement of Southern Transdanubia, one of the few cities in Hungary that survived the Second World War without significant destruction. As the seat of Baranya County, it started to develop dynamically from the 1950s. Industrialization based on the development of coal mining and uranium mining resulted in a sharp increase in the population. At the same time, housing construction started, and new city districts formed. The road network connected the new housing estates to the urban fabric, and the increasing number of commuters started to pose an increasing challenge in the organization of local transport. The aim of this study is to follow the development of local transport in Pécs during the period of intensive growth in the second half of the 20th century until 1990. The research focuses primarily on bus transport, with a special focus on the changes in the spatial extent of the network. It will be presented how the growing population and the expanding local vehicle fleet have caused challenges in the road transport. The description of these processes and the knowledge of their spatial conditions help to understand the development of the city's basic transport network and the origin of certain transport management difficulties that still exist today. This study tries to identify the urban planning and transport management situations and difficulties that can be experienced during a period of intensive growth.

Keywords: Hungary, Pécs, local transport, bus transport, urban structure change, urban planning

INTRODUCTION

Transport played a major role in the development of Pécs, and this was determined by its geographical location. The settlement, which was formed at the southern foot of the Mecsek Mountains, can be identified as a meeting point of important trade routes as early as the Roman era. Since the foothills were the most suitable for a settlement, the expansion of the city was possible in an east-west direction (Csalánosi 1982). The city was bordered by the forests of the Mecsek Mountains from the north, and wet, marshy areas from the south. For a long time, the places of work and housing were not separated from each other, and with the development of coal mining, new residential areas were formed in the vicinity of the mines.

Pécs, like Miskolc, Cluj-Napoca and Oradea, became significantly industrialized in the era of dualism (Austro-Hungarian Empire) and in addition to the development of coal mining, an important moment in the growth of the city was the appearance of the railways (Hajdú and Horeczki, 2024). The railway track and the railway station, built on an embankment in a marshy area surrounding the city from the south, are still a defining element of the city's structure and transportation system. Due to the alignment with the contours and the location of the Üszög railway, the main railway station was built in an area far from the city (Erdősi, 1968). With the construction of the area between the city core and the railway line at the time, the extent of Pécs increased significantly, and the transport connection between the city centre and the railway station caused a significant local transport demand. This route and the historical east-west transport axis formed the basis of tram transport built in the 1910s, the traditional centre of which was Széchenyi Square. The experience of tram transport and the continuous increase in passenger traffic soon raised the possibility of expanding the network. At the same time,

¹ PhD, research fellow, ELTE CERS Institute for Regional Studies, 22 Papnövelde St., Pécs, Hungary. E-mail address: nagy.david@elte.hun-ren.hu (corresponding author)

bus transport was able to provide a quick and efficient response to passenger transport needs. Partly due to the topography and partly due to the dividing role of the railway line, which was already evident at that time, local bus transport played a significant role. Due to the difficulties of the global economic crisis, the development of local public transport has progressed only slowly, and the satisfaction of the ever-increasing needs - in the absence of significant investments - has always been done with partial solutions. The experiences of the Second World War, the shortage economy, primarily the shortage of fuel and tyres, pointed out the vulnerability of bus transport. In contrast to the tram traffic, which operated almost uninterrupted and suffered only minor damages, bus transport in Pécs suffered catastrophic damage. The entire fleet of vehicles was destroyed, at first some of the buses were used for military purposes, then when the city was occupied, they served to evacuate, only their wreckage was found. After the war, at the cost of amazing efforts, building from the wreckage found, we managed to restore bus traffic, which was primarily due to the bus building traditions existing in the city. A narrow and obsolete tram service and a bus fleet reviving from destruction were the task of meeting the challenges of the robust industrial development and population growth processes that had been going on since the 1950s.

METHODS

The study presents the development of the city of Pécs through statistical data, which come from the publications and databases of the Central Statistical Office (KSH). Data on the population of the city, the extent of the city, housing stock and housing construction were presented primarily using the census surveys carried out every 10 years. If possible, I obtained the data from the first publication after the census, as the population of the surrounding settlements attached to the city was later also included in order to make the data comparable.

Presenting the development of public transport has been more difficult, as the literature on the history of local bus transport is incomplete and the topic is under researched. Therefore, library and archival research is needed to thoroughly explore the topic. The current research focused on the documents, manuscripts and maps of the Local History Collection of the Csorba Győző Library in Pécs. The history and development of transport was reconstructed primarily on the basis of the documents of the employees of the bus company and the person preparing the development plans. The development of the spatial extent of the transport network was facilitated by the map appendices of maps and timetables. The professional digitization of these could only be partially realized until the completion of the study.

Research and monographs on tram transport were available, so the parallel operation of the two modes of transport could be examined. Interesting information has emerged about the development of the planned trolleybus network, which has not been implemented to date. The map showing the network has not been published before.

RESULTS AND DISCUSSION

The urban development of Pécs and the challenges of local transport in the 1950s

During World War II, Pécs was fortunately avoided by major battles and bombings, so the infrastructure was not significantly damaged. In 1949, the administrative area of Pécs was 83.72 km², and its population was 77,617 people, which meant a decrease of about 1000 people compared to the 1941 data (KSH 1949). In the years following the war, the reconstruction of the country began, in which coal mining in Mecsek also played an important role. As a result of the 1949 Constitution and the 1950 Council Act, Pécs ceased to be a city with municipal rights and was directly subordinated to the county council (Hajdú 1996). At the beginning of the decade, the development of the Komlós-Mohács coal and steel industry vertical temporarily pushed investments in Pécs into the background. After the deterioration of Hungarian-Yugoslav relations, the construction of the ironworks continued in Dunapentele (later called Sztálinváros), but at the same time, the priority development of coal mining was given great emphasis in Pécs in addition to Komlós. As a result, the construction of new city districts began in Pécs-East (Új-Meszés and Fehérhegy residential areas). When determining the location of housing estates, the proximity of workplaces, specifically to operational shafts, still played

THE CHANGE IN THE URBAN STRUCTURE OF PÉCS, A RURAL REGIONAL CENTRE, AND ITS
IMPACT ON LOCAL PUBLIC TRANSPORT IN THE SECOND HALF OF THE 20TH CENTURY

a major role. Strung on Komlói Road as a north-south axis, a new district was born in accordance with the urban architectural principles of the time, in the northern part of which Heroes' Square played a decentric role. At the same time, residential buildings were continuously built in the zones around the city centre, one of the main scenes of which was the area then called the "Southern District" (Figure 2). Another significant stage in the growth of the city was the establishment of the so-called "Nagy-Pécs" in 1954, during which the administrative area of the city increased by 14,51 km², almost doubling by the annexation of Vasas, Málom and Mecsekalja. Industrialization and the volume of investments were further boosted by the launch of ore mining, which took place in 1955 with the establishment of the Bauxite Mining Company under Soviet control. In this highly centralized policy, which disproportionately emphasized the development of heavy industry, the development of local transport played only a marginal role, but the 1956 revolution and its events in Pécs resulted in a new era. After the defeat of the revolution, the former economic and settlement policy changed, and efforts were made to correct the previous exaggerated scale of heavy industry investments and the priority development of Budapest. At the end of the decade, the VÁROSTERV prepared the development program of Pécs, which included a significant housing construction program, the reorganization of local transport and the construction of a new city district, Újmecsekalja (later Uránváros) (Hajdú 1996).

After the war, bus transport had to be rebuilt practically from scratch, but the electric operation suffered only minor damage, and it was the first to resume operation. Since there were no buses, the lines were gradually put into operation by renovating wrecks. Efforts have also been hampered by a lack of central resources, a shortage economy and hyperinflation. However, thanks to the introduction of the forint and the successful operation of the bus construction workshop, urban transport slowly stabilized. In August 1949, according to the decree of the Ministry of Interior, the Pécs Transport Community Company was established by merging the tram and bus transport, which had been operating as separate plants until then. The directorate operated at 2 Zólyom Street, and the central traffic office at 16 Széchenyi Square.

Table 1. Length of the route of the lines operated in Pécs in 1949, 1949

1.	Public cemetery (to Málom)	6.2 km
2.	Pécsbányatelep	5.3 km
3.	Mecsek	5.1 km
4.	Gyárvárosi	7.9 km
5.	Ürögi	7.5 km
6.	Kokszműi	4.1 km
7.	Nagymeszesi	4.1 km
8.	Bálicsi	3.9 km
9.	Tettyei	3.4 km
10.	Postavölgy-Nagyárpádi	6.5 km
11.	Mártírok Road	2.5 km
12.	Pécsszabolcsi	1.4 km
	Altogether	57.9 km

Source: Szakonyi and Tegzes, 1979

In 1949, there were 12 lines operating in Pécs, the length of the routes measured from the central station was 57.9 km (Table 1). Even the longest continuous route did not reach 8 km. Until 1952, despite continuous promises, the fleet of cars was secured by renovating buses in its own construction, but in this year the first six IKARUS 30s arrived (Table 2).

Table 2. *The fleet of the Pécs automobile plant in 1952*

IKARUS 30	6
RÁBA Special	3
MAN Diesel	12
MAGIRO	3
BÜSSING	6
Altogether	30
Number of seats	1581

Source: Szakonyi and Tegzes, 1979

With the new routes, the length of the route network has been extended to 95 km, and the Pellérd, Donátus and Vasas services have also been launched. The outdated car fleet had a hard time coping with the continuous increase in traffic. The 8 IKARUS 30s arriving in 1953 were followed by 5 new buses of this type in 1954. At the same time, obsolete, previously restored cars were continuously withdrawn. In 1955, the larger capacity IKARUS 601 types appeared, of which the company received 12 pieces. This year, the buses in Pécs already carried 11.7 million passengers and ran 2 million km.

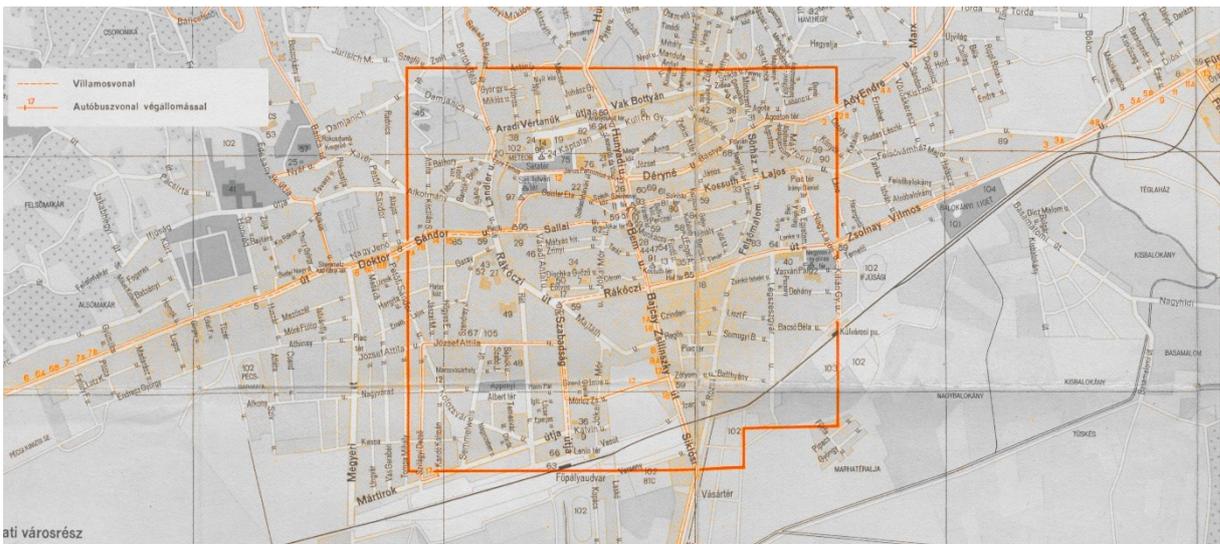


Figure 1. *City of Pécs, Cartographic Company Budapest, 1957*
 Edited by Tamás Szabó and Dávid Nagy, digitized base map: CSGYK HGY

After the company survived the events of the 1956 revolution without major damage, new buses arrived from 1957. This year saw the introduction of the division of labour with MÁVAUT, which provides long-distance and intercity transport. In addition to the opening of three external routes, buses arriving from Komló helped to relieve the burden on services departing from Hősök Square. At that time, the Bacsó Béla Street site was designated, which was made necessary by the increased bus fleet (Figure 1). As a result of the continuous increase in traffic, passenger traffic exceeded 20 million in 1959 (Szakonyi and Tegzes, 1979). In addition, with the replacement of the line between Széchenyi Square and the Main Railway Station with a bus service, the elimination of tram transport began in 1959.

A new district is born, the bus transport of Pécs in the 1960s

As a result of the radical industrial and urban development policy of the 1950s, the population of Pécs increased to 114,655 by 1960, but its area increased significantly, as a result of which the

THE CHANGE IN THE URBAN STRUCTURE OF PÉCS, A RURAL REGIONAL CENTRE, AND ITS IMPACT ON LOCAL PUBLIC TRANSPORT IN THE SECOND HALF OF THE 20TH CENTURY

population density decreased to 792 people/km². The reason for this was the annexation of the surrounding villages and the natural increase was primarily the migration gain. Between 1949 and 1960, 6200 flats were built in Pécs, thus their number increased to 32,500, which meant a 24% increase (KSH, 1960).

The dynamic development was given a new impetus by the national 15-year housing construction program adopted in 1960, which was linked to the construction of a new district in Pécs, Újmecekalja. The construction of a new district related to uranium mining was carried out in a significant open area north of the railway, on the former shooting range and airport (Trócsányi 2006). In addition, in the case of Pécs, in the case of the second five-year plan, preference was given primarily to the light and food industry, which requires female labour. The area of the settlement would have been further increased by the new administrative merger approved by the city and county councils in 1961, which proposed the accession of Cserkút, Kővágószőlős, Kővágótöttös and Bakony, but this was rejected by the central bodies. The rethinking of settlement and regional development policy was closely linked to the economic management reform of 1968, and Pécs retained its prominent role as a metropolitan area (Hajdú 1996).

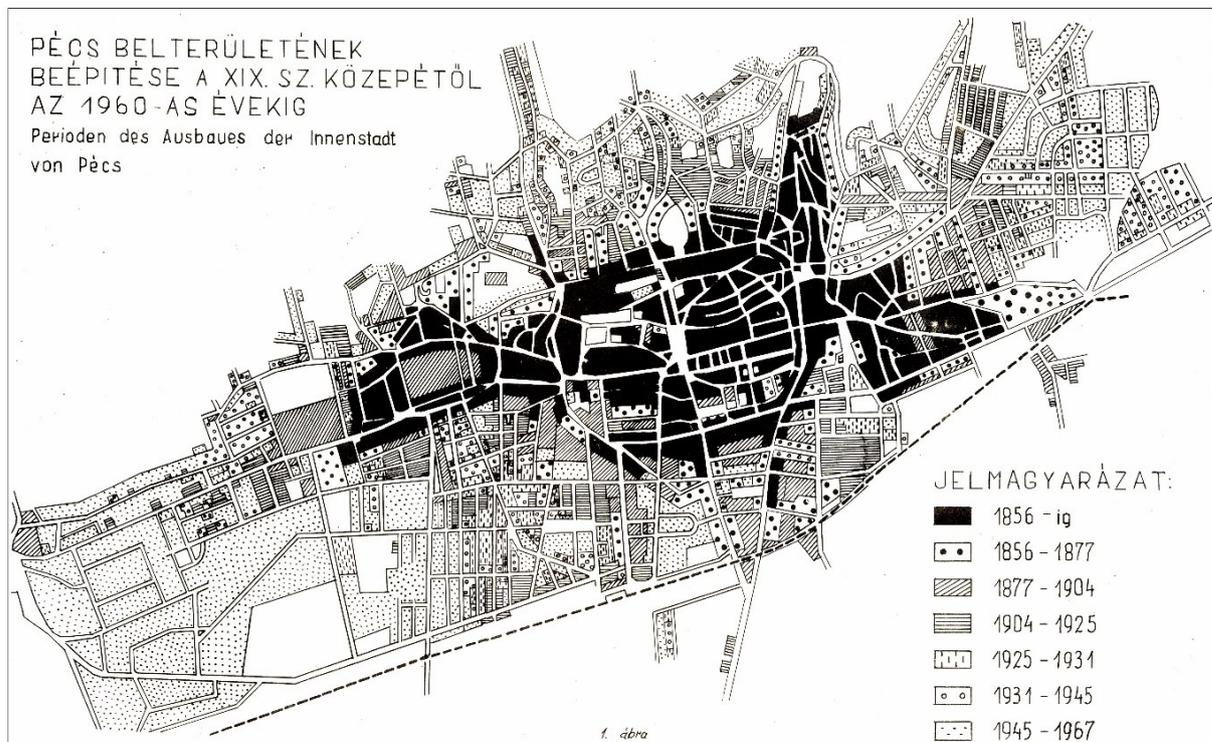


Figure 2. Construction of the inner area of Pécs from the mid-19th century to the 1960s

Source: Erdösi, 1968

The processes outlined above, the increase in population and administrative area, the decrease in population density and social changes such as the increase in the employment of women have resulted in serious challenges in the organization of local transport.

In response to these, the reorganization of local public transport began in 1960. The main problem was the outdated tram network and vehicle fleet, the inadequate throughput of the road network, the traffic load in the city centre and, above all, the increasing demand for travel. Several proposals were made, and VÁTERV (Urban Planning Office) proposed the construction of trolleybus transport, which has already been tested in Budapest. The Association of Transport Sciences proposed the modernization of the tram network and the creation of a double track. In the end, the council decided on the restructuring developed by UVATERV (Road and Railway Planning Company), the

essence of which was the elimination of tram lines and their replacement with buses. In addition, the plan also included the reduction of the load on the Széchenyi Square traffic centre (Figure 3). The terminus of some of the lines was moved to Kossuth Square, and the purchase of 22 new buses was required for the development of the factory city launch station. This was the first serious step towards the decentralization of local bus transport.

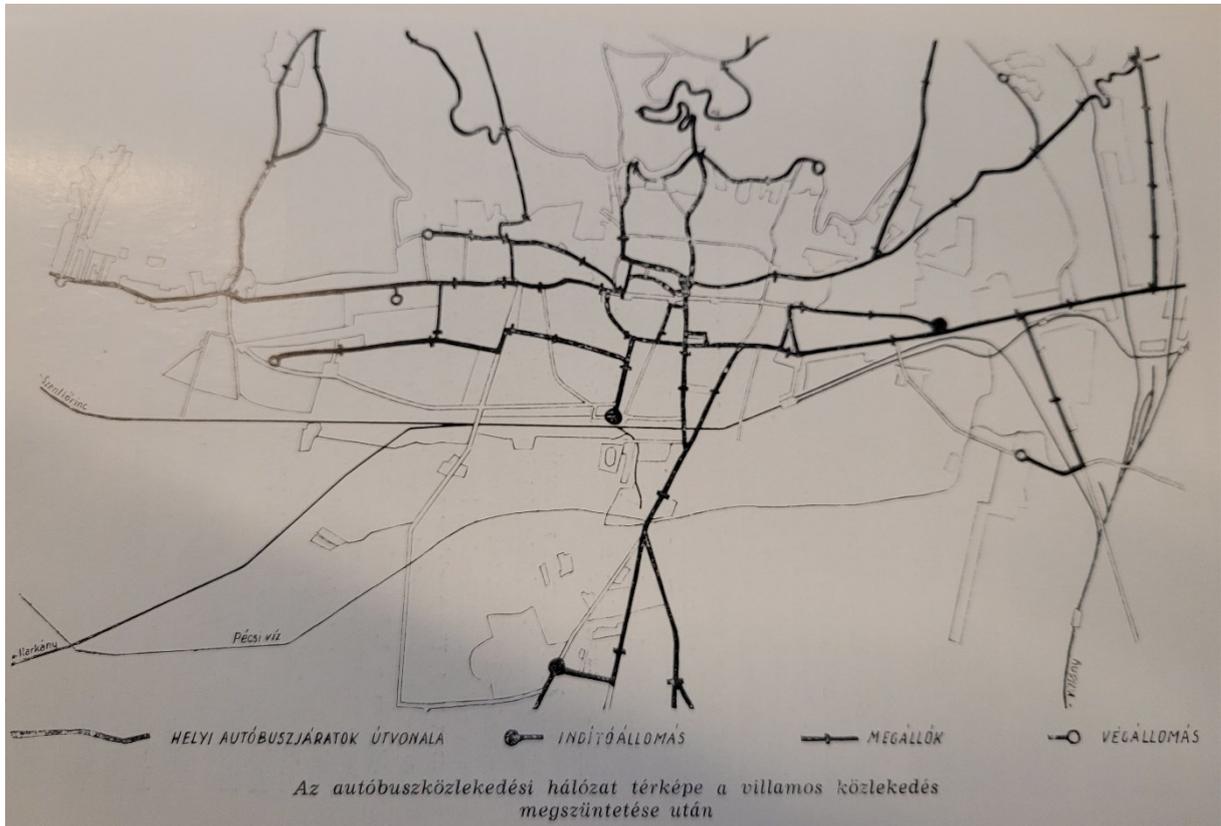


Figure 3. *The bus network of Pécs in 1960*

Source: Adonyi, 1961

On August 31, 1960, tram traffic in the city was completely stopped. However, the replacement of the most significant east-west line was not smooth. While the tram tracks were being taken up and paved, east-west traffic was increasing due to the previously inaugurated main road 6 and the construction in Mecsekalja. The provision of the sufficient number of buses was not implemented in time due to the delayed delivery of the Ikarus factory (largest Hungarian bus factory), so they again requested the assistance of long-distance buses from MÁVAUT. By the end of the year, the car fleet was expanded to 86 buses, of which 37 were Ikarus 30 and 49 Ikarus 60 types. In 1961, 99 buses carried 32.8 million passengers on 29 routes, and conductorless buses also appeared (Szakonyi-Tegzes 1979).

In the following years, in addition to the continuous increase in traffic, efforts were made to reduce the traffic load of the downtown by decentralizing the network. Lines departed from more and more termini, and the bus station was also completed in Újmecsekalja. The management of passenger traffic at the uranium ore mine and the related workplaces was also becoming more and more challenging. This task changed hands several times, local and long-distance bus transport took turns performing it, foreshadowing the need for cooperation. The rapid depreciation of the fleet, which by that time consisted exclusively of Ikarus, and the continuous need for maintenance, which resulted in the high level of use, appeared as a problem. The Ikarus 620 and 55 types appeared, and even the

THE CHANGE IN THE URBAN STRUCTURE OF PÉCS, A RURAL REGIONAL CENTRE, AND ITS IMPACT ON LOCAL PUBLIC TRANSPORT IN THE SECOND HALF OF THE 20TH CENTURY

prototype of the 180 articulated bus was also running in Pécs on line 27 (former tram main line) in Pécs. (Szakonyi and Tegzes, 1979)

On 1 January 1962, with the merger of the county transport companies, the 12th Road Transport Company (AKÖV) was established, which merged with the Pécs Transport Company (PKV) on 1 April. The merger was expected to strengthen cooperation and increase efficiency, and it also allowed for the unification of the ticketing system and the establishment of double stops. The coordination of traffic control and the development of passenger information were also a step forward, the main element of which was the issuance of timetables.

Table 3. *The vehicle fleet of local transport in Pécs in 1965 (operated by 12. AKÖV)*

IKARUS 30	1
IKARUS 31	16
IKARUS 556	1
IKARUS 60	7
IKARUS 66	9
IKARUS 601	11
IKARUS 620	62
IKARUS 180	1
FAÜ cs.	4
Minibus	1
Altogether	113

In September 1965, the mileage of local bus transport reached 477 thousand km and nearly 3.9 million passengers used the service. In a year-on-year comparison, there were fewer passengers in the first three months of the year and in the summer, while the peak periods fell in May and October. (Szakonyi et al., 1965)

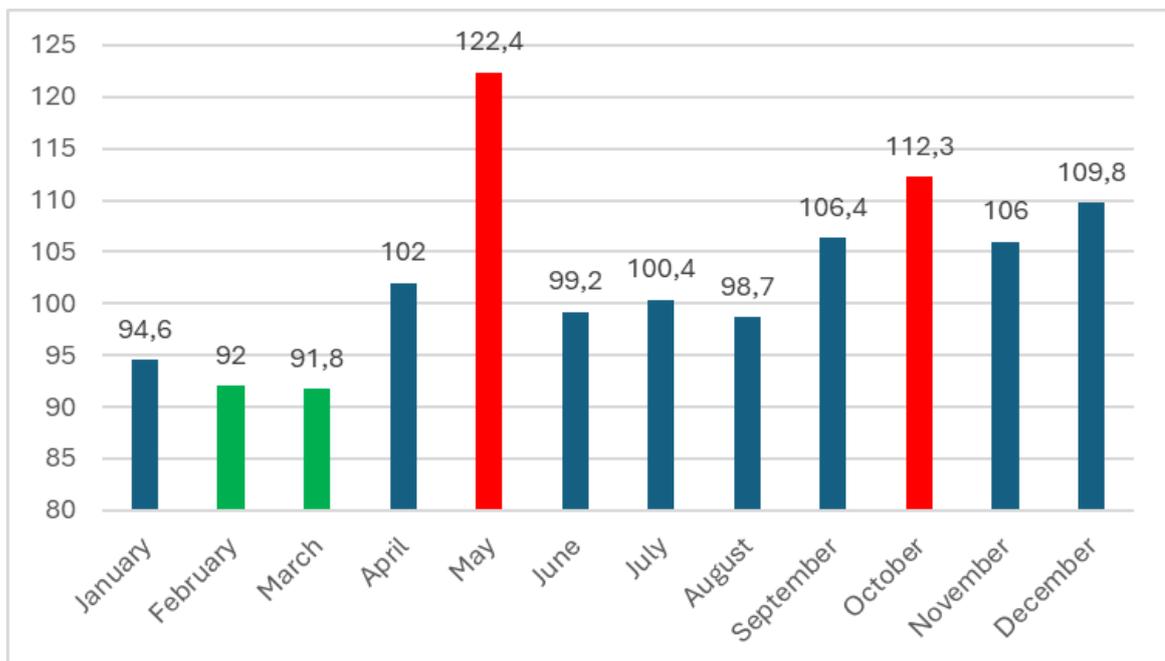


Figure 4. *Distribution of passengers by month compared to the annual average, 1965*

Source: Szakonyi et al., 1965

According to the data of the passenger count carried out in 1965 under the direction of the Working Committee of the Transport Science Association, which was made by interviewing 73.7% of the passengers on a given day, 48.6% of the passengers boarded the bus for work, 8.6% for school, 7% for shopping, and 35.8% for other purposes. According to the direction of travel, 33.5% of passengers wanted to reach the city centre, 21% to the western part of the city, 20.9% to the eastern part of the city, 15% to the northern part of the city and 9.6% to the southern part of the city. The vast majority of passengers travelled in an east-west direction, while only a quarter of the passengers chose the north-south direction (Szakonyi et al., 1965).

According to the 1967 bus timetable in Pécs, there were 36 lines, departing from Kossuth Square (20 lines), Újmecekalja (9 lines), MÁVAUT station (3 lines) and the main railway station (4 lines) (CSGYK HGY PA 1832).

THE SOUTHWARD EXPANSION OF THE CITY IN THE 1970S, THE EXPANDING NETWORK OF LINES IN THE PUBLIC TRANSPORT OF PÉCS

By 1970, the population of Pécs reached 145,335 people, making it the fourth most populous city in the country. The nearly 27% increase was mainly due to the new residents settling in. The number of dwellings reached 44,608, which meant an increase of 12 thousand compared to 1960 (KSH 1970). The dynamic growth of the city continued in the 1970s, which meant a strongly county-seat-centred development policy based on the National Settlement Network Development Framework Plan (OTK) adopted in 1969 (Hajdú 1996). By the beginning of the decade, the large open areas between the foothills of the Mecsek Mountains and the railway had been built up, and the expansion to the west and east was limited due to the location of mining, military, water resource protection and industrial areas. As a result, a panel housing estate called Lvov-Kertváros was built. The peculiarity of this was that it was not created as a real decentre, everything else played a subordinate role compared to the residential function (Trócsányi, 2006). With the settlement of the Kertváros, the separating role of the railway line became one of the basic problems of the city's transport. To a much lesser extent, the development of the northern part of the city began, rows of villas and zones of family houses were formed on the side of the Mecsek (Csalánosi, 1982). With the increase in the population of the Mecsekoldal, the capacity of bus transport had to be expanded, but here the terrain conditions and the permeability of the road network began to cause problems. The congestion of the city centre, primarily the increasing passing traffic of main road 6, necessitated the development of a new wide route, which was one of the significant transport investments of the decade.

The 1973 line network (Figure 5) is much more extensive than the 1960 situation (Figure 3), and the integration of the Mecsek districts and the settlements attached to Pécs is striking. The central role of the city centre has been reduced and Újmecekalja, the Main Railway Station and the Buda Station have become the most important starting and ending stations. At that time, the construction of the new Kertváros was still underway, and the Vásártér station served the commuters. In this period, the importance of east-west transport continued to increase. Results have been achieved in the relocation of downtown functions, mainly along main road number 6, and to a lesser extent in Újmecekalja, institutions, commercial and transport facilities have been built. From 1970, the Volán 12 Company was responsible for bus transport, continuing to combine the tasks of local and long-distance passenger transport.

It is important to note that the number of passenger cars in urban transport has increased steadily throughout the decade. In Hungary, the number of motor vehicles increased from 30 thousand in 1960 to 240 thousand in 1970, and then exceeded 1 million by 1980 (Romsics, 1999). In 1976, 5969 passenger cars were in operation in Pécs, which meant an increase of 167% compared to the 1972 figure, thus overtaking the supply of Budapest and rural towns (Szabó, 1979). According to a survey of the population carried out in 1977, 56.7% of their daily journeys were made by bus (240,000 passengers per day), 30.6% on foot, 8% by car, and the remaining 4.1% by other means (Hámoriné, 1979). It can be said that by this time, the main problem was no longer the availability of buses, but the overloading of roads and the satisfaction of increasing travel needs in an economically sustainable way.

THE CHANGE IN THE URBAN STRUCTURE OF PÉCS, A RURAL REGIONAL CENTRE, AND ITS IMPACT ON LOCAL PUBLIC TRANSPORT IN THE SECOND HALF OF THE 20TH CENTURY

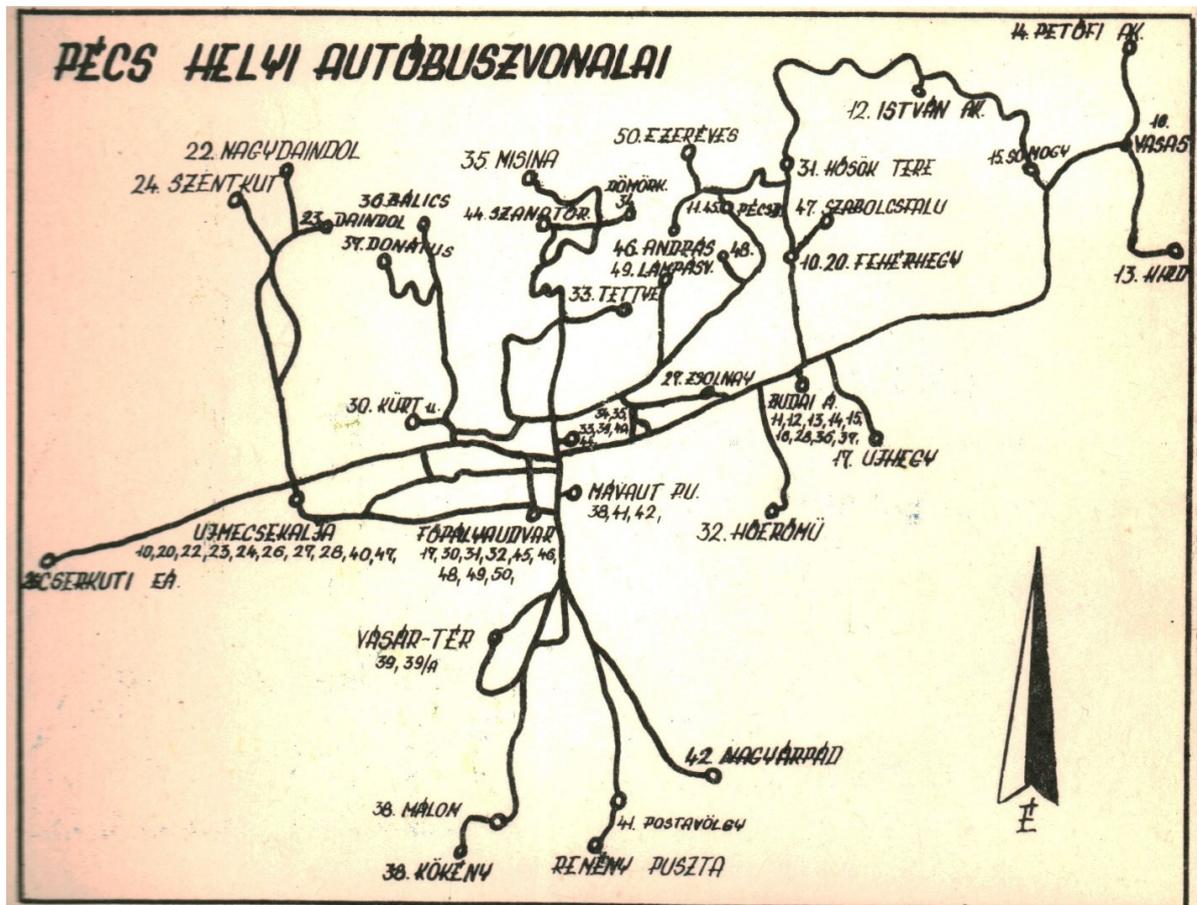


Figure 5. Bus timetable of local services in the city of Pécs, 1973 (CSGYK HGY PA 1832)

By the end of the decade, the Lvv-Kertváros and the Siklósi district were partially built, which increased the role of north-south transport. This magnified the already existing problem, the separating role of the railway, and made it one of the basic issues of transport in Pécs. There is a belief that the city's southward expansion is limited by the capacity of public transport. It became necessary to build an overpass on Siklósi Road, the protracted works of which were only partially completed by 1974. The overload of the east-west traffic axis caused a significant problem, which occurred mainly on the downtown section, during peak hours. This was increased by the traffic arriving from the Kertváros on Siklósi Road, which made the load capacity of the Kossuth Square station critical. The problem could only be partially solved later by the construction of overpasses and new roads, and the relocation of bus stations.

At the same time, as a result of the development of bus transport, the modernisation of the bus fleet, the implementation of the increase in seats, the introduction of staggered work, and the computerised optimisation of the command of vehicles were evaluated (Lovas, 1979). The length of the line network – on which 37 permanent lines ran on 45 routes – reached 135 km by 1979. The total length of the routes was 337.8 km, so they showed a significant overlap with each other, with an average length of 7.66 km. The total number of stops was 195, and their average distance was 690 m (Figure 6).

In the 1970s, passenger traffic increased by an average of 3.5-4% per year, and the number of passengers transported was around 80-85 million people/year. According to a passenger traffic survey conducted in 1977, a quarter of the passengers went to work, another quarter travelled for study, shopping and other purposes, and of course every second passenger was on their way home (Table 4) (Hámoriné, 1979).

Table 4. *Distribution of travellers by reason for travelling, 1977*

Work	24.2%
Education	7.3%
Purchase	7.8%
Administration	2.1%
Health	1.3%
Other (entertainment, sports)	9.9%
Home	47.4%

Source: Hámoriné, 1979

The spatial characteristics of bus and coach transport are well illustrated by the evaluation of the survey question item regarding the place of departure and arrival. Based on this, most people started from the eastern (33.2%) and western (31.6%) districts of the city during the morning peak period, and their main goal was to get to the city centre (30.7%) and the eastern (28.7%) and western (26.1%) districts (Table 5).

Table 5. *Distribution of journeys between the districts in the morning peak period (5-8 h), 1977*

District	Start	Arrive
Downtown	8.0%	30.7%
Northern District	6.3%	3.8%
Western District	33.2%	28.7%
Eastern District	31.6%	26.1%
Southern part of the city	20.9%	10.7%

Source: Hámoriné, 1979

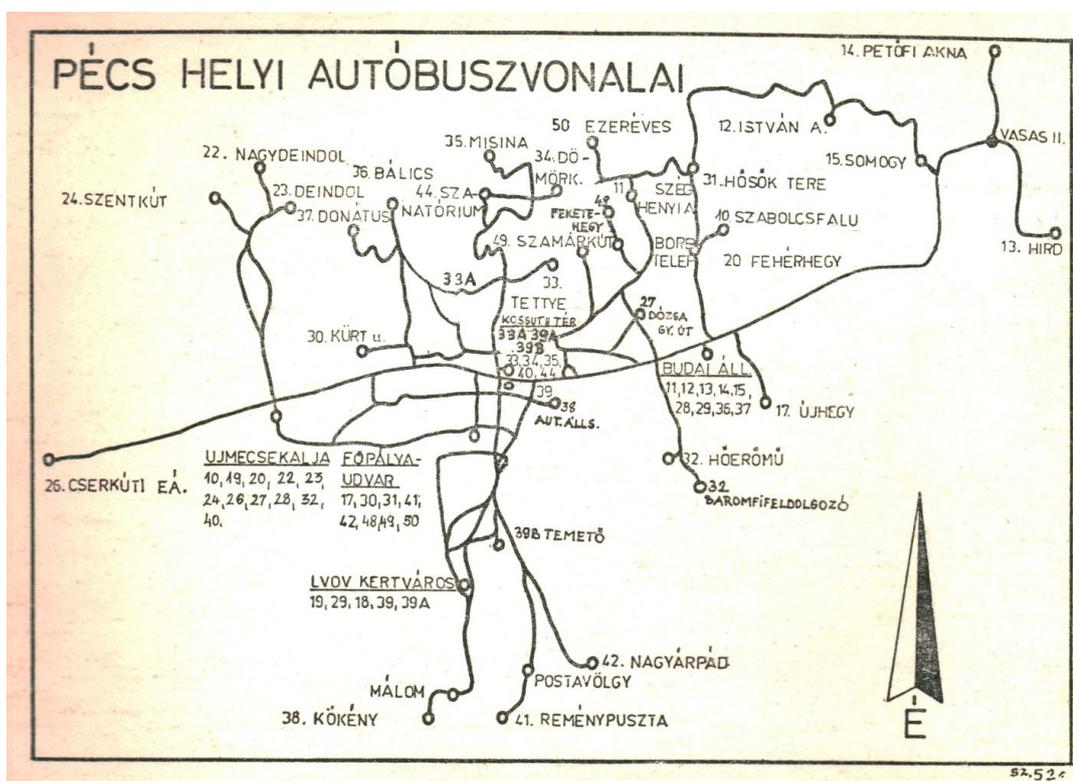


Figure 6. *Bus timetable of local services in the city of Pécs, 1979 (CSGYK HGY PA 1832)*

THE CHANGE IN THE URBAN STRUCTURE OF PÉCS, A RURAL REGIONAL CENTRE, AND ITS IMPACT ON LOCAL PUBLIC TRANSPORT IN THE SECOND HALF OF THE 20TH CENTURY

Due to the urban structure and the different functions of the city districts, the traffic of bus transport showed regional unevenness. By this time, the overlapping of routes and the overload of junctions caused more and more problems. The introduction of certain simplifications, the shortening of routes, and the provision of fewer but higher capacity services to busy routes were raised. The demand of the population to reach their destination with as few transfers as possible has often gone against these aspirations.

THE 1980S: PEAK AND CONSOLIDATION OF THE URBAN STRUCTURE

The population of Pécs increased to 168,715 by 1980, then peaked in the middle of the decade and decreased to 170,039 by 1990. The natural decrease could be compensated by the still positive migration difference. During this period, the housing stock showed a slowing expansion, in 1980 there were 54,046 flats in the city, which changed to 60,624 by 1990, but the era of significant state housing construction came to an end (KSH 1980). The concentration settlement development policy and the territorial structure of the economy were questioned from 1985 onwards, and the need for the economic restructuring of the city became increasingly clear (Hajdú, 1996).

At the same time, the expansion of motorization continued in the 1980s, and by 1990 the number of passenger cars doubled nationwide to reach 2 million (Romsics, 1999). Housing construction continued in the Siklós district, Mecsek-West and the southern part of the Kertváros. The Mecsekoldal also began to be more and more integrated. As a significant infrastructure investment, the Tűzér Street overpass was completed in 1981, which greatly contributed to the diversion of traffic in the Kertváros. This resulted in the most significant modification of the bus route network (Figure 7).

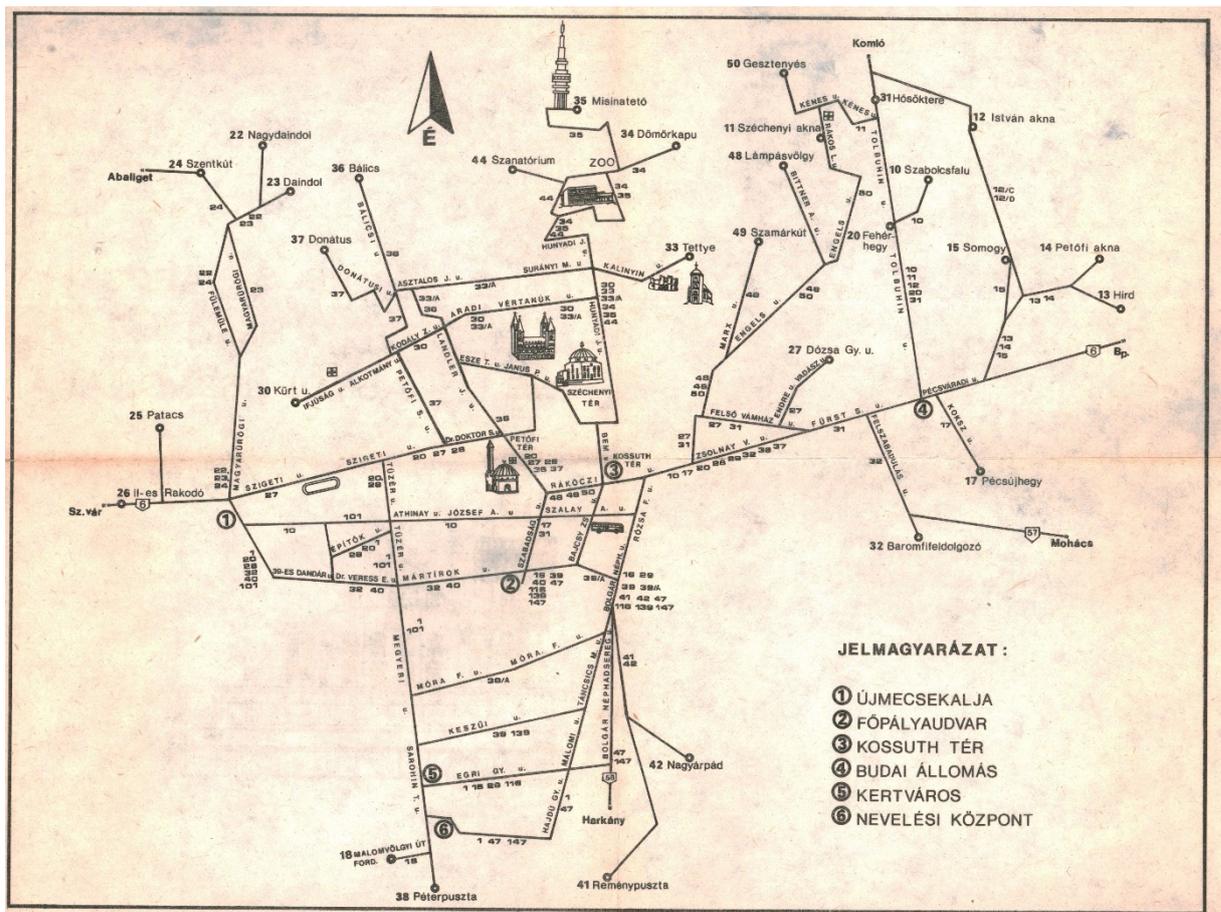


Figure 7. Timetable information on local and intercity services in the city of Pécs, 1985 (CSGYK HGY PA 2272)

Here I would like to mention the plans for the development of trolleybus transport, which has been raised several times since the termination of tram transport, but it was during this period that it seemed to have become within reach. In the 1979 transport development plan, in addition to the bus industry, the introduction of the trolleybus industry was also envisaged. The draft proposed trolleybus transport for busy and frequent services (frequency between 2 and 10 minutes). The introduction of trolleybus transport could only have been implemented with state support, the cost of which would have been estimated at HUF 548.4 million (compared to the cost requirement of HUF 334.3 million for the bus industry). The operating costs would have been HUF 173.6 million (for 15 years at the 1995 price level), as opposed to the operating costs of the bus network of HUF 224.8 million (UVATERV, 1979). Based on this, the payback period is 4.2 years, but the available calculations are superficial, and no detailed supporting documentation has been published yet. Did the width of certain roads and the location of the poles providing public lighting show the seriousness of the intention? (e.g. the Aradi Vértanúk Road), but also the construction of the Tüzér Street driveway itself to a high load-bearing capacity.



Figure 8. *Main elements of the planned trolleybus network, 1979 (CSGYK HGY PD 2362)*

In the end, the county and city councils decided to develop bus transport, opting for an investment that could be implemented at a lower cost and faster. By 1985, there were six local bus stations in the city. Most of the lines departed from Újmecsekálja (16) and Nevelési Központ (11) stations, but the Main Railway Station (9) and the Buda Station (10) also remained significant, but the load on the Kossuth tér (7) and Kertváros (3) stations decreased. At that time, a total of 55 bus routes were in operation. From 1985, the company was called Pannon Volán. From 1 June 1993, the public transport of Pécs was organized into the Pécs Public Transport Co. (Rosprim 1998). Examined territorially, public transport in the Southern District has clearly improved, and with the Tüzér Street overpass, the road network connection with the Western District has improved. In the middle of the decade, the capacity and traffic of local bus transport peaked, when nearly 180 buses were in service, and the number of passengers exceeded all previous levels. The traffic load on public roads has reached a critical level, especially in the downtown, traffic jams are regular during peak hours. Air pollution has also become a significant problem, although public transport was not primarily responsible for this. Unfortunately, the problems were alleviated by the rapid decline of the city's

THE CHANGE IN THE URBAN STRUCTURE OF PÉCS, A RURAL REGIONAL CENTRE, AND ITS IMPACT ON LOCAL PUBLIC TRANSPORT IN THE SECOND HALF OF THE 20TH CENTURY

economy and the decline of the population, but many of the difficulties that existed at that time can be traced back to the urban structure and still haunt us today.

CONCLUSIONS

The transport of the city of Pécs was naturally adapted to the urban structure, and the development of the routes was fundamentally determined by the location of residential areas and workplaces. The great advantage of bus transport was that it was able to adapt quickly and cost-effectively to changing and growing needs. The development was primarily due to the centralization efforts of the state, which can be traced at the local level in the figures of housing construction and population growth. Due to the high investment demand for the development of fixed-track transport, tram traffic could not survive and trolleybus transport could not develop in the city. The main problem of public transport in Pécs in the 1950s and 1960s was the expansion and maintenance of the vehicle fleet. By the 1970s and 1980s, the main problem was the permeability of the road network and the rapid growth of road traffic. These could not be solved despite significant infrastructure investments and the renewal of traffic management. By 1990, the main elements of the urban structure and the corresponding public transport infrastructure had been formed and social and economic changes have also brought new challenges to the city's transport.

REFERENCES

- ADONYI K. (1961). A helyi és távolsági autóbuszközlekedés kérdései [Issues of Local and Long-Distance Bus Transport.] In: Ernő Erdélyi (ed.): *Az épülő Pécs városrendezési kérdései* [The urban planning issues of Pécs under construction.] Pécs, pp. 186–190.
- CSALÁNOSI S. (1982). *Pécs funkcionális településmorfológiai sajátosságainak fejlődése és jelenlegi képe* [Development and current picture of the functional morphological characteristics of Pécs]. Pécs
- ERDŐSI F. (1968). *A pécsi városszerkezet fejlődése és a városrészek funkcióinak alakulása a kapitalizmus korában.* [The Development of the Urban Structure of Pécs and the Evolution of the Functions of the Districts in the Age of Capitalism.] Pécs, 1968.
- HAJDÚ Z. (1996). Pécs az országos település- és településhálózat-fejlesztési politikában (1949–1989)., [Pécs in the National Settlement and Settlement Network Development Policy (1949–1989)]. In: József Vonyó (ed.): *Tanulmányok Pécs Történetéből* 2–3. Pécs, pp. 37–52.
- HAJDÚ, Z., HORECZKI, R. (2024). Fundamentals of the establishment and development of modern Hungarian cities and their analyses in the Hungarian scientific literature in the era of dualism. *Romanian Review of Regional Studies*, 18.
- HÁMORINÉ MÁGORI J. (1979). Pécs tömegközlekedésének távlati fejlesztése. [Long-term development of public transport in Pécs.] In: *Pécsi Műszaki Szemle*, 24:3. 5–11.
- LOVAS A. (1979). A közforgalmi közlekedési hálózat felülvizsgálatának szükségessége Pécsen. [The need for a revision of the public transport network in Pécs.] *Pécsi Műszaki Szemle*, 24:3. pp. 2–3.
- ROMSICS I. (1999). *Magyarország története a XX. században.* [The History of Hungary in the XX Century]. Budapest.
- ROSZPRIM N. (ed.) (1998). *Fél évszázad: A Pannon Volán Autóbuszközlekedési Részvénytársaság múltja és jelene.* [Half a Century: The Past and Present of the Pannon Volán Bus Transport Company.] Pécs.
- SZABÓ É. (1979). Pécs város tömegközlekedési igényprognózisa 1985-ig. [Public transport demand forecast of the city of Pécs until 1985.] *Pécsi Műszaki Szemle*, 24:3. 18–22.
- SZAKONYI L., TEGZES B. (1979). *Pécs helyi közlekedésének fejlődése (villamos, autóbuszjáratok alakulása, kifejlődése 1913-tól napjainkig).* [Development of local transport in Pécs (development and development of tram and bus lines from 1913 to the present day).] Manuscript. Library of the Centre for Economic and Regional Studies, K79.

DÁVID NAGY

- SZAKONYI L. ET AL. (1965). *Pécs tömegközlekedése (munkabizottsági zárójelentés)* [Public transport in Pécs (final report of the working committee).] Working Committee of the Pécs Organization of the Association of Transport Sciences
- TRÓCSÁNYI A. (2006). Pécs városszerkezetének változása, a kulturális főváros projekt térformáló hatásai. In: Kertész Ádám – Dövényi Zoltán – Kocsis Károly (szerk.): *III. Magyar Földrajzi Konferencia*, Budapest, 2006. 12.

Other Resources

Csorba Győző Library Local History Collection (CSGYK HGY)

- PA 1832/1967 *Bus timetable of local lines in Pécs: valid from 1 January 1967.* [Pécs], [1966].
- PA 1832/1973 *Bus timetable for local lines in Pécs: valid from 28 October 1973.* [Pécs], [1973].
- PA 1832/1979 *Bus timetable of local lines in Pécs: valid from 2 September 1979.* [Pécs], [1979].
- PA 2272 *Timetable information on local and intercity services in the city of Pécs: valid from 2 September 1985.* [Pécs], [1985].
- PD 2362 *Development of the public transport network of Pécs.* Compiled by: UVATERV. [Budapest], 1979.
- Map collection Map of the City of Pécs (1957), Map of the Local History Collection of the Cartographic Company Budapest, Map of the Local History Collection of the Csorba Győző Library, Pécs

Censuses – Hungarian Central Statistical Office (KSH)

- KSH 1949 1949 CENSUS 4. Building and Dwelling Statistics Results (1950)
- KSH 1960 1960 census 5. *Demographics.* Budapest, 1962.
- KSH 1970a 1970 census 9. *Data of Baranya County I.* Budapest, 1972.
- KSH 1970b 1970 census 26. *Dwelling and residential building data I.* Budapest, 1973.
- KSH 1980 1980 census 2. *Data of Baranya County.* Budapest, 1981.
- KSH 1990 1990 census 4. *Data of Baranya County.* Budapest, 1992.