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Parking Policy Measures and their Effects on Mobility and the Economy

Subject: Overview of national and regional parking policies in Hungary

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GENERAL INTRODUCTION OF HUNGARY

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GENERAL INTRODUCTION OF HUNGARY

1. General overview of the Hungarian transport between 1990 and 1998

The start of economic transformation in Central-East European Countries (CEE Countries) was associated with a GDP decrease. Consequently to the restructuring implied by market economy and to the recession of domestic production and consumption – especially in the period 1990 to 1993 – transport performance decreased, as well. In the twelve most developed countries[*)] in Western Europe passenger transport performance increased by 39% (in terms of passenger-km), while in CEE Countries[**)] it fell by 25%. In the same period freight transport increased by 30% (in terms of ton-km) in the former countries, while decreasing in the Central-Eastern European ones. Based on previous data transport performance in 1997 exceeded in none of the CEE Countries the level in the second half of the 80s generally considerable as a peak year.

The change over of the Hungarian economy and society to market economy from 1990 on had severe impacts on the structure and performance of the transport, as well (Table 1).

The Hungarian Gross Domestic Product (GDP) in 1990 to 1993 decreased by about 20% and – despite of a somewhat speeding up increase – it did not reach the 1990 level but in 1998. Transport share part of the transport (transport, storing) in GDP generation became lower and lower over this economic transformation, more specifically from 6.2% in 1990 to 4.5% in 1997.

The decreasing of passenger transport performance were of lower rate, and freight transport performance of a higher rate than GDP (Fig. 1).

Passenger transport in terms of Passenger-km (pkm) were by 7.5% less in 1997 than in 1990. In the same period, freight transport performance decreased by 25.8%.

In addition to the performance of public passenger transport the number and share part of passenger cars grew, although the fast increase of driving costs affected the running performance of passenger car fleet. A decrease by about 10% of the public transport demand

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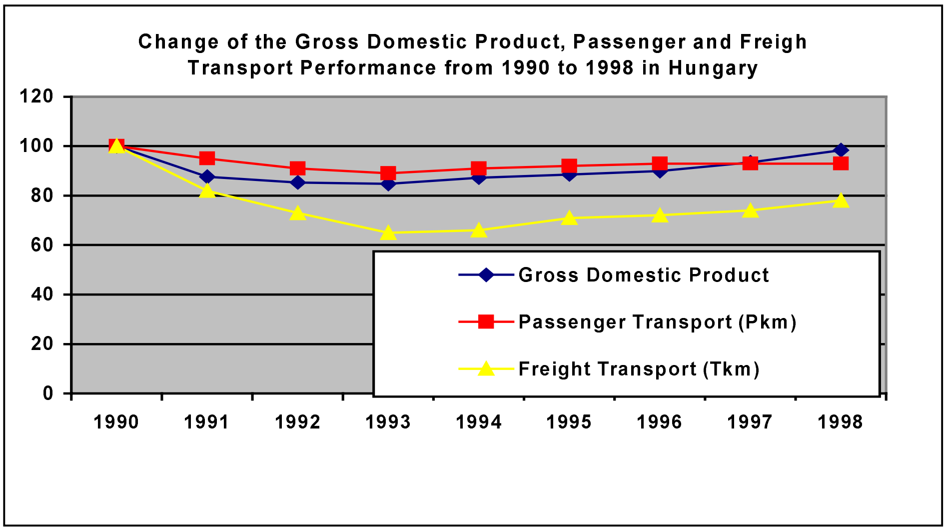
[*)] A, B, D, CH, DK, E, F, FIN, GB, I, NL, S

[**)] BG, CZ, EST, H, HR, LT, LV, PL, RO, SK, SLO

Fig. 1



is in relation with motorization increase and, mainly in these last years, with a powerful tariff increase with respect to solvency.

Simultaneously to the intensification of market mechanisms in freight transport, to a restructuring of the Hungarian economy presenting a high transport demand which is deemed significant even in international respect, specific transport demand started moderating in absolute terms from late in the 80s. A displacement of the commercial traffic from East to West, the rapid increase of production, commercial units in the Hungarian economy in modernisation, resulted in a transport demand for higher value added goods instead of large volume mass ones. In addition to international transport, the demand for the forwarding of minor consignments of local and regional character increased to a significant extent. This process transformed (and is transforming) the road traffic structure of freight vehicles and further weakened the positions attributed to the railway freight transport. At the same time as

the production sectors with high transport demand were loosing area also the performance of inland water navigation fell.

In terms of ton-km (tkm) – maritime navigation not included – the share part of road transport in 1997 amounted to 52%, railway 28%, pipeline 15%, inland navigation 5% (from 1995 including ferryboat), respectively, but the share part of air transport did not reach even 1%.

Within freight transport in the period 1990 to 1997 the share part of road and pipeline transport increased and, in contrast to this, that of the railway transport and inland water navigation decreased.

In the field of such a freight transport performance with a general decreasing trend, road exports-imports-transit traffic growth by about three times and the combined (Ro–La) road-railway transport in 1990 to 1998 by even more than three times. The competition on the transport market were intensified by a dynamic increase of the number of ventures and companies.

Simultaneously to a contracting of the domestic transport market the number of small transport companies increased from 29,500 in 1990 to 62,818 in 1993, then fell back to 35,824 in 1997. As a result of this economic transformation the number of companies in road transport is higher than the specific values in more developed industrial countries, which indicates a definite balance loss.

An investigation of the ratio of employees in individual transport subsectors reveals a significant difference between the European Union and Hungary. In Hungary, the number of railway sector employees is high, but the number of those working in road, air transport and other service activities related to transport is behind the EU.

The number of those employed in transport decreased in 1989 to 1997 by 24% due to the social-economic transformation, however, their ratio with respect to the total employees in national economy hardly changed (Table 2).

From 1996 on the total number of transport employees presented a slight increase. This increase is the most powerful in the road transport, but remarkable also in the field of transport services. A slight increase may be registered in air transport, no change in water navigation and a further staff decrease in railway transport, respectively (Table 3, 4).

Table 1

Number of Economic Organisations in Function of Management System (1990 to 1993)

(St.)

Management System	1980	1990	1991	1992	1993	1997
Economic companies with legal personality	1	585	913	1 672	2 087	4 277
Thereof: Ltd. Companies	—	575	903	1 646	2 032	4 145
Share Companies	1	5	7	18	52	79
Co-operatives	3	78	69	68	73	70
Others	43	71	74	56	23	9
Total	**47**	**734**	**1 056**	**1 796**	**2 183**	**4 323**
Budget Organisation	13	12	44	44	44	44
Private Undertaking	8	29,500	58,903	60,224	62,818	35,824

Source: KSH (Central Statistical Office), KHVM (MTCWM) "Infra Booklets"

Table 2

Number of Employees

Year	National Economy (Thousand)	Transport (Thousand)*	Transport Share (%)
1989	4 822.7	281.3	5.8
1990	4 795.2	272.0	5.7
1991	4 668.7	247.5	5.3
1992	4 078.4	247.3	6.1
1993	3 825.8	218.0	5.7
1994	3 750.9	207.8	5.5
1995	3 678.3	201.7	5.5
1996	3 647.7	208.4	5.7
1997	3 646.2	213.7	5.9
1998	3 634.8	—	—

*) Estimation

Source: KSH (Central Statistical Office)

Table 3

Number of Transport Employees

(Thousand)

YEAR	Railway	Road	Inland Water Nav.	Air Transport	Services	TOTAL
1992	103.1	112.4	4.2	4.6	23.0	247.3
1993	80.0	107.7	3.7	3.6	23.0	218.0
1994	74.6	103.6	2.9	3.7	23.1	207.8
1995	72.2	98.8	2.6	3.6	24.5	201.7
1996	69.1	110.1	2.4	3.5	23.3	208.4
1997	61.0	119.9	2.6	3.7	26.5	213.7

Source: KSH (Central Statistical Office)

Table 4

Number of Transport Employees in Function of Modal Split

(Thousand)

YEAR	Railway	Road	Inland Water Nav.	Air Transport	Services	TOTAL
1992	41.7	45.4	1.7	1.9	9.3	100.0
1993	36.7	49.4	1.7	1.7	10.5	100.0
1994	35.9	49.9	1.4	1.8	11.0	100.0
1995	35.8	49.0	1.3	1.8	12.1	100.0
1996	33.2	52.8	1.1	1.7	11.2	100.0
1997	28.5	56.2	1.2	1.7	12.4	100.0

Source: KSH (Central Statistical Office of Hungary)

2. Urbanisation and settlement structure

Due to the reorganisation of socialist industrialisation and the reconstruction of the agricultural sector the biggest urbanisation development in Hungary has taken place between 1950-1980. During this period the number of towns has doubled and the ratio of people living in towns has reached 60%.

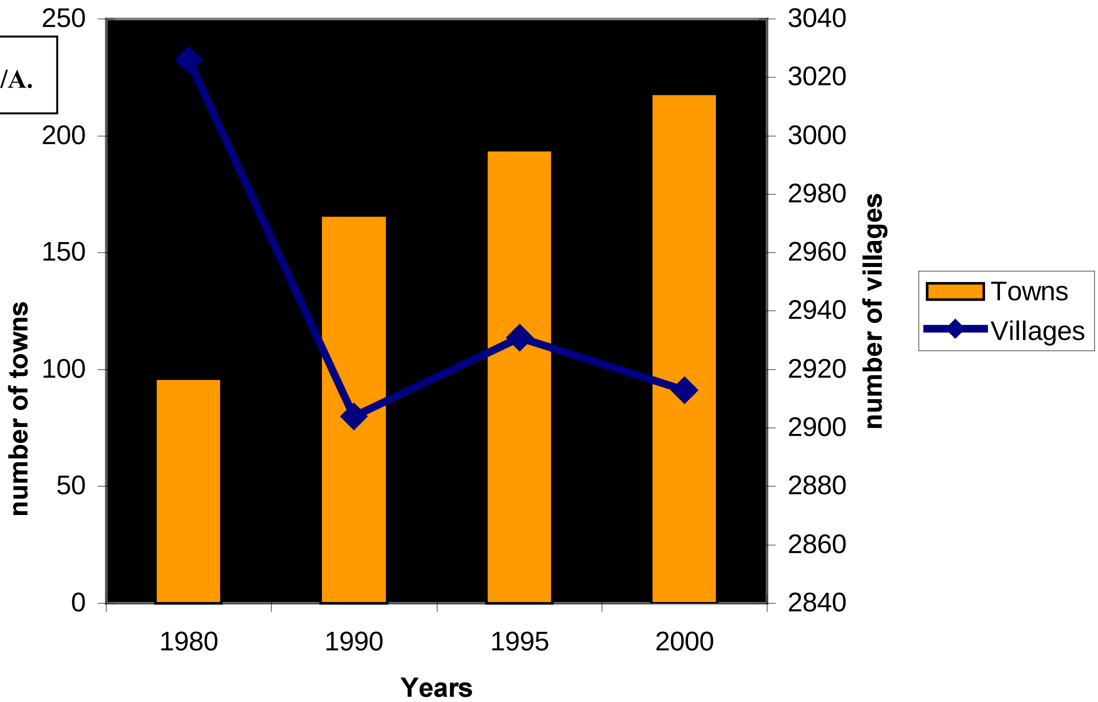
After the political transition this procedure has changed as well:

- the quantitative development became qualitative;
- the number of towns has grown further, but the ratio of the people living in towns has stabilised at around 63-64% (Fig.2/A);
- villages' ability to retain inhabitants increased due to the motorization, to the development of transportation and telecommunication infrastructure and to the flexible structure of economy.

Following from these facts the central role of towns increased in a way that the number of their inhabitants remained the same in essentials, but their attraction grew (Fig 2/B). Consequently the number of so called „day-time" inhabitants increased, which meant the growing intensity of urban traffic (commuter traffic)– primarily by cars. (Fig 3).

The change of the Hungarian settlement structure

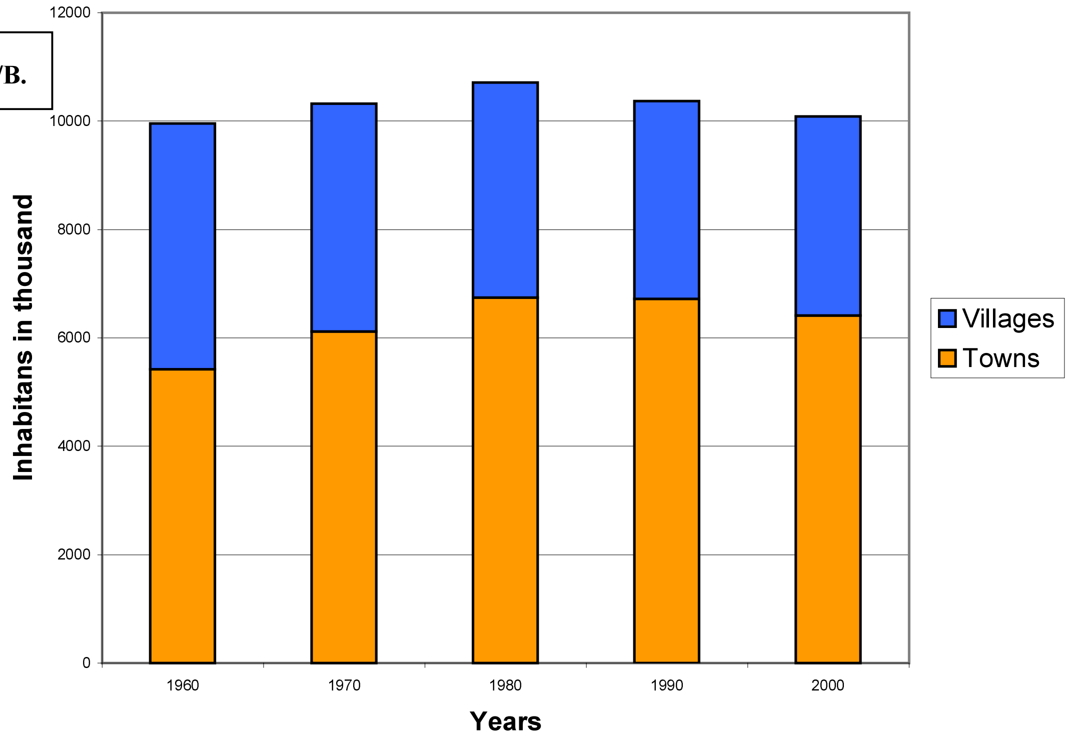
Fig.2/A.



Due to these changes the role of parking and parking management became of vital importance and handling parking problems has became a fundamental part of town management.

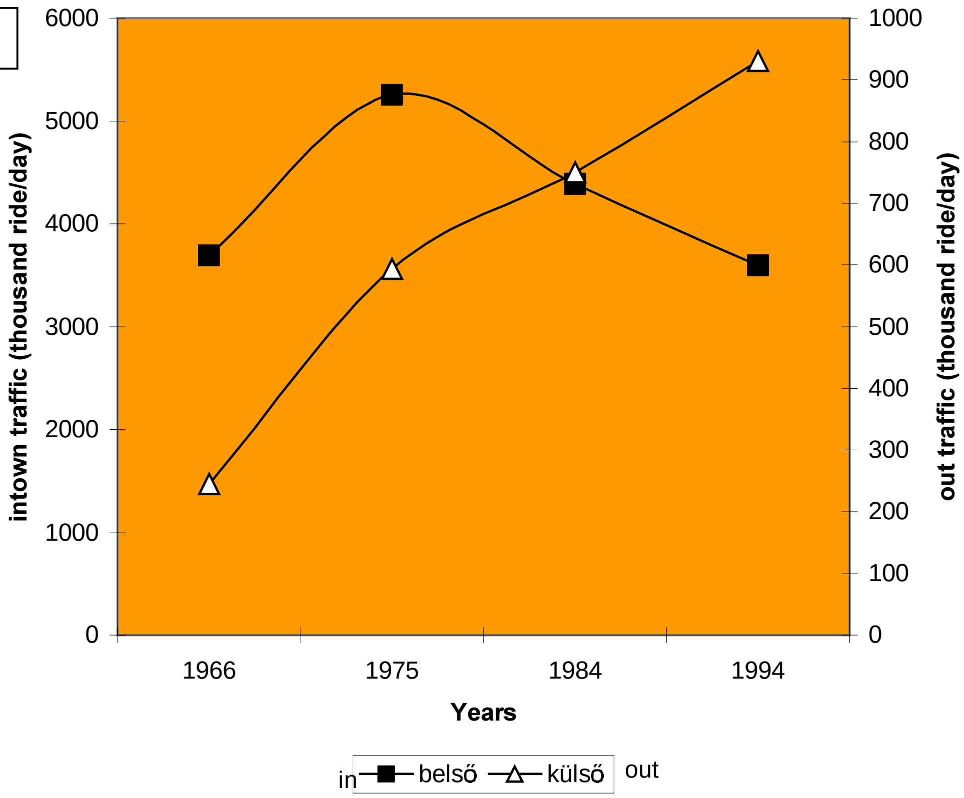
The split of the Hungarian population

Fig.2/B.



The change of the in- and out traffic in Budapest

Fig. 3.



3. Urban traffic and parking policy in the Hungarian towns

In the European practice the parking issues are treated within urban development and transportation context.

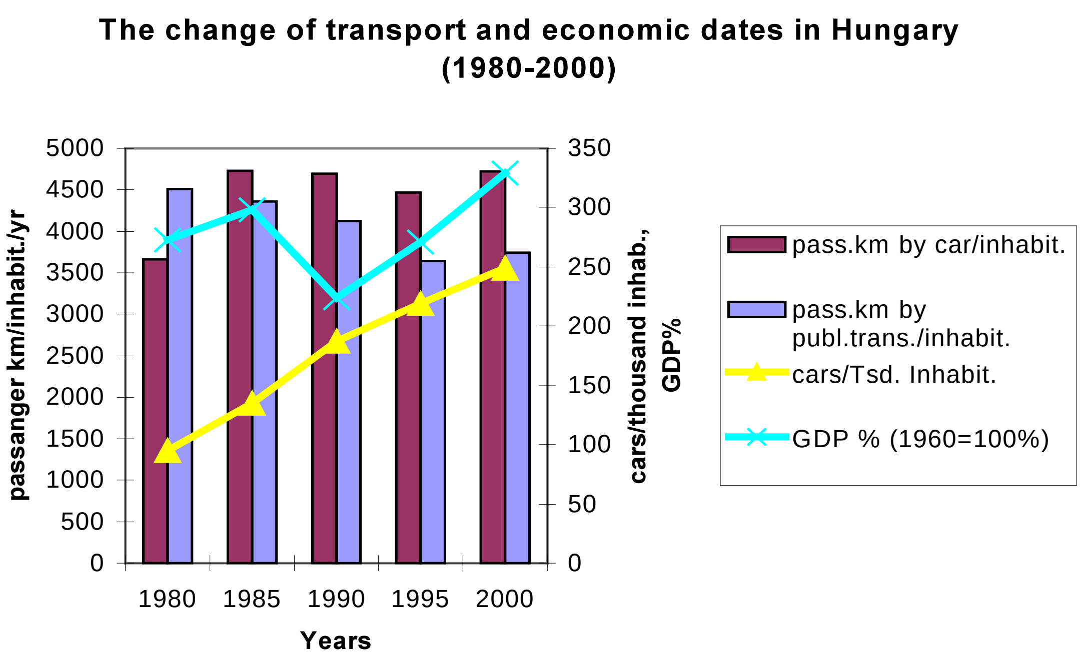
This practically means the complex analysis of parking, land use, road traffic, and motorization. Under these analysis they reveal those connections, which exists between land use, the location of parking places and their way of usage.

3.1. Urban transport in Hungary

Due to the political transition the attributes of the Hungarian transport has changed dramatically as well. This effected the urban transport as well.

The performance of public transport decreased (modal split today around 60 %) in the whole country, meanwhile the decrease of GDP has not made an effect on private car use and the increase of motorization remained the same. Fig. 4. shows the transport performance per capita and also the change of GDP and motorization. Fig. 5. exhibits the current and future trends of passenger traffic. It is obvious that in spite of EU conform transport policy we have to face the increase of private car traffic.

Fig.4.



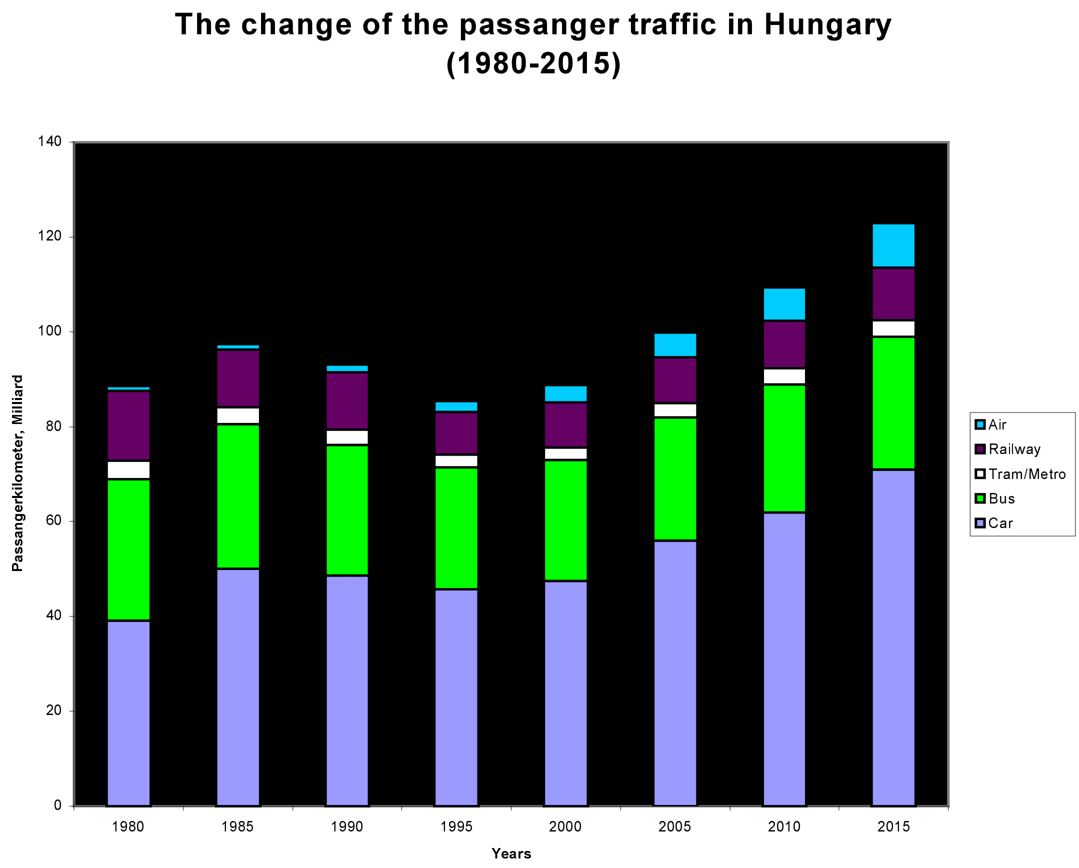
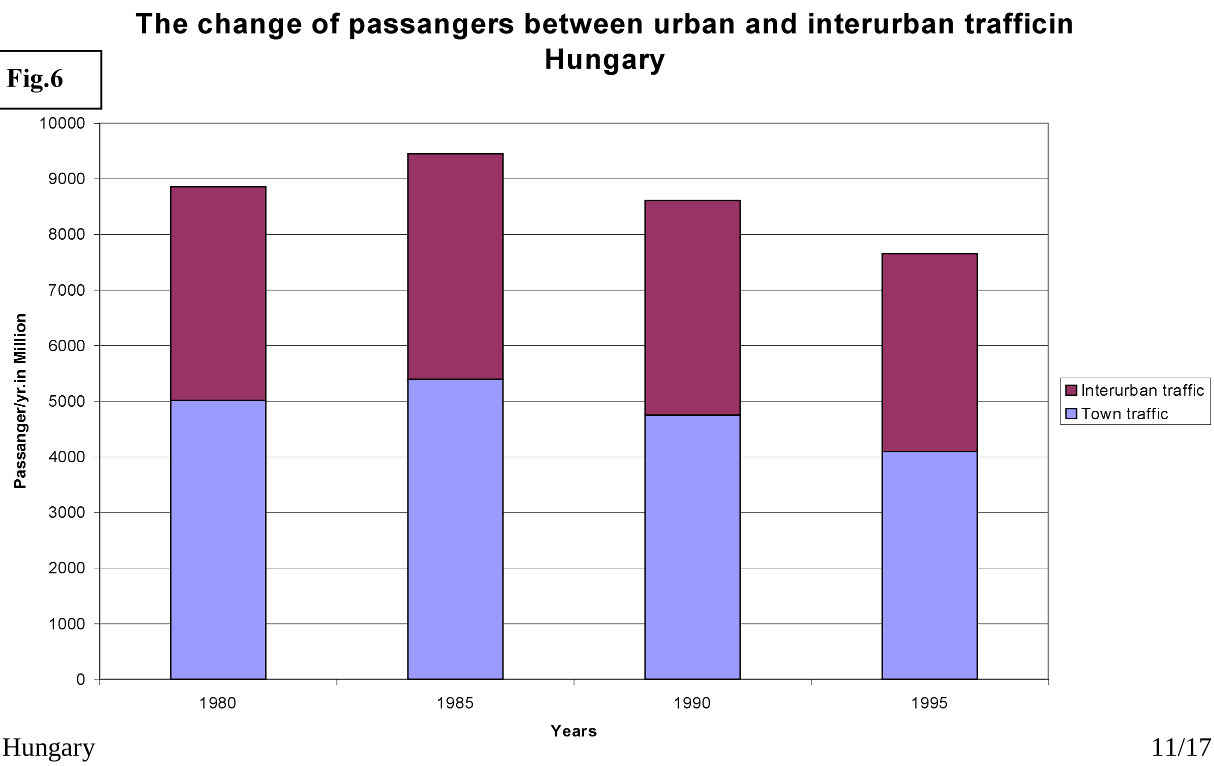


Fig. 5.

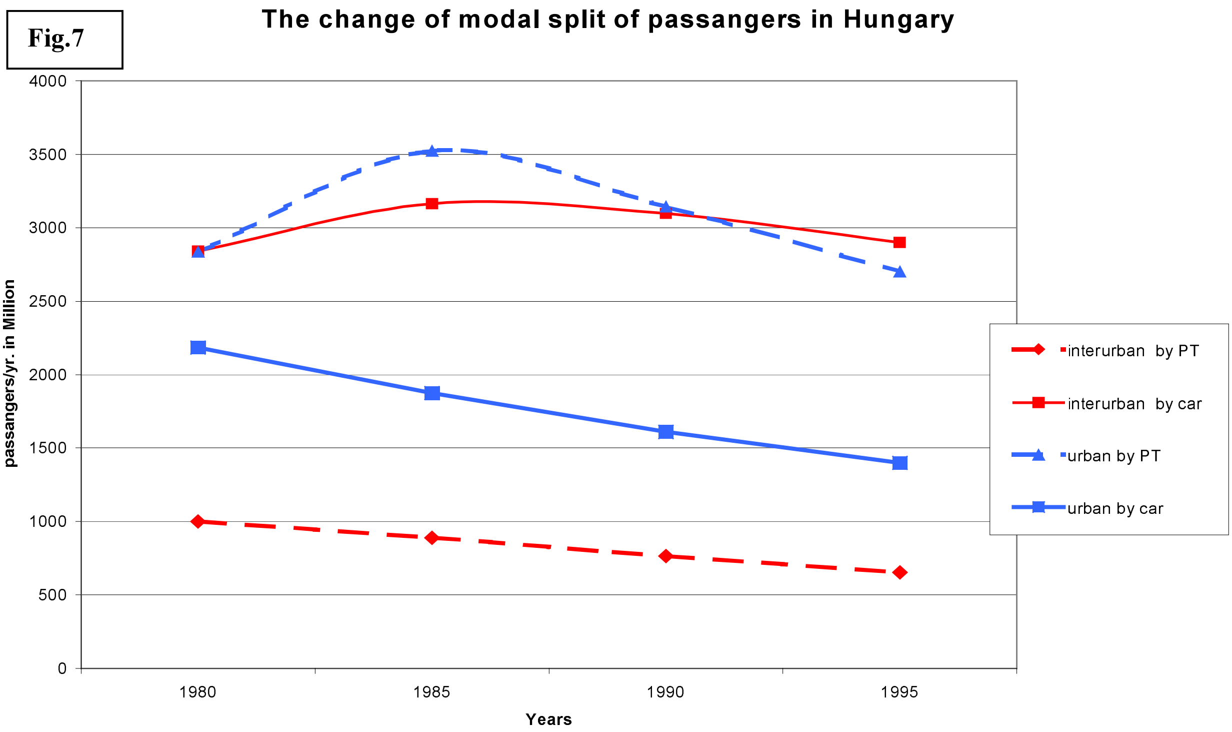
Scrutinising the frequency of travels, we can state that the occurrence both in urban and in interurban transport has decreased, especially in public transport. (Fig. 6.) This decrease ceased by nowadays and started to increase. It is worth noting that more than one third of private car use originate in towns and we have to add the portion of the interurban traffic that

Fig.6



relates to the towns. It all has parking consequences.

Fig.7



We separately examined the case of Budapest (Table 5). The tendencies are similar:

- motorization increasing, public transport is repressed (Fig. 8.)
- the number of private car increasing – in spite of fall back of GDP (Fig. 9.)
- private car private car traffic also increasing
- modal split is degrading

It deserves attention that this trend exists not only in average of the whole urban area but in CBD also.

Finally Table 5/d shows the parking conditions in CBD Budapest.
70% of parking capacity is on street parking. These parking places can be used by payments or by special permits. The number of public garages and P+R parking places are incredibly low. There are only two public garages with approximately 1000 places and 27 P+R with 3900 places. Due to these facts, the level of parking service is not satisfactory and far from meeting the demands.

Table 5

The main data of Capital Budapest

a) The change of main dates

	1970	1975	1980	1985	1990	1995
Inhabitants	2 001	2 037	2 059	2 080	2 018	1 930
Car (in thousand.)	83	159	268	362	472	570
Car/1000 inhabitants	41	78	130	174	234	295
surface of streets 1000 sqm.	15 200	16 820	19 025	22 080	22 980	23 716
statistical passengers million/year	1 511	1 612	1 592	1 581	1 687	1 520
By metro, tram	962	951	977	955	908	771
By bus	549	661	615	626	779	749

b) The change of rides/inhabitants/day and GDP

	1965	1975	1985	1995	2000
ride by public transport/inhabitants/day	1,694	2,167	1,688	1,299	1,715
ride by car/inhabitants/day	0,188	0,413	0,422	0,633	1,144
modal split %	90-10	83-17	80-20	67-33	60-40
GDP/inhabitants, 1960=100%	100	124	168	228	273

c) The change of the traffic to the Downtown (5th District)

	1985	1995	1995/85
Ride/day by public transport	187 975	126 183	67%
Ride/day by car	34 169	39 976	117%
Sum	222 144	166 159	75%
Modal split %	85-15	76-24	

d) The parking capacity of year 1998 in the Downtown (5th District)

On the street, paid	8 426
On the street reserve by permit	529
In the public garages	1 050
On the private ground for institutions and in the private garages	1 900
On the private ground for inhabitants and in the private inhabitants garages	1 623
Sum	13 528

Fig.8.

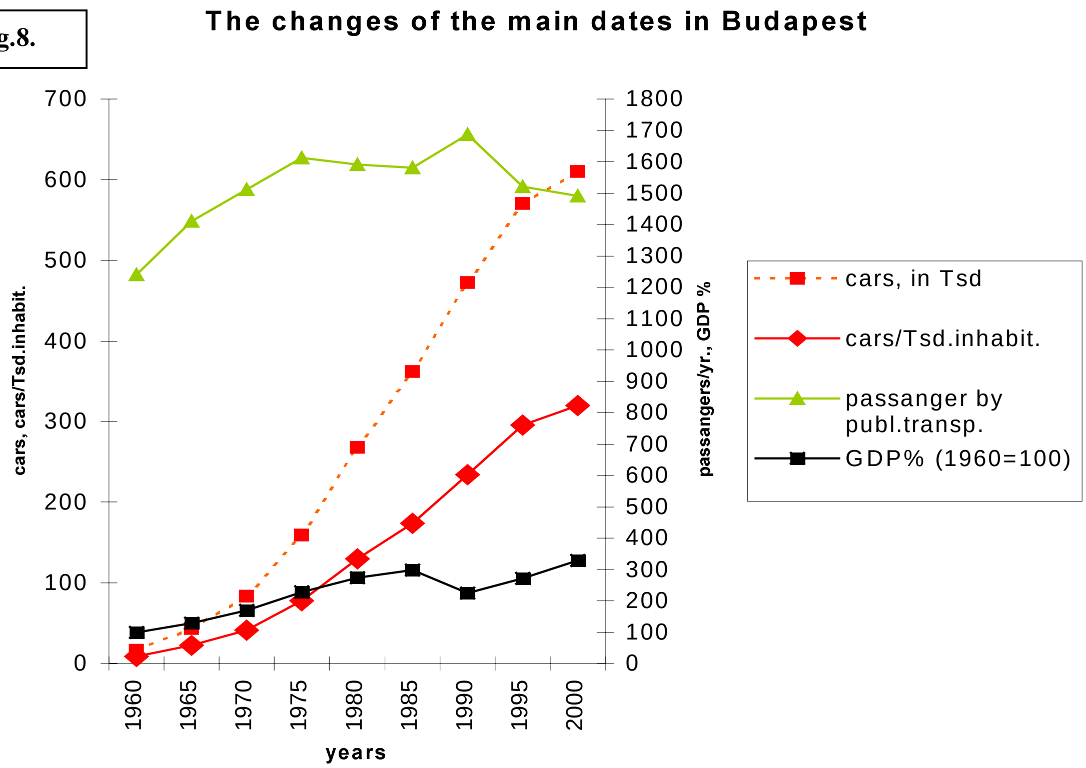
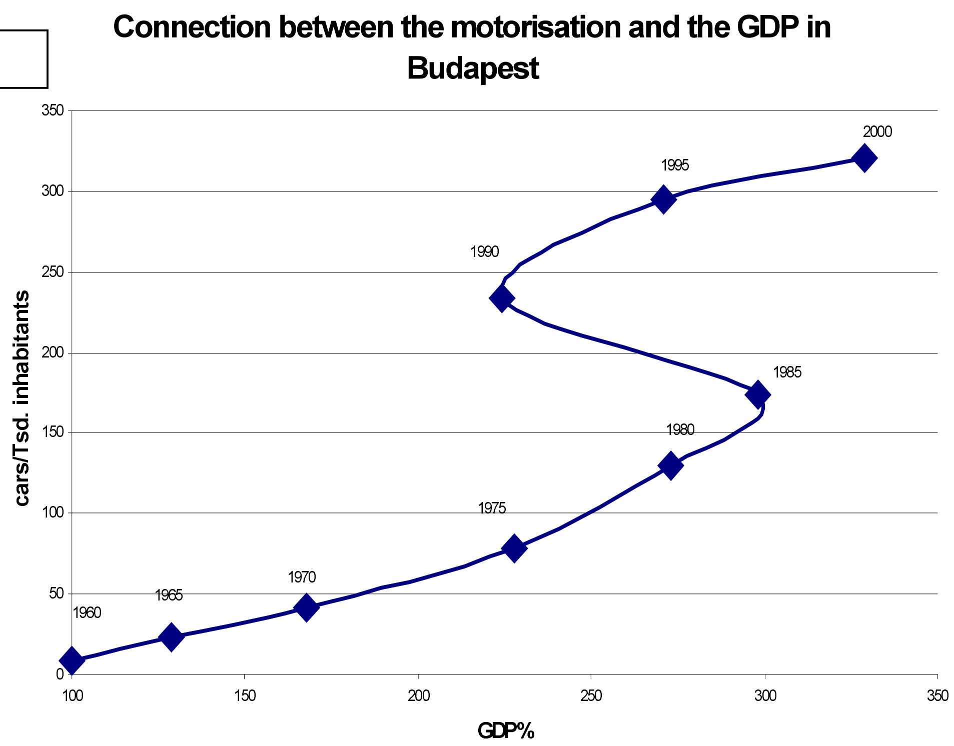

The changes of the main dates in Budapest
700
600
500
400
300
200
100
0
cars, cars/Tsd.inhabit.
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
passangers/yr., GDP %
1960
1965
1970
1975
1980
1985
1990
1995
2000
years
cars, in Tsd
cars/Tsd.inhabit.
passanger by publ.transp.
GDP% (1960=100)

Fig.9.


Connection between the motorisation and the GDP in Budapest
cars/Tsd. inhabitants
GDP%
350
300
250
200
150
100
50
0
100
150
200
250
300
350
1960
1965
1970
1975
1980
1985
1990
1995
2000

3.2. Objectives and tools in parking policy

Objectives:

I. to differentiate the different parking demand groups, according to the opportunities and to the desirable urban development and transport policy

II. to achieve the objectives we have to open up and utilise all those methods – including administrative tools – which can be accepted by the majority of inhabitants, and helps solving parking problems while improving the quality of urban environment

III. forming an acceptable balance between the elements of the system in a way that the functionality of city becomes more efficient

IV. it is a basic objective, that the parking demands are met by different expenditure level possibly till the limit of solvency, mainly in order that this important factor should not be the reason of the segregation of population

V. to meet the parking demands related to working places are not a task of city administration further more authoritative pressure can be reasonable to force back these demands

VI. parking demands related to the visitor and shopping traffic – as a function of demand and supply – should be met to it's ultimate extent within reasonable limits

Tools:

I. regulation of parking in public areas in time and tariffs, control and sanctioning

II. reasonable increase of off street parking's capacity

III. application of intelligent systems for more efficient utilisation of existing potentialities

IV. physical tools (e.g. traffic calming tools)

V. in special cases administrative/legal restrictions

3.3. City management issues of parking management

Many city operational problems occur in realisation of the objectives, and the application of tools.

Briefly:

- Parking regulation system (regulation, control, sanctioning) should be operated directly by city municipality, and the activity has to be at least self-financing
- on the town own authority able to control totally the extension of parking places within private areas, while as a real estate owner it can help to meet the parking demands which has low rentability but important from the town point of view
- the town can integrate the parking management system into its own operational and administrational system due to its legal status and organisation
- the system of parking management has its economic and engineering relation with the public road network and the public transport system operated by the town. This way the town has its majority right to keep in one hand all the essential elements of the transport operation.

4. PARKING NORMS IN HUNGARY

National Regulation for Settlement Building and Development (1998) specifies the norms for parking facilities. This regulation defines a minimum values for parking spaces in case of new construction works or in case of changes of function of a certain building. At the same time it allows the local authorities to deviate ±50% in any particular case.

Critics of the existing regulation

- not defining exact maximum level a of spaces
- it does not take account the built up environment of a certain case
- it does not consider the level of public transport services

Table 6.

The development of the Parking Norms in Hungary
(one parking place/unit)

function & element of the establishment		***in yr. 1967-1975***	***in yr. 1976-1985***	***in yr. 1986-1997***	***from yr. 1998****
home	flat, holiday-house	1	1	1	1
business	office	50 sqm, net	5 employees	5 employees	10 sqm, net
	firm, factory	5 employees	5 employees	5 employees	20 sqm in head room
	shops, etc.	40 sqm, net	50 sqm, gross	40 sqm, net	10 or 20 sqm**
	stores, warehouses	30-50 sqm, net	50 sqm, gross	40 sqm, net	10 or 20 sqm**
social, education	hospital	5 beds	5 beds	40 sqm, net	5 beds
	kindergarten	10 places	~	~	1 emp.., or classroom
	school (prim., second.)	1 classroom	1 classroom	1 classroom	1 emp.., or classroom
	university	5 employees	20 persons*	1 employee	20 sqm in head room
accommodation, meal	hotel, excellence	2 beds	3 beds	6 beds	1 room
	hotel, first	3 beds	3 beds	6 beds	1 room
	hotel, regular	8 beds	4 beds	6 beds	1 room
	restaurant, excellence	4 places	5 places	6 places	5 sqm net
	restaurant, first	6 places	5 places	6 places	5 sq. m net
	restaurant, regular	15 places	15 places	6 places	5 sq. m net
	confectionery	10 places		6 places	5 sqm net
culture	theater, music-hall	6 places	10 places	20 places	5 places
	cinema	10 places	15 places	20 places	5 places
	church	15 places	15 places	20 places	5 places
	museum, exhibition	25 visitors/day	10 visitors/day		50 sqm, net
sport	stadium, exclusive	10 places			
	stadium, regular	20 places			
	sport establishment	~	~	20 places	5 places
other	market	10 visitors/day	10 visitors/day	~	~
	assembly room	5 places	15 places	20 places	5 places
	public park, cemetery	~	~	500 sqm	500 sqm

professors, students, employees

** if the sales place is 0-100 qm:1 parking place/10 sqm , over 100 sqm: 1 parking place/20qm

*** 50% deviation is allowable (except flat) in accordance with a traffic study