



Management Committee COST 342

Parking Policy Measures and their Effects on Mobility and the Economy

Subject: Overview of national and regional parking policies in the Czech Republic

1. Legislation and General Framework of Parking Policy

The key laws in affairs of traffic policy in the Czech Republic are the Law No 13/1997, on the roads, with the Regulation No 104/1997, by which the Law on the roads is performed, and the Law No 361/2000, on road traffic.

Other important law in the branch of parking policy is the Law No 50/1976, on territory planning and construction order, with the Regulation of the Ministry of Local Development No 137/1998, on general technical requirements on the construction, and further the Regulation of the Ministry of Economy No 174/1994, by which general technical requirements securing the construction utilisation by persons with limited motion and orientation ability are determined.

Parking standards are included in ČSN (= *Czech State Norm*) 73 6056 Setting-away and parking areas of road vehicles, ČSN 73 6110 Design of local roads, ČSN 73 6101 Design of roads and motorways, ČSN 73 6057 Separate and line garages and ČSN 73 6058 Collective garages.

1.1. Laws and regulations

➤ Law No 13/1997, on the roads

Generally: The law determinates a road categorisation, their construction, utilisation conditions and their protection, rights and obligations of road owners and their users and state administration performance in road affairs by the relevant road administration offices.

§12

All construction layers of roadways and shoulders, also landings, are as components of the motorway, road and local road.

If they are not as separate local roads, then adjoining footways, public parking places and turning places are too as components of local roads.

Landing is a motorway, road or local road area specified by a construction and an operation determined to uncharged standing of the road motor vehicle for the time necessary to ensure the safety and continuity of road traffic and for the rest of users, possibly to their refreshment and refuelling.

Public parking area is a local road or purpose-made road area specified by a construction and operation or separate local road or purpose-made road determined to standing of the road motor vehicle.

§ 19

It is forbidden to set away a road vehicle permanently technically incapable for traffic, which is not supplied by a number plate, on motorways, roads and local roads.

§ 23

The community can by the public notice for purpose of traffic organisation on its territory to determine areas, where can be local roads or their sections used for the price appointed in accord to price regulations:

to standing of road vehicle in the community for limited period no more than 24 hours;

to standing of road vehicle operated by judicial or physical person for the business reason accord to special regulation, which has a seat or a place of activity in determined part of community,

or for standing of road vehicle of physical person, which has a place of permanent residence in determined part of community,

if safety and continuation of traffic on the roads or other public interest will not be endangered by this utilisation.

Community determines in its generally valid public notice a way of payment of appointed price and a way of this payment.

§ 40 State administration performance

Road administration in affairs of motorways, roads, local roads and public purpose-made roads is performed by road administration offices, which are Ministry of Transportation of the Czech Republic, region bodies in the transferred function and district offices. In the frame determined by this law it is performed also by communities in transferred function.

Ministry of Transportation of the Czech Republic:

It decides on the classification of a road to the category of a motorway or a road and on changes of these categories, on annulation of a motorway or a road after the agreement with the Ministry of Defence. It performs function of road administration office and special construction office in affairs of motorways and speeding roads according to this law.

Region body in the transferred function:

It decides on the classification of a road to the category of roads of the 2nd and 3rd class and on changes of these categories, on annulation of roads of the 2nd and 3rd class after the agreement with the Ministry of Transportation and the Ministry of Defence. It performs function of road administration office and special construction office in affairs of roads of the 1st class with exception of affairs decided by the Ministry of Transportation

District offices:

They perform function of special construction office in affairs of roads of the 2nd and 3rd class and road administration office in affairs of roads with exception of affairs decided by the Ministry of Transportation or region body in the transferred function.

They perform function of special construction office in affairs of local roads and public purpose-made roads in communities, which are not according to the special regulation entrusted by the function of general construction office.

Communities:

They decide on the classification of a local road to the category of local roads and on discarding of local roads from this category. They perform function of road administration office in affairs of local roads and purpose-made roads. They perform function of special construction office in affairs of local roads and purpose-made roads, if they are according to the special regulation entrusted by the performance of general construction office.

➤ Regulation No 104/1997, by which the Law on the roads is performed (§ 26)

To parking:

This regulation includes minimal requirements for landings at motorways and high-speed roads – it determines above all requirements on the dimension of their parking areas.

- In the basic landing equipment must be at least exactly determined number of parking places for passenger cars, lorries and buses.
- All new constructed operational and parking areas of landing must be physically separated from driving stripe (stripes) of the motorway or high-speed road and must make enable their utilisation also to the citizens, be thrown upon invalid vehicle.

➤ **Law No 361/2000, on road traffic**

Traffic in the living and pedestrian zone

§ 39

Living zone is a build-up area, which begin and end is marked by traffic signs (Beginning of the living zone, End of the living zone).

Pedestrian zone is an area, which begin and end is marked by traffic signs (Beginning of the pedestrian zone, End of the pedestrian zone).

In the living zone and in the pedestrian zone pedestrians may use a road in its whole width. Children games are allowed only in the living zone.

In the living zone and in the pedestrian zone can be driven with the velocity not over 20 km/hour. At the same time it must be born in mind of enhanced consideration towards pedestrians, which a driver cannot endanger; in the case of necessity he must stop the vehicle. Standing is allowed only on the places marked as parking areas.

For the purpose of traffic organising a community can determine local roads or their sections in the living zone, which must be used for standing of a lorry or vehicle set.

It is allowed to drive to the pedestrian zone only for selected vehicles.

In the living and the pedestrian zone pedestrians must enable to run to vehicles. The same is valid also for children playing in the living zone.

➤ **Law No 50/1976, on territory planning and construction order (construction law, in the version of later regulations (§ 143 art. 1 and 4))**

A territory plan solves a functional territory utilisation, it determines principles of its organisation, and materially and chronologically coordinates construction and other activities influencing a territory development.

A proposal of transport conception, civil and technical equipment is one from basic parts of territorial plans of cities and communities.

In the relation to parking (generally) the law on territory planning in the frame of the solved territories planning documentation (communities and cities) determines a location of parking and setting-away areas, exactly determines conditions of the territory proceedings and procedure at permitting of constructions and theirs changes and utilisation.

➤ **Regulation of the Ministry of Local Development No 137/1998, on general technical requirements on the construction**

This regulation determines basic requirements for a territory-technical construction solution and for purpose-made and construction-technical building solution, which belongs to the range of common construction bodies and community bodies according to the construction law (§ 117-119, 123, 124).

To parking:

This regulation determines requirements for building constructions and technical equipments of setting-away and parking areas and garages (§ 56).

- **Regulation of the Ministry of Economy No 174/1994, by which general technical requirements securing the construction utilisation by persons with limited motion and orientation ability are determined**

This regulation secures necessity of a reservation of standings on selected setting-away and parking areas (for passenger cars) for vehicles of health-handicapped persons (2 % of places, min. 2 places) inclusive their solution (§ 4).

1.2. Standards

- **ČSN 73 6056 Setting-away and parking areas of road vehicles (8/1988)**
(ČSN=Czech State Norm)

This standard holds for design of new and adaptation of dispositional solution of existing setting-away and parking areas of the road vehicles; it does not hold for areas determined for setting-away and parking land techniques of army bodies).

From the view of parking the standard:

- according to vehicle types determines location of setting-away and parking standings (in an intravilan / extravilan, in / outside residential parts),
- ensures fulfilling of the hygienic requirements for the environment protection,
- determines technical requirements:
 - for a location of the setting-away and parking standings on the roads,
 - determines dispositional solution of attending roads for setting-away and parking areas (approach and exit roads) inclusive of design elements for internal roads,
 - dimensions of individual standings, their ranging

(Extract)

Sorting

7. According to the types (ČSN 30 0024, ON 30 0402) and parking admissibility the vehicles in this standard are classified to the groups on:
 - a) vehicles of group 1: passenger cars, motorcycles, mopeds and their attached vehicles;
 - b) vehicles of group 2: lorries, buses, special automobiles;
 - c) vehicles of group 3: towing vehicles, attached vehicles, vehicles sets, hinged buses, tractors and autonomous work machines.

Location of setting-away and parking standings

8. Setting-away and parking standings for the vehicles of group 1 can be located in the living parts of the towns. Setting-away and parking standings for the vehicles of group 2 and 3

must be located only outside the living parts of the towns, excepting setting-away and parking standings for special automobiles of police, fire brigade, sanitary and living. Number of setting-away and parking standings by the singles building types is determined by ČSN 73 6110, an obligation to establish setting-away and parking standings by the building is determined by the special regulations.

9. In the location of setting-away and parking standings must be kept hygienic requirements and technical requirements and it is necessary to practice the requirements, which take out the highest claims.

Hygienic requirements

10. In the designing of the location of setting-away and parking standings basic hygienic requirements for the environment protection must be kept. Before all, a protection ahead of noise, vibration and emission gases and protection of superficial and subsoil waters ahead of the pollution must be respected. It is necessary to proceed according to relevant regulations of ČSN 73 0531, ČSN 73 4301, ČSN 83 0917 and according to relevant hygienic and waterworks regulations. The design of noise protection will be carried out according to relevant methodical instructions; principles for location of setting-away and parking standings from the view of hygienic protection are in a special attachment. The design of the location of setting-away and parking standings from the view of hygienic protection is obligatory judged by the relevant body of the hygienic service.

➤ ČSN 73 6110 Design of local roads (7/1987) in the version of later changes, art. 193-202

This standard holds for local road design both in residential formations and in a free countryside, it is for new buildings and reconstructions. It holds also for road channels in the building area or in the area determined by the plan to building.

From the view of parking this standard determined basic indicators of a perspective number of setting-away and parking areas:

- Total number of standings in the solved area
- basic number of setting-away standings,
- basic number of parking standings,
- coefficient of the influence of motorisation degree,
- coefficient of the community dimension,
- coefficient of the influence of location of the solved area (object),
- coefficient of the transport performance division.

(Extract)

Setting-away and parking areas

1. Parking and setting-away standings for passenger cars are established at all potential traffic sources and targets, it is at housing objects, production and administration establishments, schools and establishments of civil equipment so, that to both stepwise and prospectively their requirements be satisfied.

Note: In design of parking and setting-away standings all hygienic requirements for environment protection are kept.

2. Basic indicators in the table are derived for the degree of motorisation 1 : 3.5, a city above 50 000 inhabitants with the central zone and transport performance division of individual automobile transport to the other passenger transport in the rate 25 : 75 (the other passenger transport, it is trains + buses + urban transport + cycle transport + pedestrian transport).
3. It is the most suitable at existing objects to verify the requirement of parking standings by a survey. Perspective requirement of parking standings is then determined in the rate of motorisation degree in the time of survey and in the design period.
4. Total number of standings in the solved territory with other presumptions, than in the art. 2 is shown, is calculated according to this formula:

$$N = O_0 \cdot k_a + P_0 \cdot k_a \cdot k_v \cdot k_p \cdot k_d$$

where N is total number of standings in the solved territory (solved object),

O_0 - basic number of setting-away standings according to the art. 2 for the degree of motorisation 1 : 3.5,

P_0 - basic number of parking standings according to the art. 2,

k_a - coefficient of the influence of motorisation degree.

motorisation degree	1:2.5	1:3.0	1:3.5	1:5	1:7	1:10
coefficient	1.4	1.2	1.0	0.7	0.5	0.35

k_v - coefficient of the influence of dimension of residential formation

below 20 000 inhabitants 0.4

between 20 000 and 30 000 inhabitants 0.5

between 30 000 and 50 000 inhabitants 0.7

above 50 000 inhabitants 1.0

k_p - coefficient of the influence of location of the solved territory (object)

central zone (over-municipal importance) 1.0

zone with higher facilities (all-municipal importance) 0.8

residential zone (local importance) 0.6

k_d - coefficient of the transport performance division (IAT – individual automobile transport)

IAT : the other 10:90 20:80 25:75 30:70 40:60

coefficient 0.4 0.8 1.0 1.2 1.6

5. It will be added to determined number of parking standings at services and repair shops of motor vehicles other standings, this is three parking standings for every work standing in the service or the repair shop.

Given data are at enterprises, institutions, exhibition or trade fair halls only approximately and must be adapted according to local conditions, as location of enterprise or institution

with regard to domiciles of the personnel, international or domestic character of exhibition, distance of stops or stations of the public transport etc.

6. Parking and setting-away standings is recommended to design not only in the ground, but also under residential objects, further in the garages under ground or under public area or the purpose-made objects, in the more-floor garages above ground according to ČSN 73 6058. It is necessary to locate at new built hotels at least 20 % from determined standings number in the garages.

Setting-away and parking areas and garages for passenger cars is recommended to locate so, that walk distances would be at most:

for short-time parking	100 m,
for long-time parking	200 m,
for setting-away	300 m.

In the concentrated existing building (historic centres etc.), where it is not possible these value in the full range been fulfilled, it is necessary to ensure, that attained distances are to these values as near as possible.

It is suitable at the shop centres to locate the parking places in the relation to the goods issue.

7. Dimension of standing and arrangement of setting-away and parking areas of road vehicles for automobile transport is solved by ČSN 73 6056, for separate and line garages by ČSN 73 6057 and for collective garages by ČSN 73 6058.

Requirements from the view of the fire safety to separate and line garages determines ČSN 73 0837 and to collective garages ČSN 73 0838.

8. It is necessary at rail and bus stations to ensure needed number parking standings for vehicles of personnel, taxi and private vehicles waiting for departure (arrival) of trains (buses). It is necessary at airports in addition to consider with parking standings for vehicles of spectators. With regard to big diversity of introductory conditions it is necessary to calculate numbers of parking standings at these objects according to respective situation individually.

9. It is suitable at chosen stations of the high-speed and capacitate transport (rail, metro, urban high-speed way) with a good connection to important radial roads in middle and external zones of the great cities to establish retaining parking places, enabling to continue the journey with public urban transport. Situation and dimension of these parking places is determined individually according to approved transport engineering documentation of relevant city.

10. Besides parking standings for passenger cars it is necessary at some cultural, sport establishments, hotels, public board etc. to establish parking standings also for buses, possibly also for lorries (motor-rests).

➤ **ČSN 73 6101 Design of roads and motorways (7/1986) in the version of later changes, art. 240-241, 245, 247-249**

This standard holds for roads and motorways design in a free countryside.

From the view of parking this standard contains above all principles for an equipment of landing at the motorways and high-speed roads by parking standings – according to the landing dimension it determines above all minimal requirements to the number of parking standings according to the vehicle type, their location and the way of ranging

(Extract)

Parking areas

1. Parking areas by the roads (e. g. near holiday areas, wood complexes, viewing places and tourist or other attractive objects) must be located so that the entry to the parking area, vehicles manoeuvring on the parking area, vehicles parking and departure from the parking area should not disturb road traffic continuation.
2. For the arrangement of purpose-made strips and roads and adjoining parking areas hold relevant regulations of ČSN 73 6056, approved type bases and model sheets.
If a parking area shall be used perspectively as a landing, it must be designed according to the principles for landings.

Landings

3. Dimension and equipment of landings on the motorways and high-speed ways and their relative distances are determined by the relevant regulation. On the other roads the equipment of landings can be adequately smaller and their relative distances shall be at least 10 km.
4. Landings are established for each traffic direction particularly. On the roads divided by the direction is recommended by the landings located counterpartly and connected usually with further service establishment also off-level road connection for motorised traffic. On the roads undivided by the direction shall be the landing on the running side located earlier than the one for the opposite direction. At two-stripes roads is possible to establish also one-side-landing on the basis of accordance of the relevant administration office on the condition of solution of landing joining to the road according to the principles valued for junctions (ČSN 73 6102).
On the landings by motorways and high-speed ways must not be attached other roads than purpose-made roads for supplying traffic of the service establishments and their workers. Their attachment shall not enable the entry to the motorway or high-speed way.

➤ **ČSN 73 6057 Separate and line garages. Basic regulations (6/1988)**

➤ **ČSN 73 6058 Collective garages. Basic regulations (8/1988) in the version of later changes**

Further legislative standards in the sense of respectancy of charged parking zones

Law on offences - exact specification of the conception of the offence in charged parking zones and determination of the qualification for the solution of these offences

Law on the Municipal Police - precisation of the authorisation of policemen in the area of the charged parking zone, possibly authorisation for utilisation of means for departure prevention. General legislative environment enables different interpretation of respective standards and regulations. This creates problems in the streets, where a member of the Municipal police need not be fitted out by the knowledge of all juridical aspects. In addition, the Municipal polices in different towns approaches by the different way a specification and solution of offences in the area of the calm traffic.

2. Problems of charged parking zones

Many charged parking zones arise rather in armchair, than on the base of the thorough analysis of the actual state of the calm traffic, they include a lot of mistakes both of virtual and juridical character (for example in Kroměříž).

Established charged parking zones or their segments affect by incomprehensive impression, they include in them escape zones and effort to reach economic profit prevails - for example attendance distances exceeding 50 m and so on. Hardly any town has elaborated conception of parking development and if so, hardly any town holds it constantly. Many charged parking zones affect intransparently - a town has no survey of incomes and expenses of the charged parking zone, possibly this information is not willing to publish or it try to obscure it.

There is shortage of reinvesting policy, it means strictly defined rules for utilisation of financial sources acquired by the charged parking zone operation to its development (implementation of first-rate information and guidance systems), creation of new parking activities in centres and possibly for sanation of the house estate parking, which market potential is minimum.

A charged parking zone is no static system, but it must react to changes in the environment, where it is established and possibly prevent them. Generally the municipal components are very inelastic and then many charged parking zones affect in this way too. Hardly any charged parking zone operates with regular tracking and evaluation of occupancy, respectancy and further variables. If even any evaluation appears, it is limited only to rough economic variables. Parking is often rather a political than professional matter.

In many cities more operators operate who are not able to cooperate in the interest of the optimal parking system. Where lower number of operators is, results of functionality are much better too. Often we meet with cases, where operator of the charged parking zone performs it only from „compulsion“ (various municipal organisations) and it is not interested in the operation without problems and in the functionality of the charged parking zone.

A shortage of effective tariff policy creates overfilling of on-street parking and on the contrary a strong unloading of parking objects. It would be the goal, to reduce a number of vehicles in the streets and to much utilise of parking garages. Excepting of tariff unequilibrium, also further psychological barriers affect - for example it is very difficult to learn Czech citizen to put their car to underground or overhead garage.

A control in the charged parking zone bumps into inaccurate legislative and often into different access not only of single policemen, but also theirs superiors, include the highest ones. Sometimes a policeman can use 20 means for departure prevention in a day (respectancy over 80 %) and somewhere only 3 (respectancy under 20 %).

3. General indicators of the Czech Republic - demographic, economic and transport development in 1990 - 1999

		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
inhabitants number	thous.	10363	10309	10318	10331	10336	10331	10315	10304	10307	10295
GDP - constant prices	bill. CZK	1449,4	1281,1	1274,5	1275,3	1303,6	1381	1447,7	1432,8	1401,3	1397,9
goods transport	mill. tkm	59417	52389	52776	51621	53845	56585	58387	62651	54332	55770
road goods transport	mill. tkm	16820	18150	20250	25260	29810	32500	34550	40640	33912	36964
personal cars	thous.	2411	2483	2580	2694	2967	3113	3193	3392	3493	3440
passenger transport total	mill. perkm	102993	101352	100145	99764,7	105262	107661	110503	110924	108878	114264
passenger transport public	mill. perkm	63093	60252	55845	50764,7	53562,2	53160,9	52602,8	51923,8	48077,6	52013,5
passenger transport public (without urban transport)	mill. perkm	27883	27162	24325	19893,7	22636,2	22030,9	21023,8	20056,8	19386,6	19948,5
passenger transport public road	mill. perkm	12340	11720	10140	9090	11523	10963	9735	8804	8681	8649
passenger transport rail	mill. perkm	13360	13610	11760	8548	8481	8023	8111	7721	7018	6957
passenger transport air	mill. perkm	2180	1830	2420	2250	2605	3033	3170	3524	3680	4335
urban transport	mill. perkm	35210	33090	31520	30871	30926	31130	31579	31867	28691	32065
passenger transport individual road	mill. perkm	39900	41100	44300	49000	51700	54500	57900	59000	60800	62250

A number of inhabitants of the Czech Republic raised very slowly till 1994, from that time an opposite trend has started - sinking (Fig.1).

The gross domestic product (in constant prices) has dropped in result of the economic transformation from 1990 to 1992 up to 88 % of the original value. From 1993 till 1996 was the decrease exchanged by the gradual increase almost up to the value of 1990. From 1997 mild decrease of the gross domestic product follows again. In 1999 the average value of the GDP was 178 400 CZK (4 840 EURO) on 1 inhabitant of the Czech Republic.

A development of the goods transport is nearly corresponding with the GDP development - a decrease till 1993, than increase up to the original value and then a decrease in 1998. The expressive increase of the road transport share has come here from 28 % in 1990 up to 66 % in 1999. On the other hand, in the passenger transport only decrease has come - by 3 % in the total volume, which was exchanged soon by the increase - by 11 % more in 1999 than in 1990 (Fig. 2).

A modal split was, however, very essentially changed in the passenger transport in this period. The share of the public transport has decreased from 61 % in 1990 up to 45,5 % in 1999, meanwhile the share of the individual transport has increased from 39 % up to 54,5 % in the same period. In the frame of the public transport was the greatest decrease of the rail transport share (from 13 % up to 6 %), a little less the road transport share (from 12 % up to 7,5 %). On the other hand, the public urban transport has nearly held its market share (a decrease from 34 % only up to 28 %). The air transport share has increased from 2 % up to 4 % (Fig. 3).

An essential increase of the individual road transport was conditioned by the great increase of the passenger cars number (by 43 % between 1990 - 1999), what affected also on the great increase of traffic accidents, emissions and other negative influences from transport, and also

considerable problems with parking areas, especially in the big cities (Fig. 4). In 1999 in the Czech Republic went 334 passenger cars on 1000 inhabitants.

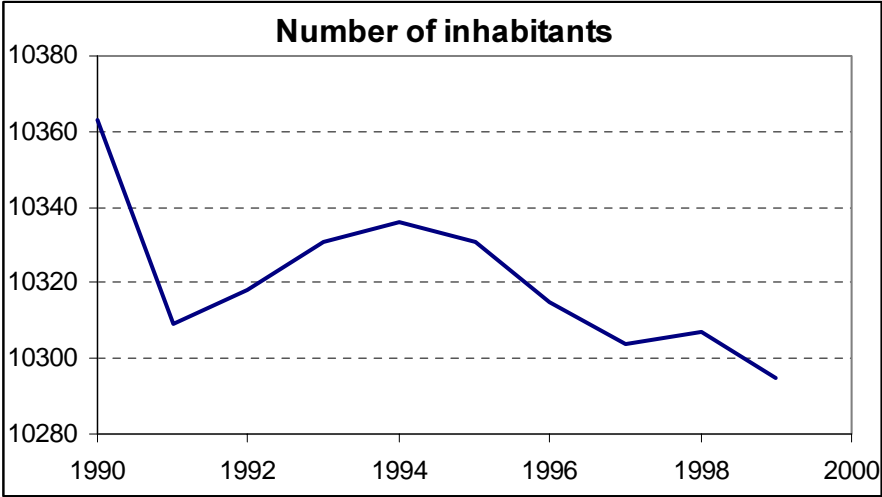


Fig. 1

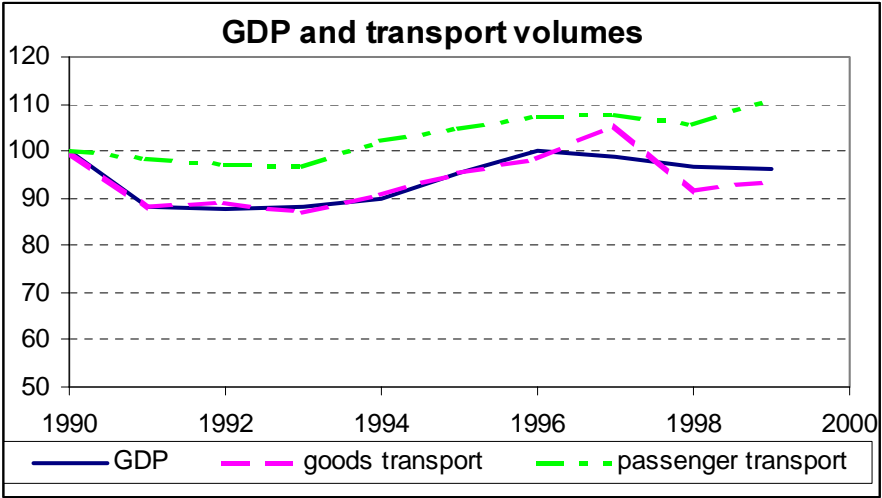


Fig. 2

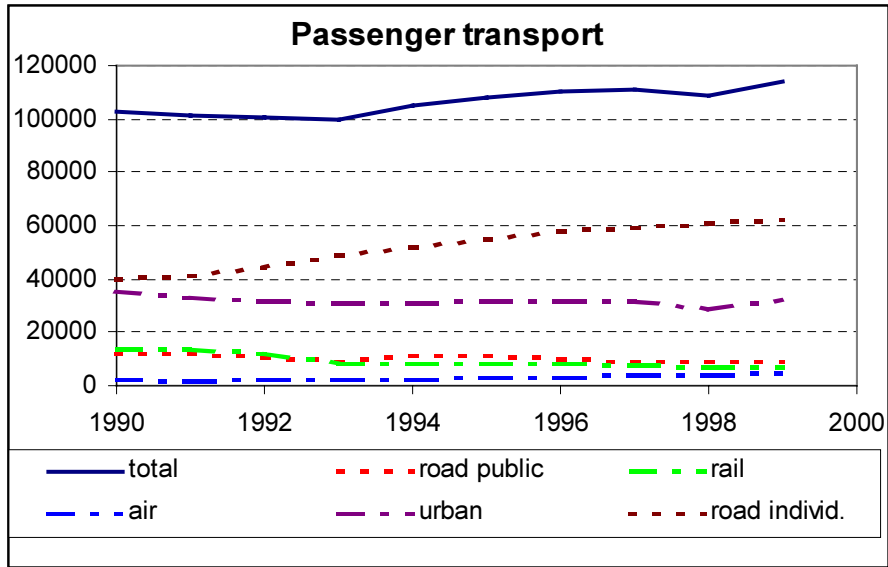


Fig. 3

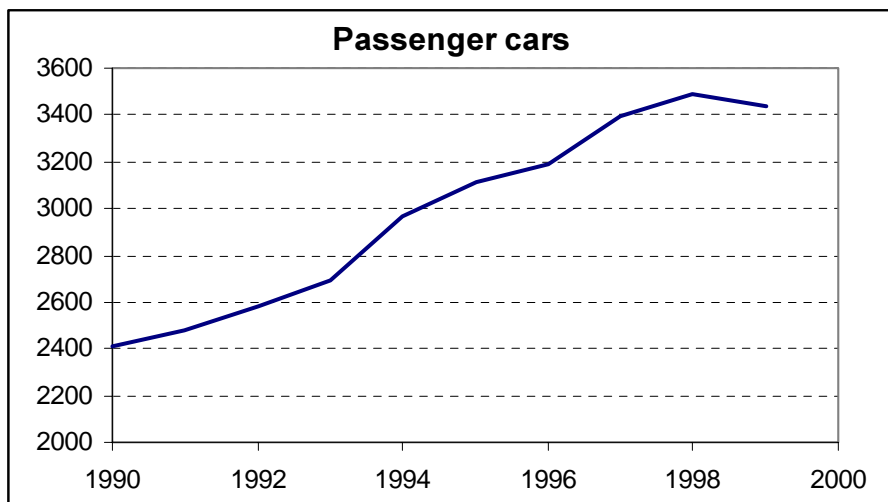


Fig. 4