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The public balance of transport in Hungary 2004-2010

István Kövesdi^{a, *}, Gábor Albert^b^a Researcher, KTI Institute for Transport Sciences Non Profit Ltd., Thán K. u. 3-5., Budapest, 1119, Hungary^b Head of Department, KTI Institute for Transport Sciences Non Profit Ltd., Thán K. u. 3-5., Budapest, 1119, Hungary

Abstract

The public balance of transport has been studied in our institute since 2004 and we have complete time series for the years 2004-2010. Only pure transport items are included on both sides of the balance – on the one hand transport taxes, fees and other revenues, on the other hand transport expenditures (e.g. road and rail construction, maintenance, operation; public transport subsidies, PPP fees). Although, we also calculate the contributions of transport sector (e.g. personal income tax, corporate tax, etc.) to the general public expenditures, these items are not included in the balance.

This public balance of transport, in order to become even more realistic, should be put into adequate circumstances, where among others, the following issues are discussed:

- changes of public property of transport;
- fluctuating amounts of transport investments and their correlation to the investment needs;
- external effects are covered only partly;
- public balance versus social balance;
- the efficiency of public expenditures; and the transport costs of the society.

The public balance of transport and all of its items are divided by transport subsectors (road, rail, inland waterway, air), where road and rail figures are good enough to draw conclusions, while the role of inland waterway and air transport in public balance are marginal. Between 2004 and 2010 road transport revenues were significantly higher than expenditures (except 2006), in spite of intensive motorway construction activity. On the other hand, public balances of rail transport have been always significantly negative, especially in the period 2006-2010. However, the performance figures of rail transport have not justified the huge amount of rail subsidies.

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transport; finance; Hungary; road; rail; public finance; public balance; social balance; revenues; expenditures; budget; state property; infrastructure; development; maintenance; operation; externalities; tax; fuel excise; vat

1. Introduction

Everybody has experienced the phenomenon when different organisations evaluate the same measure, investment differently. This results from the natural variegation of the viewpoints, which per se cannot be

* Corresponding author. Tel.: +36-1-3715855; fax: +36-1-2055930.
E-mail address: kovesdi.istvan@kti.hu.

considered as rejected yet. The transport is hit especially hard. The growth of mobility, on the one hand, was presented as a requirement of everyday life, as its concomitant, moreover representing a special value, while on the other hand it was considered as an activity causing serious damages that should be profoundly changed in its tendencies.

Not contesting the necessity of variegation of opinions, the Hungarian ministry of transport considered that the very moment has come when those domains should be revealed where apparently irreconcilable antagonism can be dissolved and the viewpoints could be drawn near to one another. To this end, the ministry invited experts of KTI Institute for Transport Sciences Non-profit Ltd. and of Clean Air Action Group (CAAG; Levegő Munkacsoport) to overview the direct budgetary and social costs and revenues of transport. The task was to find the elements in which agreement can be developed, and where this is not possible, to determine the different standpoints finding their roots. In this article we engaged ourselves to summarise the public balance of the transport sector, i.e. to quantify the transport-related public revenues and expenditures. In the article KTI's standpoint is reflected, which does not necessarily correspond with view adopted by the experts of CAAG.

2. Methodology

Essentially the **expanded public balance of transport** or, in other words, the **social balance of transport** consists of the following:

- 'classical' public balance of transport (public revenues and expenditures),
- the balance of the change of transport infrastructure assets in public property,
- external balance (basically from the changing circumstances of the natural environment).

Financially realised revenues and expenses arisen in the institutions of the public budget are included in the public balance, in the topic of this article. For detailed methodology see references [Albert G. et al., 2010].

2.1. *Delimitation of the scope of transport*

The scope of transport is one of the most important questions of the balance and a determinant of its value.

The public balance of transport is solely determined on the one hand, by the tax and other public revenues coming from transport, and on the other hand, by the public expenditures in the interest of transport. All these means that in our study the income type taxes and social contributions were eliminated from the revenue side, as well as the expenditures, which could be assigned to transport as an income-producing sector in other areas (state administration, national defence, education, etc.). In this way, only the amounts spent specifically on transport were taken into account.

2.2. *Source and evaluation of data*

Since the data, for the aim determined above, are decisively taken from the public budget – in absence of other data – the **cash flow-based** methodology of the budget also has to be used, i.e. as a main rule only the financially realised revenues and expenditures are taken into consideration.

The main data sources are the annexes submitted to the yearly Act on final accounts of the public budget prepared by the Ministry of Finance, in which there are many closing statements presented.

The closing statements include the public budget balances by subsystems and also aggregated, i.e.

- central government budget,
- social security funds (Health Insurance Fund and Pension Insurance Fund),

- extrabudgetary funds and
 - local government budgets
- subsystems, as well as the expenditures and revenues aggregated for the entire **public budget** of the general government system and both economic (according to revenue and cost types) and functional subdivisions of revenues and expenditures are available.

2.3. Public revenues from transport

Keeping an eye on the necessity of the consolidation of revenues, with some conversion of the aggregates officially accessible in gross mode, the budget revenues were grouped as follows:

- Tax revenues
- Other revenues (Own revenues of the central budgetary institutions, Own revenues of chapter administered professional appropriations, Other local government revenues)
- EU support revenues
- Payments related to state and local government property.

2.4. Public expenditures of transport

Our starting point is the consolidated functional aggregation of total government expenditures, dividing the budgetary expenditures into functions of state operation, welfare, economy, debt management as well as into items which cannot be classified into the main functions mentioned. The first main functions (expenditures related to state operation, welfare and economy) are divided into further 14 main groups (16 in total) and subgroups, where under the main group code (F12) the transport expenditures can also be found.

(1) Public expenditures listed among transport expenditures

Transport expenditures can be found under class No. F12.abd of the general government account by function, aggregated into further four sub-points as follows: a) Road transport activities, b) Railway transport and services, c) Telecommunication and d) Other transport and haulage.

Related to functional classes, from the revenue categories listed before, under the transport functional classes one can find the expenditures belonging to the transport revenues. However this would be the case with any other revenue category, if some direct expenditure would occur in relation to it.

(2) Public expenditures not listed among transport functions

While studying the items of the state government budget, out of the governmental function-groups, in our methodology, apart from changing non-transport official status of some sub-items (e.g. consumer price supplement in public transport, the EU supported radar development project and harbour projects), the following items have been declared as partly transport-related in addition to expenditures marked with the afore-mentioned F12.abd codes.

Table 1: Transport expenditures of the budget marked as part of other functions

Government function, (main) group	Proportion of transport item
Public order and safety	25 %
Healthcare	3.05 %
Sick pay, maternity or provisional disability allowances	4 %
Other social insurance provisions	3.12 %
Activities and services of multi-purpose development schemes	25 %

Environmental protection	1 %
Government debt management	15 %
VAT-based contribution to EU budget	14.2 %

In Table 1, in addition to the data not expressed in percentage, under any function code, there may occur such local government transport expenditures, listed as non-transport-related, itemised and not making part of the national budget, which lacking of more detailed statements similar to those of the state government budget, were not taken into consideration. It is assumed that their aggregated value influences our balance only to a hardly demonstrable extent.

3. Methodology

3.1. Tax revenues

According to our calculations the different revenues from transport were as follows in the period between 2004 and 2010 (Table 2).

Table 2: The transport related public tax revenues in 2004-2010 (HUF billion)

<i>Tax categories</i>	2004	2005	2006	2007	2008	2009	2010
Value added tax (VAT)	145.1	184.9	186.3	185.3	192.3	194.5	204.0
Excise taxes	380.7	407.4	441.4	453.8	463.2	457.5	464.7
Registration fee (consumption tax)	64.0	68.3	88.4	93.4	86.8	33.6	30.0
Motor vehicle tax and excess weight charge	48.2	50.0	52.1	63.7	67.0	64.4	71.2
Vehicle property acquisition duty	18.8	19.6	20.9	19.2	22.2	16.4	14.8
Environment protection product fees	5.9	4.6	4.8	4.1	4.5	4.6	2.9
Mining annuities	2.0	3.6	4.2	4.0	5.4	3.3	4.5
Eco-taxes	1.0	0.7	0.9	1.1	1.2	1.3	1.0
Customs payments, customs duty imposed on population	6.1	1.3	2.0	2.1	1.8	1.2	1.3
Tax payments in total	671.7	740.4	800.9	826.8	844.3	776.8	794.4

3.2. Other revenues

From **own revenues of the institutions financed by central government budget**, the incomes attached to the procedures of National Transport Authority and its predecessor authorities (26-28 billion HUF per year). Another more than 10 billion HUF comes from police fines. The basic item of the revenues from the **own revenues of chapter administered professional appropriations** is motorway toll, as follows (Table 3):

Table 3: Revenues from motorway tolls (excl. VAT and additional charges, HUF billion)

<i>Toll categories</i>	2004	2005	2006	2007	2008	2009	2010
D1: vehicles < 3.5 tons, buses < 7.5 tons	13.1	16.2	19.7	22.6	24.5	24.1	23.8

D2: 3.5 – 7.5 tons, buses 7.5 – 12 tons	1.2	0.9	1.0	1.0	1.4	1.2	1.1
D3: 7.5 – 12 tons, buses above 12 tons	5.6	1.0	1.1	1.1	1.4	1.4	1.4
D4: vehicles above 12 tons except buses	-	5.6	6.9	14.7	15.7	14.3	14.4
Total	19.9	23.7	28.7	39.4	43.0	41.0	40.7

At **local governments**, the highest revenues accrue from the previously mentioned motor vehicle taxes (See Table 2), which are partly dedicated to the maintenance and operation of local roads. Another important item is the net parking revenue (6-9 billion HUF per year), and within this mostly the net parking fee revenue of Budapest and its districts. Currently in the most frequented areas of 76 settlements there are **public parking places with payment**. In Budapest, in the urban zones with limited traffic of vehicles of certain gross mass category about 700 million HUF has been collected from **'entrance fees'**.

3.3. EU support

EU supports have been provided for Hungary already since the change of regime (1990).

The EU grants from different programmes are realised through the central government budget. The budget is the recipient of the grants, of any deductible, which added to deductible in the budget, are realised as expenditures during project implementation. In the period investigated, in addition to other subsidies, the grants provided in the pre-accession period in 2000-2003, as well as the National Development Plan I (2004-2006) (NDP I / NFT I.) due after the accession, and the annual grants of the 2007-2013 period, parts of the New Hungary Development Plan (NHDP / ÚMFT) are all included in this item.

Full EU grants provided to the following programmes are considered as revenues belonging to EU support:

- Transport Operational Programme (TOP / KÖZOP)
- Transport projects to be implemented from ISPA / Cohesion Fund supports
- Transport projects to be implemented from PHARE and Transitional Assistance Programmes
- Environmental Protection and Infrastructure Operational Programme (EIOP / KIOP) Priority 2: Transport infrastructure development
- Other supports (TEN-T grants, road damages caused by the 2006 flood)

The following EU grants are partially considered as transport revenues:

- Regional Development Operational Programme (RDOP / ROP)
- Cross-border cooperation (CBC) programmes of the border regions
- Expenses of all technical assistances belonging to EU grants realised in the framework of priorities

In the period of **2007-2013**, the transport projects, covered by the Cohesion Fund, along a greater volume and intensity of the EU support, are continued within Priorities 1 and 2 of the Transport Operational Programme (TOP / KÖZOP), where as an emphasised and new element, the support given to urban and suburban transport (Priority 5) appears as well. Road projects belonging mostly to KIOP transport priority can be found in KÖZOP Priority 3, whereas the theme of ports and logistics developments realised also in the framework of the KIOP, henceforth belong to KÖZOP's Priority 4.

Instead of ROP engaged in the distribution of the resources from 2004 to 2006, a separate programme was initiated for each region for the period 2007-2013, along similar regional development priorities, where transport goals are subject to special measure, design, or components. The operational programmes of border cooperation are achieved within the framework of the European Territorial Cooperation (ETC / ETE).

According to facts & figures and our estimations the EU support allocated to transport projects can be presented as follows (Table 4):

Table 4: EU transport support in 2004-2010 (HUF billion)

<i>EU framework programme</i>	2004	2005	2006	2007	2008	2009	2010
New Hungary Development Plan (2007-2013)					80.9	101.4	166.1
ISPA (2000-2003) & Cohesion Fund (2004-2006)	4.9	14.5	29.8	27.2	22.3	39.3	15.6
National Development Plan I (2004-2006)	0.0	22.4	18.4	23.0	11.7	2.1	1.0
Phare Programmes (2000-2003)	1.7	1.7	2.1	0.1	0.3	0.0	0.0
Other grants (TEN-T)	0.0	0.0	0.7	0.7	1.3	0.6	4.7
EU transport support total	6.6	38.6	51.0	51.1	116.5	143.4	187.4

3.4. *Payments related to state and local government property*

The scope of the revenues of state properties includes the following main items: **dividend income, concession revenues, revenues due to the central government budget accruing from the sale and utilization of state properties.** From the revenues of the local government assets no significant transport company revenue could be identified; depending on the form of payment (e.g. dividend) also the parking revenues can be considered here.

4. Central and local government expenditures on transport

According to the methodological statement of the government, in total 770.8 billion HUF, 2.88 % of the GDP was spent from the budget to transport activities and their services in 2008. Out of this 617.7 billion HUF was financed from resources of the central government budget and 153.1 billion HUF from the local governments' resources, including the amount of 100.8 billion HUF transferred from the budget.

According to our methodology applied in this study, the transport related expenditures of the budget in 2008 amounted to 1,221.2 billion HUF; the gross value added, produced by the transport sector as a whole (GDP) and interpreted on a much wider scale than the statistics do, is estimated to 12.2% of the total GDP, i.e. to 3,257.8 billion HUF. According to official statistics in 2008 the GDP produced by transport was 656.8 billion HUF (2.46% of the GDP), together with supporting and auxiliary transport activities 953.4 billion HUF (3.55%).

The items indicated under transport codes F12.abd were in 100% compiled on budgetary level by the Ministry of Finance. Consequently, this is taken as the starting point. Only the railways expenditures can be accounted for in an itemised mode, because they all appear in the central government budget. In average only 95% of the road expenditures listed under the code F12.a can be accounted for in an itemised mode through the statements of the central budget and of Budapest (overlapping excluded).

The major items of expenditures listed within the transport functions described under paragraphs 4.1. and 4.2. are summarised in Table 5.

Major items of the transport are officially not ranked within the function of transport, but which we listed as such, can be found in paragraph 4.3.

4.1. *Central and local government expenditures on transport*

Most of transport related expenditures (20-50%) of the whole public expenditures concern the **development of the network of expressways**. This item is significant as it gets also an important role in balancing the whole budget.

However the current level of development depends also on the capacity of the budget, therefore there is a significant change from year to year. This is also true for developments implemented in PPP schemes, because the rate of the charge for maximum availability due for infrastructure investments achieved in PPP system have been maximised for the sake of sustainability.

Major infrastructure investments have been implemented in the period investigated. The whole Balaton-section of the M7 motorway with large viaducts and other motorway sections with two Danube bridges have been finished. Moreover, two other motorway sections have also been constructed in PPP system, imposing less charge to the budget. Except for the Dunaújváros – Pécs M6-M60 motorway constructed in PPP system, most of the current road infrastructure investments are EU co-financed with high supports (max. 85%), which will provide in the next period (at least by 2015) a stable financing background for the expressway, public road and the railway developments, as well.

As compared to the previous situation, there were significant **railway developments**, which were mainly financed by EU Cohesion Fund, but railway developments and reconstructions realised from state investments using own resource and EIB loans were also carried out.

The supporting of **railway passenger transport** is an important, single item, outstanding since 2007, its dramatic increase presenting a loss-financing feature and it became one of the main targets of the measures devoted to the reduction of government expenses. In 2007, however a **capital increase** of 110.6 billion was realised, and in 2008 due to the **selling of MÁV Cargo Co.** revenue of 102.5 billion HUF – not shown in the summary above – could mitigate the group's previous debts.

Table 5: Public expenditures on transport in 2004-2010 on the basis of government statistics (HUF billion)

<i>Public expenditures</i>	2004	2005	2006	2007	2008	2009	2010
Expressway development	176.3	80.8	444.5	288.7	159.2	72.3	67.1
State Motorway Co. (NA) debt assumption (technical item)	0.0	177.8	0.0	0.0	0.0	0.0	0.0
Motorway availability fee	15.0	22.1	33.9	64.0	54.1	57.7	71.0
Expressway maintenance*	0.0	0.0	2.3	11.5	6.6	3.6	2.6
Expressway operation*	0.0	0.0	15.6	19.4	16.6	9.2	10.5
Road development and - maintenance	45.9	50.3	62.0	65.6	66.0	90.8	80.1
Road operation	26.1	29.4	26.4	27.3	35.5	33.2	32.6
Rail development	14.0	17.8	33.2	33.3	43.5	74.1	54.9
Rail passenger transport and track maintenance	52.0	53.2	77.8	166.9	174.5	157.9	172.8
Rail general (loss) financing	1.2	9.0	0.0	110.6	0.0	0.0	0.0
Road passenger transport (interurban)	0.5	0.0	0.0	5.0	24.0	16.6	24.9
Budgetary support of transport for local governments	12.6	33.2	70.2	85.0	100.8	57.7	65.8
Budapest municipality developments from own resources	n. a.	34.2	48.2	29.6	28.4	44.4	34.0
Other public expenditures on transport	93.7	89.3	126.7	61.4	60.9	91.7	149.8
Total public expenditures on transport	437.2	597.1	940.8	968.3	770.1	709.2	766.1

* beyond public budget up to 2005 (ÁAK)

On the local governments' side, they receive most of their transport financial resources as a transfer from the central government budget. In the first approach, the **replacement of the resources for** the significantly under-financed **transport development and operation of the local governments** makes also great demands on central budget; resources, which reach their destination through the budget of the local governments. The normative support provided to local public transport (about 90% is transferred to Budapest), as well as the state contribution given to the construction of metro line 4 are the greatest amounts in this group of items.

As the **local governments** are financially dependent from the central budget, they could afford only few **transport expenditure items covered from own resources** or loans. This was the least known item for us; nevertheless the total value of this is available in the government statistics. However, knowing the 2005-2010 budget of Budapest, most of these items can be linked to the construction and reconstruction of metro lines. Amounts spent on the reconstruction of local roads and other Budapest-centred developments are also known. More than half of transport expenditures realised from local governments' own resources were experienced in the Capital.

4.2. Public expenditures on transport listed within non-transport function

From the expenditures ranked with non-transport related functions, there are a few which have been re-ranked in the category of transport expenditures. Major items of these are summarised in Table 6.

Table 6: Public expenditures of transport with non-transport function in 2004-2010 (HUF billion)

<i>Public expenditures</i>	2004	2005	2006	2007	2008	2009	2010
Consumer price subsidy of passenger transport	103.8	117.7	117.9	111.9	107.6	107.4	107.3
Government debt management	126.6	130.9	140.8	144.1	165.2	169.0	164.1
Public order and safety	57.7	61.9	69.1	75.7	70.1	63.9	67.4
Multipurpose developments with transport concerns	14.5	17.2	20.7	19.0	27.6	37.8	41.6
Compensation of Airport Development Corporation	0.0	0.0	17.2	0.0	0.0	0.0	0.0
Expressway development	0.0	0.0	0.0	0.0	0.0	8.9	10.1
Financing Volán companies (road passenger transport)*	(6.7)	(10.6)	(5.7)	(0.4)	8.8	0.0	0.0
Financing other state owned transport companies		0.3	0.4	9.1	0.2	4.3	45.4
Other (with healthcare, environment protection)	53.5	59.2	63.5	66.0	71.5	62.5	61.9
Total public expenditures on transport ranked in non-transport related function	356.1	387.2	429.6	425.8	451.0	453.8	497.8
Grand total public expenditures on transport	793.3	984.3	1370.4	1394.1	1221.1	1163.0	1263.9

* beyond public budget up to 2007 (ÁPV)

According to the Act LXXXVII of 2003, the **consumer price subsidy received of passenger transport** companies after the beneficiary groups (students, pensioners, and free travel for the age group

over 65) is a major item in the expenses of the budget, which however continues to diminish in its real value due to curtailing of the preferences and reduction of the public transport performances.

From year to year very significant sums are spent on **debt-related expenses** from the budget. Ignoring the analysis of the real causes of indebtedness, we believe that a remarkable part of the credits drawn charge the capital cost of transport regardless of the character of the activities they are directly used for. Consequently, in the case of these expenses we charge 15% to transport's account.

From the **other items** there should be highlighted the 25% share of the transport costs estimated for police and for multipurpose developments, as well as the charges to cover in part the external effects.

5. The balance

In Table 7 the total summarization of the revenues and expenditures, as well as the balance sheet of the transport are shown, where also the non-recurrent items determine the final picture of the balance.

Table 7: Public balance of transport in 2004-2010 (HUF billion)

<i>Revenues and expenditures in all and by transport sub-sectors</i>	2004	2005	2006	2007	2008	2009	2010
Total public revenues from transport	730.4	1,419.4	933.0	958.0	1,069.3	1,014.6	1,098.3
road	692.6	964.4	887.8	931.4	993.3	972.4	978.0
rail	10.7	17.7	22.2	18.5	72.7	37.9	99.4
waterway	0.2	3.7	1.8	2.2	1.9	0.6	0.5
air	26.9	433.6	21.2	5.9	1.4	3.7	20.4
Total public expenditures on transport	793.3	984.3	1,370.4	1,394.1	1,221.1	1,163.0	1,263.9
road	591.7	750.5	1,034.9	879.0	785.5	733.6	774.1
rail	175.7	204.0	282.8	489.5	410.2	408.4	428.6
waterway	9.1	10.0	10.8	12.3	20.6	12.5	11.8
air	16.8	19.8	41.9	13.3	4.8	8.5	49.4
Public balance of transport	-62.9	435.1	-437.4	-436.1	-151.8	-148.4	-165.6
road	100.9	213.9	-147.1	52.4	207.8	238.8	203.9
rail	-165.0	-186.3	-260.6	-471.0	-337.5	-370.5	-329.2
waterway	-8.9	-6.3	-9.0	-10.1	-18.7	-11.9	-11.3
air	10.1	413.8	-20.7	-7.4	-3.4	-4.8	-29.0

Such is the opposite side (177.8 billion HUF) of the revenue of technical character accounted for with respect to State Motorway Co. (NA) in 2005, the 415.9 billion HUF debt assumption also accounted for with respect to NA in 2006, being already the result of real – admittedly of several years – processes and significantly exceeding the earlier financing, as well as the 110.6 billion HUF increase of capital of the MÁV Co. in 2007, and along it the 86.2 billion HUF individual surplus support given to MÁV Group, compared to the similar sum of the previous year, a volume that served as the basis for the annual subsidy in 2008. It also has to be considered – but it is not shown in the balance – that the revenue of 102.5 billion

HUF accrued from the selling of MÁV Cargo Co. in 2008. These items cause distortion in the yearly balances.

6. Conclusions

Between 2004 and 2010, the road transport subsector was – except 2006 – almost always in the black, regarding the public balance. In 2006 it was necessary to draw in some resources from non-transport sectors, in order to finance the intensive motorway construction projects. The constructions continued still intensively in years 2007 and 2008, but the net payer position could be restored, the positive balance in greater part or in whole would be sufficient to compensate for that part of the negative external effects caused by the road transport sector, which have not been covered financially so far. Especially, if the payments of the subsector would be spent expediently (much more resources should be spent on road maintenance and on the compensation of external effects). Nevertheless, the road transport has done its bit as a producer sector as well, covering a substantial part of the general expenses of public finance.

In the case of rail transport, the state subvention has been continuously present, and even rising since 2006. This subvention can be considered as appropriate, in virtue of its part filled in transport, but compared to the real performance (passenger km, ton km) of the railway sector, it can be considered as excessive. Moreover, the loss of the railway sector is actually much more than that presented in the public balance, because it does not include the continuous property-loss, which is further increased by having sold MÁV Cargo Co. Similarly to road sector, there is only partial financial compensation for the negative external effects of transport.

While the road payments – even if they are not appropriately spent – seem to be sufficient to cover the major part of costs and losses, the rail sector, having much lower performance, draws excessive resources from public finances. This was the result of the lack of maintenance and improvement for decades, which has put the railway sector into a negative spiral (continuously deteriorating railway network, sharply decreasing performances, non-decreasing resource-needs). The solution is not simple. Nevertheless, it is clear that where railway sector must have a long-term role, its forwarding performance must be significantly increased. In the interest of this goal the network that will be kept, must be refurbished and the infrastructure properties must be continuously conserved and maintained.

From the aspect of public finances, air transport proved to be variable, however, the revenue is considered as insufficient for the necessary covering of external effects. Waterway transport causes deficit for public financing, although this represents much smaller items compared to all other transport loss items. Increasing intensity of ship-traffic could bring positive changes.

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