

Public Finance Sources and Road Network Development in a Transition Country—Hungary (1990–2018)

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Abstract: This article reviews the history of the Hungarian public road network in the thirty years that has passed since the change of the political and economic regime up to the present from the aspect of financing. In the context of the neighboring countries that today are also members of the European Union, this writing outlines the growth-public finance course that this country, formerly belonging to the Soviet type planned economy mechanism, followed during the past nearly three decades after breaking away from that system. It provides insight into the specific public finance positions determined by the macroeconomic course since 1990 and the opportunities offered by this course for infrastructural developments. In connection with the above, the article outlines the main characteristic features of the social expectations, the financing solutions that could be linked to the various governmental concepts regarding road matters, focusing primarily on motorway development. It shall touch upon the respective starting points and life cycles of those concepts and the role of the EU supports in the developing of the domestic public road system. In light of expenditures, it is illustrating the development by some servicing indicators.

Key words: Public finance, motorway, financing, development, budget, transportation, transportation economy, road network.

1. Introduction—In the Aftermath of the Social and Economic Transition

When summing up the trend of the resources used for the development and maintenance of the national public road system¹ of Hungary in the decades following the social and political change of regime in 1989–1990, we should not avoid briefly outlining first the “historic heritage” that was the starting point as well as the economic-public finance course that has been followed by this country in the said period.

Prior to the change of regime, the technical-technological standards of the Hungarian public road system and its major development ideas also followed the European practice. In this respect, we

could not speak about “falling behind”. At the same time, both in respect of development and operation, fundamentally the so-called “principle of the remainder” financing concept ruled. Within this concept, an especially moderate resource—7% to 14% of the amounts used for national public roads—was dedicated to motorway network development.

In 1990, out of the publicly managed national road network of 30 thousand kilometers, only 346 km was motorways,² while the various, aborted programs considered the construction of approximately 2,000–2,500 km motorways urgent, in harmony with the forecasts concerning the interface to international road networks and the trends of domestic loads. Thus, the following factors made up the “historic heritage” of the period of the Soviet type planned economy: a significant lack of motorway infrastructure, insufficient, overloaded highways with insufficient technical parameters and the network of dense but bad

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¹ The article does not concern the financing of road developments and operation managed by settlements (e.g., the capital, cities, villages, etc.).

² The first steps of motorway development were made in 1961.

condition lower level (distributing) road network.³

Following the change of regime, the rapid development of road infrastructure—primarily that of the motorway network—emerged as a headline target, in harmony with its role in economic development [1, 2]. The basis of the economic and political changes adopted in the course of the 1990 change of regime were the laws that ensured the transition in the real economy. At the same time, uncertainty prevailed in the ideas concerning the service providing responsibility and economic role of the state, in the operational and institutional models of public services, as well as regarding their financing methods. This had such internal reasons like the change of regime itself: the transition from planned economy to market economy, the appearance of foreign investors, the system of examples and values they presented and, not in the least, the swaying concepts of the succeeding governments concerning the role and “mission” of the state. On the other hand, the adaption process resulting from our accession to the EU influenced not only the conditions of the functioning of the public finance—and beginning with 2004, most significantly the EU membership itself—but the so-called policies, among them road matters, as well. This interface was different than that prior to the change of regime, in quality and contents too and differed from the mostly “voluntary” adjustment to the pre-transition period, as regards road links, technological stipulations [1, 2].

2. Sketch of the Positions of the Hungarian Public Finance Following the Change of Regime

The annual economic revenue primarily determining the public finance revenues (GDP) reached the pre-transition level only in the mid-1990s both in Hungary and the neighboring post-socialist countries

as it can be seen in Fig. 1 [3, 4]. Following the climbing back after the temporary recession brought on by the social-economic transition, it was the spill-over of the 2007 worldwide financial crisis that presented the next shock. When we are focusing only on Chart 1/a. the Hungarian growth trend is close to that of the neighboring countries that, by now are also members of the EU, respectively to Austria.

However, when glancing at Fig. 2, it is already obvious that at the moment of the change of regime, Hungary was in an incomparably weaker and unstable position than the neighbouring countries with similar history, and Austria.⁴ There were periods when Hungary was sinking even deeper in her debt trap.

Sustaining the “happiest barrack of the Soviet bloc” in the 1980s could be managed only by external resources from the IMF (International Monetary Fund) and various money markets. The country is still paying the price of the one-time relative wealth and social peace: until the last couple of years, the country has been paying more for debt service than road development.

The comparison of the government debt trend and the election cycles indicates the launching of lasting debt reducing processes took place only when there was a strong political authorization, i.e., the large scale election victory coincided with an external pressure⁵ from the money markets or originating from the EU integration.

⁴ Naturally, we are referring to the debt indicators’ data of Slovakia and Croatia from the time of the dissolution of Czechoslovakia and the moment when Croatia gained her independence.

⁵ The financing losses in case of Hungary resulting from the devaluation of the national currency amounted to approx. USD 40 billion. The so-called CDS (credit default swap, sort if insurance in case of defaulting) spread that well exceeded the same indicator of the neighbouring countries sharing a similar fate but not indebted, represented an additional burden of similar magnitude and here we do not even mention the interests to be paid on the loans. We can say that thanks to the debt burdens several years’ worth of GDP “was lost” for the country. The loans taken for road network developments, the resorting to the involvement of external resources to finance the re-purchasing of the unsuccessful concessions and public-private-partnership solutions have contributed to the country’s indebtedness altogether and approximately by USD2.5-3.5 billion.

³ Not only the money, to be used for the road network was little. In Hungary, the years prior to the change of regime had brought a public finance maintaining of what was getting more and more difficult—even despite the grossly growing government debt—and the system was struggling and crawling towards the unaffordability of the social entitlement systems.

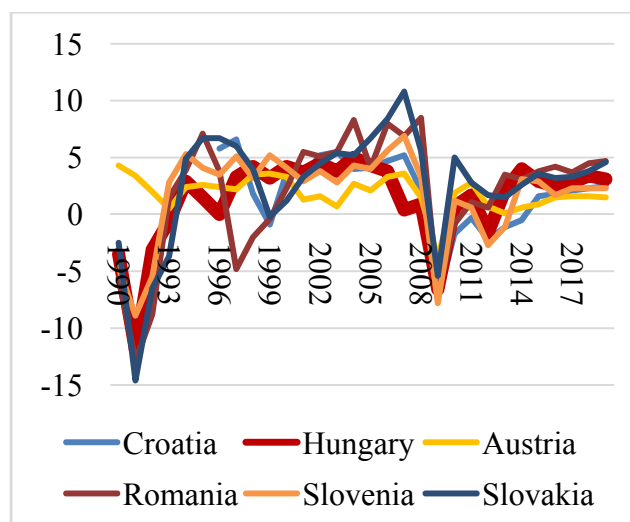


Fig. 1 GDP (gross domestic product) growth in Hungary and the Neighbouring EU Member Countries 1990-2019 (%).
Source: Eurostat, Hungarian Fiscal Council (FC) Secretariat.

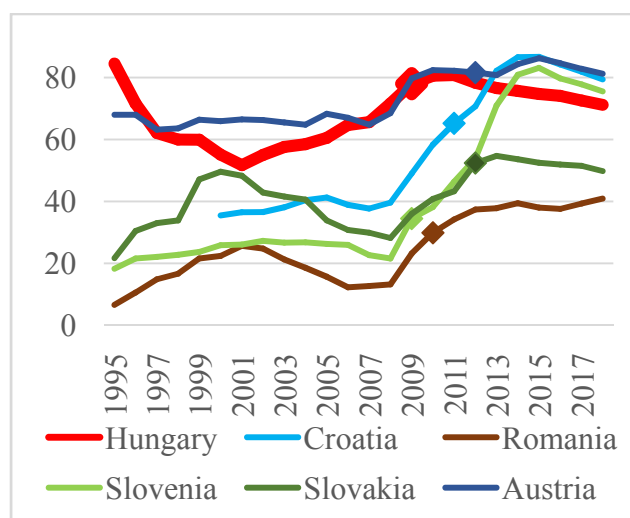


Fig. 2 Trend of the GDP proportionate government debt in Hungary and the neighbouring EU member countries 1990-2017 (%).
Source: Eurostat, Hungarian Fiscal Council (FC) Secretariat.

The line at the bottom of Fig. 3 indicating the parliamentary support of the governmental cycles⁶ allows us drawing conclusions as regards the room to maneuver of the current governments concerning the pressure to meet social demand as well as the difference of concepts regarding the mission of a government when it came to increasing debt. It is

⁶ A study of the author of the present article is dealing with the relations of the citizens' expectations and the topical governmental policies, thus that of the transport development. In this study, he is pointing out how the promises of the government anticipate social expectations—for example in case of promising motorway network developments [9].

apparent that the requirement of the balance of stability and growth has not always prevailed [5].

A brief period prior to the 1994 parliamentary elections and a longer period that can be related to the parliamentary elections in 2002 and 2006, respectively, the period between the above elections witnessed an era when “election budgets” far lagging behind the output of real economy were prepared.

The Balkan wars and the collapse of the Soviet Union were factors unforeseen by the road management profession and have contributed to the difficulties as regards the transit traffic and to the

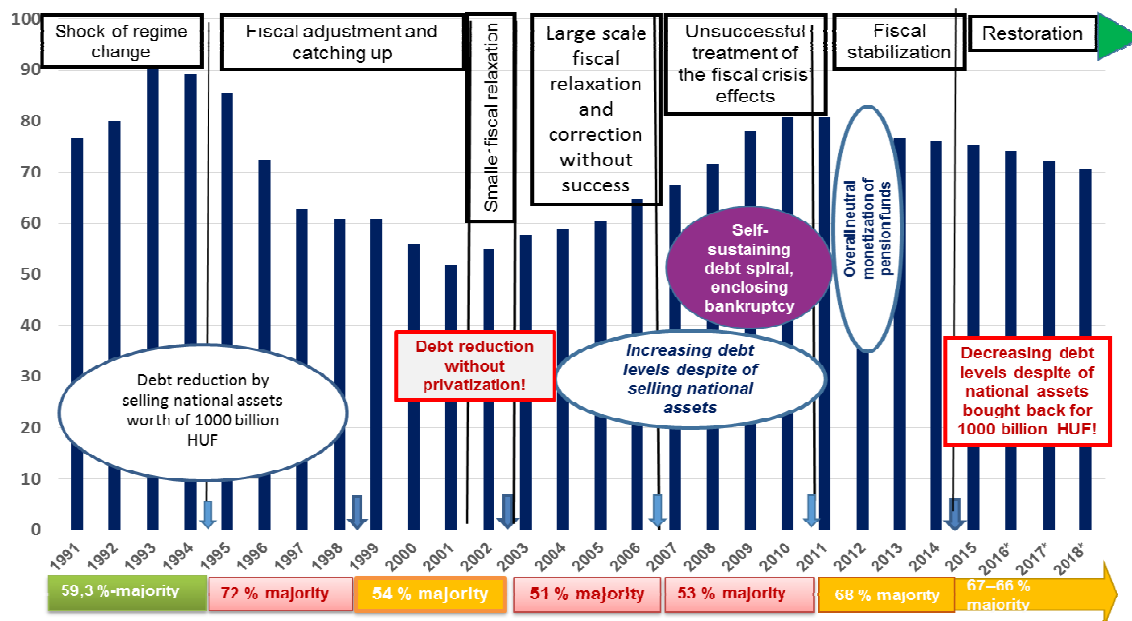


Fig. 3 Trend of Hungarian government debt and the fluctuation of economic policy and privatisation 1990-2018 (arrows mark the times of elections, colours represent the leading party's affiliation).

Source: Eurostat, State Dept. Managing Company, * (as specified in budget laws) Convergence Programme, Hungarian Fiscal Council Secretariat.

significant transformation of the targeted development concepts in the first half and the middle of the 1990s. From a transit country, we became for years a “terminal” [6, 7].⁷ Our being unfamiliar with the introduction and application of the new market economy solutions—concessions—the bankruptcy of the civil engineering companies owned by the state, the privatization of the near bankrupt companies, the predominance of private ventures and within them the foreign ownership of concession companies and civil engineering firms, as well as their subsidiaries that had great negotiating power, just added to the problems. Following the consolidation process from 2002 to 2008 and spanning various governments, the results of economic growth could be attributed to the huge leverage of external sources. In the meantime, the fiscal

positions suffered serious damage.⁸

Spending⁹ exceeding all earlier measures and totally separated from social performance led to the approximately 10% GDP proportionate deficit in 2006, to the government debt exceeding 80%, to the severe fiscal inconsistency the effects of what have been only worsened by the financial crisis that reached Hungary as well in 2008. These negative effects were terminated by the consolidation measures introduced in 2010 to be followed by the stabilization and growth turn executed in 2013. Public finance today is following a balanced

⁷ For example, in case of the preparations of the concession undertaking of motorway M5 towards Serbia, the traffic was merely a fragment of what they'd calculated with. The European transit road function was lost and this resulted in the impossibility of the concession contract and a 5 year long delay of the construction itself up to the border. We witnessed similar consequences in case of the M3 expressway in the direction of the Ukrainian border (and via Ukraine towards Russia) where the motorway shall not be completed even by 2020.

⁸ Namely, the decrease of the charges took place in a way that in the meantime they significantly increased the social expenditures, wages and started introducing new entitlements with the slogan of “convergence to European wealth and economy”. Parallel with this they even increased state expenditures for the improvement of the infrastructure as well from loans, respectively by re-launching concession and public-private-partnership solutions.

⁹ By 2009, the debt increased to more than 80% of the GDP. Namely, in the period of 2002 and 2009 by a 4% annual GDP growth in average, borrowing was approximately 2.5% higher than the expansion of the gross domestic product. In this period, the country could not meet in any single year the targeted public finance deficit undertaken in the framework of the so called convergence programmes to thus promote the accession to the Euro area.

course that has growing resources at its disposal. The sustainability of this course is manifested in the professional opinion of various international analyzers and rating companies.

3. Strategic Planning of Road Developments and Provisions at Their Disposal

From the multitude of issues to consider, in this article we are going to deal with two:

(1) the proportion of the sources available for road developments, the profits from road services and that of the money reinvested in this field;

(2) the trend of the conditions determining the approach of strategic planning.

3.1. Provision of Road Development Resources and the Money Reinvested from the Profit

When the redistributing mechanisms of the budget are dominant in financing—like in case of roads operated by the state—the issue is how much is being reinvested in reality in this field from the profits of the provided service respectively, how much money can be withdrawn from this field in principle, without causing harm.¹⁰ According to various calculations, the revenues of the central budget in Hungary from the so-called Road Fund,¹¹ that is paid for the use of roads,

mostly in the form of various taxes incorporated in the fuel price—fluctuated between USD 2-3 billion in the period of 1990-1998. Out of this only about 10%-15% was reinvested in road development,¹² while the rest was used in other fields of public finance,¹³ among them for debt management. Between 1998 and 2010, the social revenues originating from road transportation fluctuated and climbed to near USD 4 billion.

At the same time, financing from the budget, disregarding the two outstanding then crashing years,¹⁴ grew very moderately and were around 15% [6, 8-14]. With the gradual stabilisation of the fiscal position of the country following 2010, not only the reinvested amount of money, but also its proportion to the social revenues originating from the use of roads has improved, see Figs. 4 and 5. A deep gap between the need and the sources available characterised the first two-thirds of the 1990s [15]. The amount of the reinvested money in roads via the the redistribution functions of the budget—together with EU resources, today shows a much more balanced state. From time to time, it was impossible even to ensure the money required for maintaining the technological level [16].¹⁵

Following the change of regime in Hungary, the

¹⁰ The methodology of calculations of the direct and indirect effects as regards this exceeds the frame of the present article. When delineating the memorandum items I was relying on calculations and conclusions published by various research institutions and researchers, like the Institute for Transport Sciences, Non-Profit Ltd., the Budapest University of Technology and Economics, the Institute of World Economics of the MTA (Hungarian Academy of Sciences) Research Centre for Economic and Regional Studies, additionally by András Timár, Csaba Koren and László Táncos [3, 5-7].

¹¹ The expectation was that by establishing the Road Fund, by Act XXX of 1992 the community resources will expand. Given that the creation of resources happened essentially in proportion of the used fuels via tax-type payments, the economic downturn made the financing essentially meaningless and the fund-like operation even more complicated. In three years following the establishment of the Road Fund, it lost its ability of financing—thanks to lack of resources and insolvency. Until 1998, when it was terminated, the Fund did not play any significant role in the financing that had returned to a financing method following the principle of the remainder [8].

¹² Instead, in the then member states of the EU, 30%-35% of the centralised revenues originating from public road sub-sectors were returned in that period.

¹³ As, in order to keep social peace, the plummeting deterioration of health care and social services that had directly affected the population in the post-socialist era, had to be financed even in an obsolete “money eating” structure, and once again the principle of the remainder prevailed as regards the transport investment of the public finance.

¹⁴ As we will see, breakouts were related to forced steps, the nullification of concession-type enterprises and their re-purchases.

¹⁵ Up to 1997, the structure and accounting system of public finance did not make it possible to know precisely how much had Hungary spent from the budget for construction and maintenance of national public roads. The chart is following the so-called COFOG (classifications of the functions of the government) system that corresponds to the EU statistical system. In lack of data appropriate for statistically precise comparison in the period of 1990-1997, the proportions of the expenditures of road development and maintenance compared to the GDP can be estimated only by order of magnitude in the functional subdivision of the budget. Their measure fluctuated between 1.2%-1.7%.

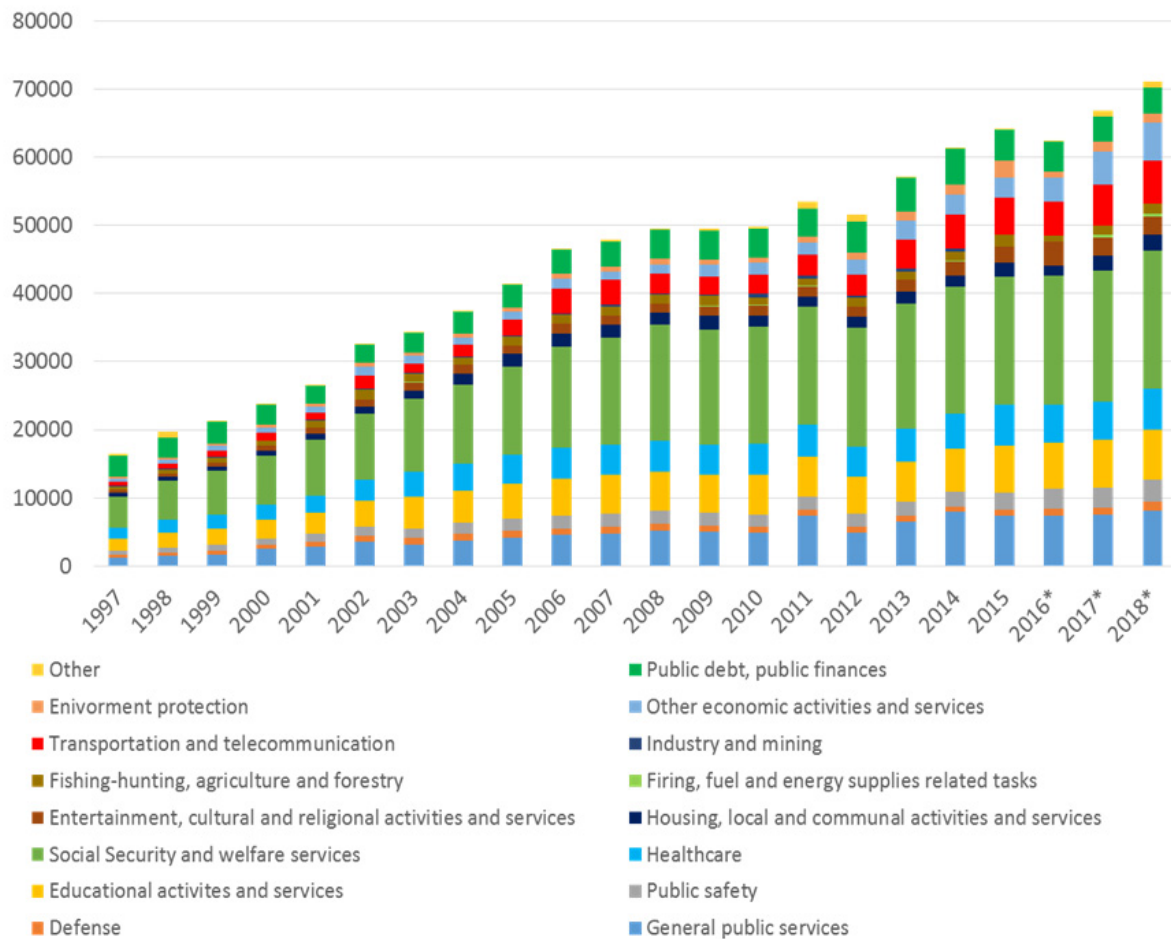


Fig. 4 Public expenditures by function (consolidated, million USD).

Source: based on budgetary laws, own estimates, Hungarian Fiscal Council Secretariat.

Note: * is the budget;

Due to methodical changes, the data is for illustration purposes. Data calculated at the exchange rate of July 5, 2017 (1 USD = 271.6 HUF (Hungarian Forint)).

financing of the road network development and maintenance was realized mainly via the redistribution mechanism of the budget respectively, via relying on external resources. The Road Fund established at the beginning of the 1990-ies functioned as a new solution that in principle established connection between the generated sources and expenditures. Replacing this solution, in 1998 they separated a so-called “targeted appropriation”¹⁶ for development

and road maintenance purposes with the (unfulfilled) promise that within this Fund they are going to separate at least the same amount that earlier had constituted to the amount of the supposed supports [9]. Thus, the Road Fund proved to be a short-lived form of support system and with the repurchase of the deficit constructing stretches of concession roads (M1), respectively with the reshaping of their operation (M5), the direct relation between the use of roads and their financing was totally terminated [17].

The completeness of the redistribution mechanism of the budget became prevalent also by the fact that while as regards the use of motorways, the earlier system used at different stretches of concession

¹⁶ In 1998, the Road Fund as a separate public fund was formally terminated and replaced by the so-called earmarked allocation within the budget. The earmarked allocation supported the preparatory works of expressways and the forming of public companies responsible for the management and organisation.

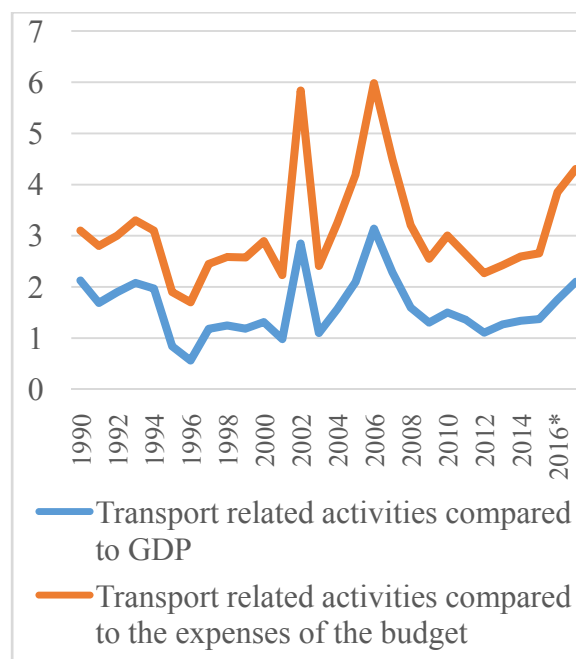


Fig. 5 Share of road transport within public finance expenditures and its GDP proportionate measure (%) (1990-2018).

Note: * is the budget;

Due to methodical changes, the data is for illustration purposes.

Source: based on budgetary laws and Hungarian Central Statistical Office database Hungarian Fiscal Council Secretariat.

motorways relied on a payment method directly in proportion to the length of the used kilometres, i.e., the so-called “toll-road” system, was terminated. As regards the motorway network they uniformly introduced the guidelines following the Euro vignette solution, i.e., the use of “windshield sticker” to be followed by the system of reading “e-stickers”, i.e., the system of prepaid fees valid for a set period.

Ever since its introduction, the system has been functioning well, bringing significant budgetary revenues. And when the development of the IT system made road network application possible, the system of electronic road toll payment system¹⁷ was installed on the most important stretches of the national road network, the motorways (highways, expressways) and the periphery stretches of main roads was established for trucks; depending on the amount of used kilometres and on the number of axles. As the options of

increasing tariffs are limited, the growth or decrease has been shaped depending on the economic growth, the tourism and the European cooperation (transit), see Fig. 6.¹⁸

Up to the 2010s, the resources intended for maintaining and operating the existing road network originated from the annual budget. To establish the expressway network that had a priority in road development schemes, moreover even the construction of road sections redeeming the main roads crossing the city, we had to rely primarily on external resources—from the beginning of the change of regime to the present [18], see Fig. 7.

Private capital in Hungary essentially could operate lastingly and in a profitable manner not on a single stretch of a road. Resorting to simplification, we

¹⁷ The annual revenues from toll payments indirectly improve the availability of resources intended for public transport services via the redistribution mechanism of the budget. Since the introduction of this system approximately USD 2 billion excess budget revenues have been realised.

¹⁸ According to the double diagram of Chart 4, however, it is also clear, or rather the conclusion can be drawn that the growth of the length of the motorway system could not go together with the proportionate growth of the respective budgetary revenues and that the reserves originating from the toll system based on payments according to the used kilometres that, at the beginning meant a significant surplus, were dwindling.

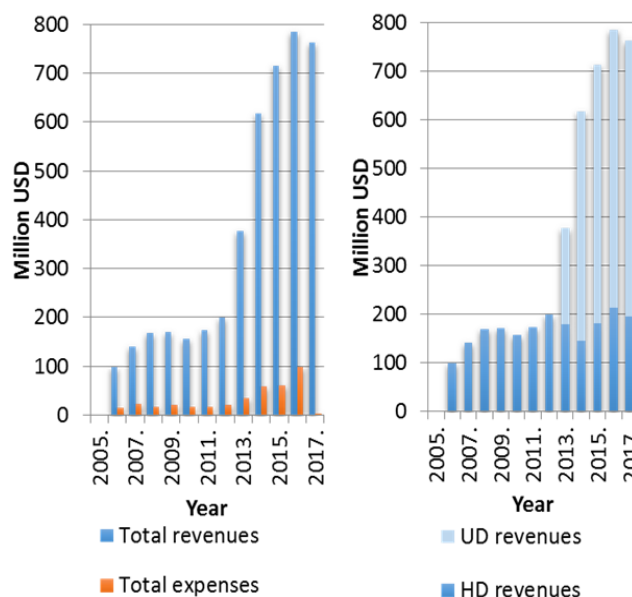


Fig. 6 Trend of revenues from road use fees.

Source: Ministry for National Development (NEFMI) database, budgetary law, Hungarian Fiscal Council Secretariat.

Note: HD revenues exist since 2006, UD revenues since 2013. 2005 no data. (it was company revenue—State Highway Management Company). Data calculated at the exchange rate of July 5, 2017 (1 USD = 271, 6 HUF).

Election cycle	Resource %					
	Central government (Road Fund)	Local governments	Loan	Licence	EU Funds	Other
1990-1994	25-35	20-25	0	40-50	0	0-5
1994-1998	25-30	10-15	10-15	40-50	0	0-5
1998-2002	35-45	20-30	5-15	20-25	0	0-5
2002-2006	25-30	10-15	5-15	30-35	10-20	0-5
2006-2010	25-35	10-15	5-15	20-30	15-25	0-5
2010-2014	30-40	10-15	0-10	5-10	35-40	0-5
2014-2018	40-45	20-25	0	0	30-35	0-5

Fig. 7 Share of resources spent on central government managed public road development and maintenance 1990-2018.

Source: budgets/draft budget, Hungarian Fiscal Council Secretariat estimation.

can say that they gone bankrupt (M1, M5 concessions) and as a result of the concepts of the reigning government, they were bought out and partially—in lack of well-capitalized entrepreneurs—could not even

reach the phase of implementation. Thus, with the exception of the utilization of EU sources, the involving of external resources indirectly burdened the budget of the coming years via the debt service.

Investments targeting the stopping of the deterioration of the existing artery and cross road system, increasing their carrying capacity and general capacity, in effect could take place only in 2005, following our EU accession, as can be seen in Fig. 8.

3.2. The Concept of Strategic Planning and Its Consistency

When comparing the various strategic documents of Hungarian road development schemes, it is apparent that connecting to the European road system, the technical standards, development guidelines, the settlement structure of the country determined the task to such extent that the primary issue was not what to build and where, rather from what and when. We can say that issues of strategic planning had to be tied to the issues of ensuring, respectively redistributing the

resources, where it was financial policy, more specifically, the cam design dictated by the macro-balance conditions that was playing a dominant role vs. road construction policies.

The constant lack of money led to the half-hearted solution that had existed for nearly two decades, i.e., that year by year so-called “(financial) survival packages” were created for the operation of the existing infrastructure—thus that of the road system. In the meantime, strategic plans were born concerning the developments serving the alignment, however, it was only from 2005, parallel with the increase of drawing on EU resources that ensured the sources necessary for the load capacity improvement of the highway network and their track alignments, that these issues came into focus, together with stopping the deterioration of the cross road system. At the same

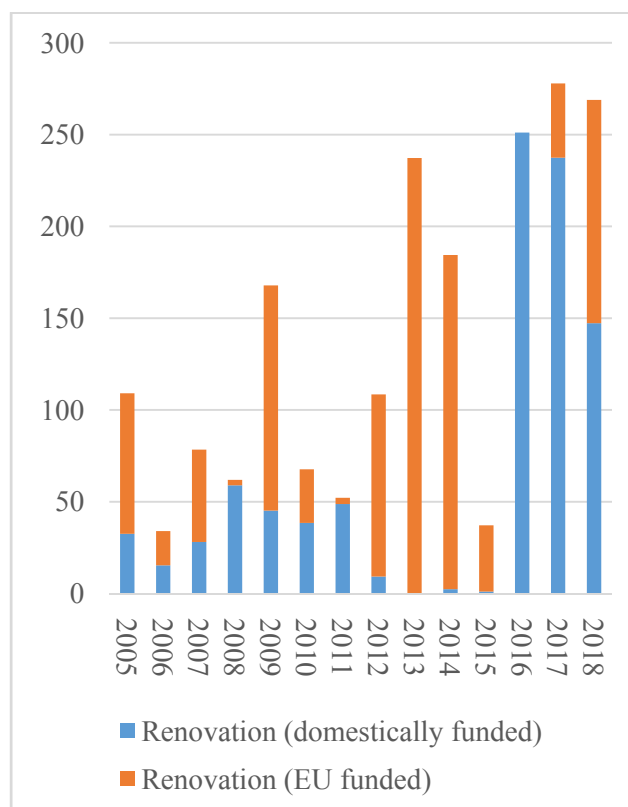


Fig. 8 Central government expenditure on Hungarian road renovation sector,¹⁹ 2005-2018, million USD.

Source: Ministry for National Development (NEFMI) database, Hungarian Fiscal Council Secretariat.

Note: Data calculated at the exchange rate of July 5, 2017 (1 USD = 271, 6 HUF).

¹⁹ The “domestic” source shown by Chart 5 essentially means the budgetary resources used for the reconstruction of major and secondary road networks and “external resources” stands for EU money.

time, the completion of the expressway links and the beginning of the capacity developing reconstruction of motorways being exposed to the greatest traffic load also became urgent.²⁰

It would be unilateral if we assessed the numbers appearing every year in the central budget and would not take into consideration the fact that the trend of the expenditures used for public transport did not align solely to the possibilities of creating resources but also did show a marked relation to the governmental visions that have changed from cycle to cycle. Namely, what and to what extent, the reigning governments wished to “marketize” by resorting to resources from private investors and cover from sources outside of the budget, that is from external sources.

Beyond the need to approach the quantitative-qualitative indicators, the strategic concepts that were focusing on infrastructure development and operation, together with the rapid construction of motorway networks were also looking for answers to the question of “how”. The answers as regards concrete network relations and development concepts once again were to be found in the direct adaptation and professional answers and examples,²¹ in other words in western orientation and in the process of adopting European approaches.²² As regards the opted financing models of motorway development, examples heralding the advantages of marketing social services that was interpreted by one segment of decision-making political-economic elite as the key to join the mainstream and this attitude became almost a

dogma.²³ Business formulas transmitted in the course of privatization and greenfield developments carried out first by professional investors and later by financial investors have had a similar, marked effect. Their demands, entrepreneurial culture, growing economic presence, the system of their interests and conditions have brought to the surface the weak functioning of the institutional system that had been financed by public finance resources, their slow and uncertain adaptation abilities, the inconsistency of the economic organisation, the regulation and the ability of enforcing their respective will [19, 20].

The transport policies of the first freely elected government recognized that first, they should complete the outstanding construction and maintenance works as this was the only way to create the possibilities for real development. In 1991, they worked out the perspective development programme of the national motorway system that determined the tasks to be completed by year 2000.²⁴ According to the estimations of this programme, the costs—at the time—were approximately USD 2 billion without specifying the methods of raising this amount. Even by a better prepared concept, the financial barriers dictated by the economic environment and the implementation of the programme would have met difficulties. By such preparations that lacked the solid financial foundation, it was inevitable that the implementation of the

²⁰ Capacity enhancing reconstruction, i.e., developing the road to have 3-3 lanes—became an urgent matter as regards the M1 motorway leading to the western border.

²¹ This obligatory adjustment in practice meant the transposition of the rules and institutional system of the EU, i.e., that of the *Acquis Communautaire*.

²² Under the expression of “collective term”, we mean the adaptation of the institutional relations, guidelines, methods, norms and, not in the least, the management ideas of, first the European Community, then the European Union as well as the effects of the bilateral cooperation with the countries of the Union.

²³ The highly diverse thinking of our very helpful partners made the choosing of the western “best practice” difficult. The Hungarian actors getting in decision-making positions were used to different methods, i.e., getting “directives”.

²⁴ The goals included nearly “everything” thus, the development of the structure of the core network, improving economic competitiveness, the improvement of regional availability, the development of urban and suburban transport and the prevention of the deterioration of the roads due to heavy axle load vehicles. Within the given generous framework, however, the timing of the developments, the proportion of specific regions and future harmony with the economy, the rural development, the starting EU integration process (Hungary signed the Association Agreement in 1994 and became a member of the Union on 1st of May 2004), the traffic capacity enhancement of the neighbouring countries, the goals of efficient operation and maintenance or even the changing quality of life and social structure were rather haphazard [4].

programme, the ideas that were built on concession-type solutions²⁵ failed [21-23].

In lack of domestic well-capitalized companies, concession meant involving foreign capital. The retreat of this solution was closely linked with the changing government concepts, on the one hand and, with the impairment of the sustainability of financing from private resources alone, on the other hand. Such Hungarian projects deviated from the usual international practice: the burdens of both the construction and the operation had to be covered from the fees paid by the road users, not to mention here the profits of the concession companies, the repayment of the bank loans taken and the payment of taxes and contributions. And as a result of the high road tolls,²⁶ the major part of the traffic avoided the motorways and resorted to using the parallel carriage ways, thus causing a rapidly growing deterioration while pollution and noise increased at the concerned settlements. It was also difficult to explain that on one of the expressways built from public funding and managed by the state, one had to pay toll, while on another, one did not have to pay for the use. By the end of 1998, it became clear that without the involvement of the state, without the state's sharing 30%-40% of the costs, the problem cannot be solved. They terminated the contracts with the state concession companies collecting tolls; they gradually bought out the frozen demands and settled the financial conditions with the investors. The government that came into power in the period of 1998-2002 not only terminated the bankrupt road fund but also ordered the demolition of the toll gates built on

the motorways a few years earlier.²⁷

The coalition government ruling in the period of 2002 to 2010 disputed the appropriateness of the targeted appropriation of road traffic founded by its predecessor²⁸ and brought back again private capital as a financing partner in road development schemes, albeit in a bit different construction than before. Additionally, to a modest degree, they could already rely on EU funds as external sources. As regards the financing, the latter gained a more significant role only after 2005. Namely, the organization's structure system became more complex and getting the hang of the complicated control, financing and resource allocation mechanisms stipulated by the EU was difficult.

In 2003, the national assembly created a law to promote the speeding up of the expressways network development.²⁹ The so-called Highway act—after

²⁷ The programme did not contain the necessary maintenance needs where solely the value of the not performed works was estimated to reach USD 1 billion at the time.

²⁸ In 2002, the independent transport portfolio was terminated. The management was merged into the economic portfolio. From year 2009, this was combined with telecommunication and energy then, from 2010, it got integrated into the development portfolio. The framework of the present article does not allow a complete review of the changes of the organisation responsible for operation and maintenance, thus, here we merely refer sketchily that from the change of the regime up to 1998, it was operating essentially in a centralised and county-level regulatory body to be transformed gradually into today's state owned non-profit private limited company. However, the responsibility and tasks of motorway developments were separated from this organisation, even at the time. From 1990, it was the Concession Motorway Bureau, and then the Road Management and Coordination Directorate that were cooperating in the developments. After this, in year 2000, the State Motorway Management Co. was established only to have part of their tasks taken over by the National Motorway Co., only to be followed by newer reorganisations. Reconstructing these changes merely on the basis of the ever changing names is hardly possible. Apart from this, behind the new starts there were objective reasons, like the breaking of the macroeconomic course, the buyout of concession companies in trouble, etc.

²⁹ In connection with the implementation of the act, in its resolution 2044/2003 (III. 14), the Government specified the elements of the long-term development programme up to 2015, beside the medium-term development plans of the expressway network. According to the plans up to year 2006, 420 kilometres expressway should have been completed and they should have started the construction of additional 425 kilometres, together with starting the preparatory work of constructing 803 kilometres.

²⁵ According to the concession regulated by Act XVI of 1991 the 60 kilometres long stretch of M1 in the direction of Vienna reached the border in 1994. Apart from this, in the 90-ies they started the preparatory works and the construction of the Budapest-Belgrade motorway (M5) while several stretches – like the M3 motorway in the direction of Ukraine and Romania were financed from government loans in the so-called “toll-road” construction - while the motorways towards Croatia and Slovenia, the touristically important M7 motorway to Lake Balaton, the M0 Budapest beltway and several Danube bridges respectively continued to be completed as a state investments.

²⁶ Not even the extremely high fees – USD 0, 15/kilometre – that far exceeded the solvency of domestic road users could mitigate the financial burdens of the companies [5].

having stressed the importance of the road development—summarised the general rules and tasks related to the planning and financing of expressways. At the same time, apart from identifying the stretches of the roads and the amount of money considered necessary for the construction, it did not contain the exact resources. The real resources lagged behind the appropriated ones stipulated by the specific law.³⁰

In 2004, the National Assembly adopted another transport policy concept. Within the generous framework of this concept however, the time schedule of developments was rather haphazard as regards the proportion of the individual fields and their respective harmony with the economy, territorial development, the EU integration, the transport capacity expansion of the neighboring countries, the targets of efficient operation and maintenance or even, with the quality of life or the social cohesion of the society. The reaction to the changing conditions of programming that had been brought along by the otherwise predictable EU accession was slow. Namely, in order to be awarded by the investment resources obtainable from the EU Cohesion and Structural Funds—completed with the share of domestic contribution—the concept had to be updated. The White Paper of the Uniform Transport Development Strategy³¹ was born to fill the missing link.

The renewing reorganizations led by the various governing administrations have also hindered the proactive adjustment to the changing external conditions. We should add that when deciding certain motorway and motorway-bridge construction schemes, it was not so much the traffic demands or professional conviction, rather the political lobbying power of the region, as it was in case of the Szekszárd Danube

Bridge or Motorway M6 inaugurated in 2003.

After 2010, the role of utilizing EU resources became predominant as regards financing. This redeemed the external sources formerly originating from concessions, bank loans and the so-called PPP (public-private partnerships) with the significant difference that utilizing these resources did not imply an obligation to pay interest or repayment.³² True, EU sources cannot be used freely on the road network as their utilization is regulated by strict prescriptions.

Financing the road developments has become more balanced following the public finance stabilization and the reconstruction of the main road system as well as the termination of the deterioration of the inferior road system.

In summary, ever since our accession to the European Union in 2004, in various EU support constructions—calculated with the data expected for year 2017, we used altogether more than USD 5.9 billion out of what the domestic share made up approximately 30%. Beyond this, for the same purposes, we used approximately USD 7.6 billion that was topped by about USD 3.9 billion availability pay that we had to pay for the M5 motorway built in a PPP construction.³³

4. State of the Road Network Today, Some Characteristic Development Indicators

A fragmented outline of the road network financing also cannot be complete if we do not mention briefly the issue, what we have reached in the course of the

³⁰ In 2004, exactly 50% of the planned resources were available, in 2005, 71%, in 2006, 80%, in 2007, 55%, while in 2008, approximately 40% and in 2009 barely 30%.

³¹ According to Ref. [18], headline targets are the following: establishing a major network structure improving competitiveness, improving regional accessibility, developing urban and suburban transport, preventing road wear caused by high axle load vehicles.

³² This article does not offer a chance to explain in more detail that the received support fluctuating between 2%-5% of the GDP is far from “free money” as—in harmony with the quota share burdening Hungary, it is contributing to the joint operation and it is in the interest of the whole EU that the relative underdevelopment, the differences between the member states should not hold back the performance of the total EU. We should not evaluate these amounts merely as external resources rather; these influenced also the resources allocated from the budget in harmony with the 25% “own contribution” requirement stipulated by the EU regulations [16, 17].

³³ Data calculated at the exchange rate of July 5, 2017 (1 USD = 271.6 HUF).

nearly three decades following the change of regime, see Figs. 9 and 10.

The length of the country's expressway network in year 2000 was 574 kilometres. By 2010, it was close to 1,292 kilometres. More expressways were built in a single decade than in the previous 50 years altogether.

Although with delays and some detours that had hurt the efficiency of financing, by today we managed to significantly mitigate the huge backlog as regards the existing expressway network. The length of tracks put into service reached already 1,700 kilometres at the time of writing this article and we have reached the phase when—with the exception of some specific

additional sections—by 2020 the network essentially shall be completed. Certain stretches subject to the greatest pressure are already ripe for capacity enhancement. Thanks to the improvement of the motorway or highway coverage within half an hour motorways or highways shall be available within half an hour from any settlements in the country.

Thanks to the significant growth of expenditures and the EU contribution to resources, a considerable development can be seen also as regards the reconstruction of the main road network. Due to the bypass road stretches away from cities part of what had been built as expressways, the length of the road network

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
European Union (28 countries)	n.a.	n.a.	13,1	13,4	13,4	13,0	12,8	13,6	13,8	9,5	n.a.
Croatia	n.a.	n.a.	26,8	27,8	28,9	28,9	29,2	29,3	30,2	30,4	n.a.
Hungary	9,8	11,9	8,5	12,7	12,7	14,7	15,2	15,3	17,8	18,0	19,2
Austria	20,3	20,4	20,5	20,4	20,3	20,6	20,5	20,4	20,3	20,2	n.a.
Romania	1,1	1,1	1,3	1,4	1,6	1,6	1,7	2,7	3,2	3,4	3,4
Slovenia	27,1	27,2	28,8	34,6	36,8	37,5	37,5	37,4	37,4	37,4	37,4
Slovakia	6,5	6,6	6,8	7,1	7,3	7,7	7,8	7,8	7,8	7,7	8,1

Fig. 9 The length of expressways per hundred thousand inhabitants (km) (2005-2015).

Source: Hungarian Central Statistical Office, estimates, Hungarian Fiscal Council Secretariat.

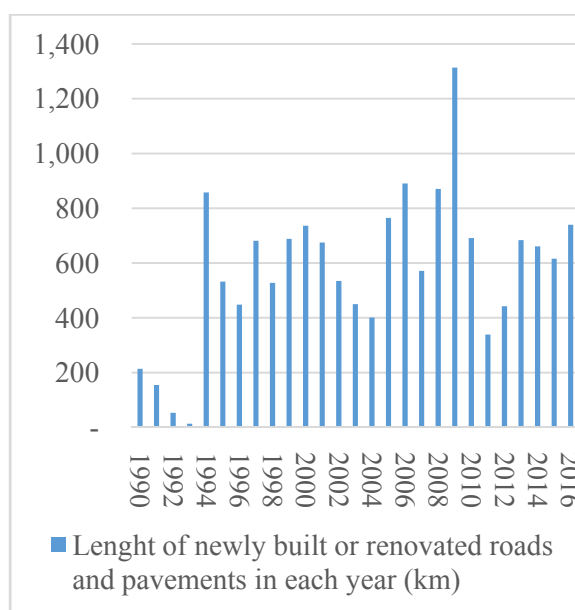


Fig. 10 Length of newly built or renovated road and pavement in each year, total (1990-2016).

Source: Ministry for National Development (NEFMI) database, Hungarian Fiscal Council Secretariat.

has grown to 31,000 kilometres, out of which 6,000 kilometres are main roads, the major part of what meet the axle load stipulations required by the EU.

The state of the inferior distribution road network however is less favourable. The elimination of the consequences of the former “principle of residuals” has not been successful by far.

5. Conclusions

Following the social and political changes in 1989/1990, the framework of the legal and institutional conditions of the market economy had been built up in Hungary especially rapidly and this ensured an open course for the transformation of real economy. At the same time, as a particular torso of the change of regime, modernisation in the budgetary economy and in public finance was delayed. The financing of the operation of such decisive services that are built on the provision of the responsibility of the state like transportation, remained essentially unchanged. Apart from the above, technical development, motorisation and meeting the expectations of the requirements to catch up with Europe, together with the “pressure” of the society that had expected a “miracle” from the change of regime, prevailed [10]. However, the financial and financing capabilities of the public finance—thus the availability of resources for road network development and maintenance—could not change automatically, parallel with the 1990 change of regime, primarily due to lack of economic foundations. And the very deep economic recession that accompanied the transition market economy indicated even sharper “contours” between the social expectations and the available resources for the improvement of the transportation network.

Due to the western-oriented change of regime, the naturally evolving new partnerships, the ambitious motorway developments were focusing on reaching the western and southern borders of the country. It was the natural consequence of this solution that the state of the existing road network kept deteriorating even further while new motorways and bypass roads were

constructed. The relieving role of these developments—thanks to the periodic stops and starts of the works—proved to be more moderate than the deterioration of the national road system that had been maintained and operated by the “principle of the remainder”.

Apart from the zig-zags—even if with weak efficiency—the results of the investments became clearly visible by the second decade of the years 2000. After 1990 and even today the development and operation of national transport system are declared to be the task and responsibility of the state. However, apart from recognizing the results, we have to see the significant difference between the development and financing in the second decade of the years 2000 and that of the first twenty years following the change of regime. Namely, in the budgets of the present decade, not only the resources—the so-called co-financing related to a substantial part to the EU sources—related to constructions of this period but, at the same time, the debt service of external loans involved in the road investments of the earlier two decades have to be considered, as well.

The question is: was there an opportunity to postpone the development of the expressway network by blaming the lack of resources and instead claiming external sources in financing the constructions and introducing rearrangements that would have cut deeper into welfare expenditures? I believe the answer is clearly no.

However, to the question: could we have opted for a solution by what we could have reached the state of road network development of today, that is incomparably better than before, years earlier and with smaller losses—the answer is clearly: yes! Even here, we wouldn’t be fair if we’d not refer to the fact that the possibilities of developing and maintaining road services were also depending on the resilience of the budget. Relying on the last resort born out of lack of money, the time lags definitely have overwritten the relation of plans and the reality, made harmonious

development impossible and this naturally brought along the excess costs of the implementation.

However, the balance of successes and failures remain positive even if the implementation of the ideas took place burdened by conflicting interests, financing-political “detours” and affected by the changing concepts as regards the government’s role, depending on the political cycles. In significant segments of Hungarian public finance, thanks to the “pressure” to follow the positive examples, important modernisation changes have taken place in several fields, thus in transportation developments and, not in the least, also thanks to the changing awareness.

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Appendix A Legal Acts Referred

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Appendix B



Fig. B1 Highway development in Hungary (1990).



Fig. B2 Highway development in Hungary (2000).



Fig. B3 Highway development in Hungary (2010).

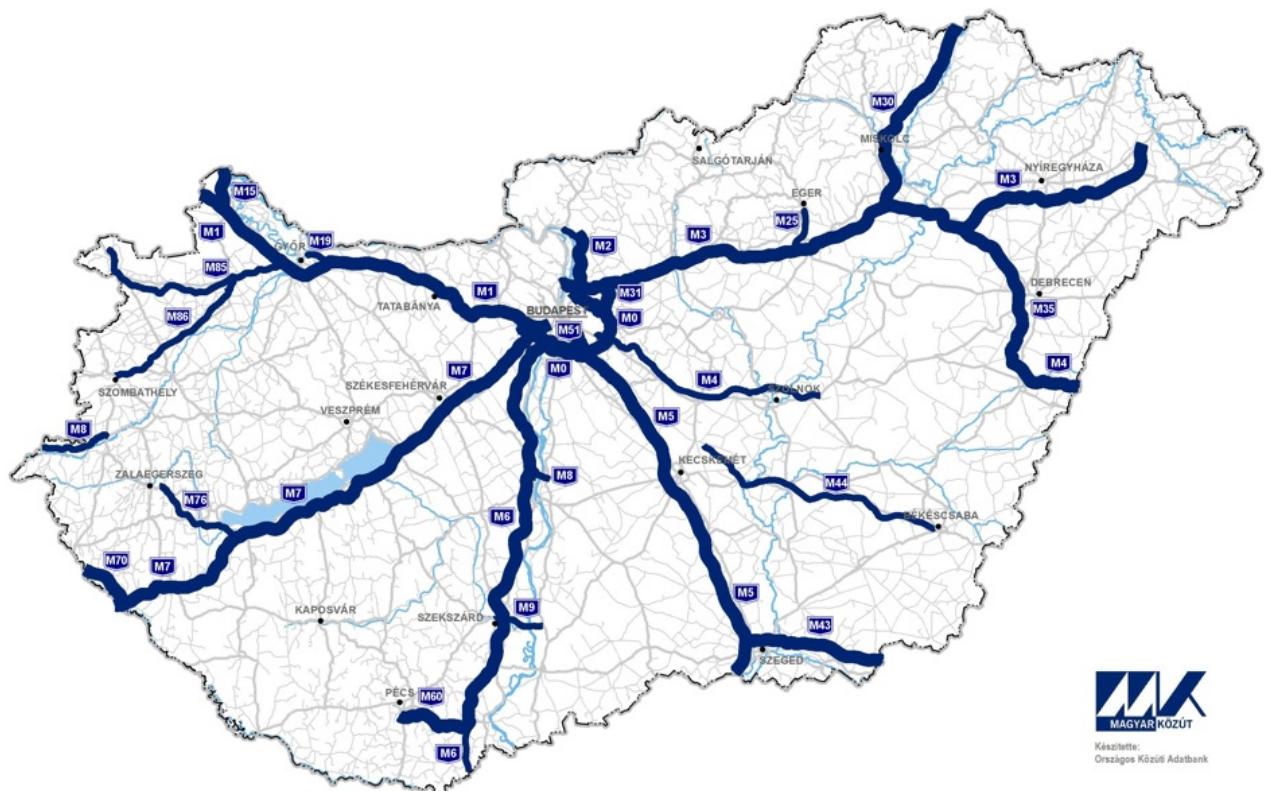


Fig. B4 Highway development in Hungary (2020).