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THE INLAND TRANSPORT SYSTEM OF HUNGARY
1950–60

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THE INLAND TRANSPORT SYSTEM OF HUNGARY* 1950-60

Summary

When the Communists assumed power in Hungary immediately after World War II, they directed the economic system of the country toward heavy industrial development with little provision for the transportation services needed to support this development. Even though there is no evidence that transportation services have failed to support economic development up to the present, the transportation system generally, and the railroad system in particular, will require increased capital investment to prepare for the increasing demands for service inherent in the 1961-65 economic plans.

After many years of intensive use the physical equipment of Hungarian railroads has been reduced to a condition that would be considered poor by Western standards. Moderately ambitious plans for improvement have been in existence for some time, but funds and materials necessary for the fulfillment of these plans have not been allocated. At present, however, there appears to be a growing awareness of the necessity for directing more of the resources available to the economy to the transportation sector to make it capable of supporting future economic growth.

The Hungarian transportation network, which is dominated by the railroads, is well developed and evenly distributed throughout the country. About one-tenth of the standard-gauge rail network, which radiates from Budapest, is multitracked, and only a small part is electrified. Railroad motive power and rolling stock consist almost entirely of steam locomotives and two-axle freight cars of low capacity. The traffic load is unevenly distributed, with nine-tenths of the total traffic being handled on one-half of the network. Although the railroads have been operating at an apparent loss, a recent revision of rates and the abandonment of some branch lines may improve their financial situation.

The Hungarian highway system also radiates from Budapest. Roads consist chiefly of gravel, crushed rock, or dirt construction, and one-half of them are in poor condition. The truck inventory is small, and

* The estimates and conclusions in this report represent the best judgment of this Office as of 15 April 1961.

the entire highway transport system is not of sufficient quality to support extensive diversion of long-distance (more than 50 kilometers /km/) transportation from the railroads.

The inland water network of Hungary consists primarily of the Danube River. The inland water fleet is small and of poor quality, ports are poorly developed, and there is little mechanical cargo-handling equipment. Because there are no current plans for expansion of the inland waterway system, it is probable that the present, almost negligible, contribution by inland water transport to the availability of transportation service will not increase significantly during 1961-65.

During 1950-60, Hungary managed to increase the total transportation performance substantially through more intensive utilization of labor, plant, and equipment. Traffic has been moved by relying on the railroads to absorb the bulk of the demand and also by utilizing the highway and inland waterway systems at a high level of intensity in spite of their limitations. The highways and, to a lesser extent, the inland waterways are used to provide feeder-distribution service to and from the railroad system. Pipelines are not yet a significant mode of transport, but expansion of pipeline facilities is underway. The current capability of the transportation system as a whole seems to be near the level of average demand. Consequently, peak loading periods, especially in the autumn, create demands in excess of capability, resulting in some delays in the movement of traffic.

The chief problem in all modes of transport is a shortage of transportation equipment. As a temporary expedient, the Hungarians are attempting to compensate for the shortage of serviceable railroad freight cars by renting foreign cars, a decision probably forced on them because of the scarcity of capital investment funds. The authorities planned to increase the rate of investment in transportation during the Second Five Year Plan (1956-60) because they recognized the need of the transportation system for an increased share of capital investment. However, the actual annual rate of investment in transportation has declined since 1954.

The practice of utilizing equipment and facilities intensively through the application of labor instead of capital has been adequate to meet the increasing demands for transportation service and may be expected to continue. Although efficiency can be increased and although there probably is still some degree of underutilization of the present transportation system, there is a limit in all modes of transport to the traffic increases that can be achieved through increased utilization. This practice will not be adequate, therefore, to provide the transportation service needed to support the economic plans for 1961-65. Consequently, the trend in capital investment must be reversed, or transportation will become a major problem in the Hungarian economy.

I. Introduction

The level plain of Hungary offers few geographic obstacles to the development of an efficient transportation network. The railroad system of the country, which accounts for the major part of all traffic, was originally developed as a part of the system of the old Austro-Hungarian Dual Monarchy. The radial pattern was established at an early period and was intended to link the Hungarian part of that joint kingdom to the Hungarian capital at Budapest. Modern roads have been developed primarily to provide feeder service to and from the railroad system. During the final phases of World War II the entire transportation system suffered extensive damage. By 1949, however, this system had been basically restored, and since that time the performance of all modes of transport has increased considerably.

Following the Soviet pattern of achieving maximum performance from the system with a minimum of capital input, the present government of Hungary has relied more on improved operating efficiency than on capital investment to achieve increases in performance. This statement is especially true with regard to rail and water transport, where inventories of equipment have increased only modestly since 1955. The expansion of the Hungarian economy, which has resulted in an increased traffic load for all modes of transport, together with intensive utilization of transportation facilities and equipment and a policy of barely adequate capital inputs, has resulted in a transportation system with little excess capability but one that has met the demands placed on it.

II. Development and Maintenance

A. Organization and Administration

The Hungarian Ministry of Transportation and Postal Affairs (KPM) functions under the policy direction of the Central Transportation Council. The Council, chaired by the KPM member and consisting of representatives from appropriate ministries, sets policy, effects coordination, and issues directives that are binding on all transportation organizations. Operational control is vested in various subdivisions of the KPM, including railroads (Department I), navigation (Department V), and motor vehicles (Department VI). Pipeline transport is believed to be under the jurisdiction of the Ministry of Fuels and Power. 1/*

50X1

1. Railroad Department

The Railroad Department (I) of the KPM is responsible for the operation and administration of the Hungarian State Railroads (MAV), including the Budapest Suburban Railroad and the Gyor-Sopron-Ebenfurth Railroad (GYSEV).* Control is exercised through six regional directorates located at Budapest, Szeged, Debrecen, Miskolc, Pecs, and Szombathely. These regional directorates -- like the Railroad Department -- are subdivided into appropriate sections such as those dealing with motive power, operations, maintenance, and finance. The Railroad Department also controls intercity bus operations through the Hungarian State Railroad Motor Transport Enterprise (MAVAUT). 2/

2. Navigation Department

Hungarian inland waterway and maritime shipping is controlled by the Navigation Department (V) of the KPM. The department was organized in 1955, when the USSR, which during 1946-54 had been a member of the Hungarian-Soviet Joint Stock Company (MESHART), withdrew its membership and sold its stock to the Hungarian government. The Navigation Department is presently divided into four enterprises, as follows:

a. The Hungarian Danube and Sea Navigation Corporation (DTRT), which is a maritime shipping enterprise;

b. The Stream Regulation and Gravel Dredging Company (FOKA), which is a small enterprise engaged in stream regulation and channel dredging;

c. The Hungarian Navigation Company (MAHART), which is the major inland water shipping enterprise in Hungary; and

d. The Hungarian Shipping Cooperative (MAHAJOSZ), which is a cooperative of small shipowners and rafters organized to supplement governmental shipping in small local shipments.

The MAHART enterprise controls nearly all freight traffic on Hungarian inland waterways, including freight and passenger transport and transit shipping on the Danube. In addition to 45 passenger and freight agencies on the Danube and Tisza Rivers, MAHART has its own agencies in Danubian ports in West Germany, Austria, Czechoslovakia, Yugoslavia, Rumania, and Bulgaria. 3/

* See the footnote on p. 5, below.

3. Motor Vehicle Department

All motor transport in Hungary is owned and operated by the government, but, unlike rail and water transport, its control is divided among several agencies. Operational control over "special-purpose" transport enterprises is under the jurisdiction of non-KPM organizations (such as the Ministries of Chemicals, the Interior, and others), which own and operate their own vehicle parks for special transportation needs. Special-purpose vehicles also are owned and operated by other components of the government such as police, security, and army groups.

In addition to these enterprises, the Motor Vehicle Department (VI) of the KPM owns and operates those divisions concerned primarily with common-carrier transport (hereafter referred to as the transport group). This group has two subdivisions, the AKOV's (motor transport enterprises), which operate various types of vehicles and apparently are organized on a geographical basis, and the TEFU's (trucking enterprises), which operate only cargo trucks and are functional groups that perform common-carrier local and intercity transport.

To coordinate the flow of traffic and goods, the KPM has established a nationwide organization of dispatching stations organized on a geographic basis, with the central dispatching office located at Budapest and a second major station located at Gyor. There are between 50 and 60 substations in the network. The dispatcher directs the movement of freight from one enterprise to another and also may authorize the services of the AKOV's to industrial and commercial enterprises and cooperatives if the transportation requirements of such organizations exceed their capabilities. 4/

B. Characteristics and Plans

1. Railroads

The total route length of Hungarian standard-gauge railroads (4 feet, 8-1/2 inches wide) in 1960 was about 8,320 km, only 11 percent of which is multitracked and only 5 percent electrified.* The

* The Hungarian railroad system is made up of two separate standard-gauge railroads -- MAV and the Gyor-Sopron-Ebenfurth Railroad (GYSEV). The latter line is owned jointly by Hungary and Austria and is under the jurisdiction of the KPM but is managed by an independent agency located at Sopron. Because GYSEV is too small to be treated separately, this report includes only total figures for both systems, which will be referred to together as MAV. The /footnote continued on p. 6/

general condition of the Hungarian track structure is poor, necessitating a slow rate of speed and hence reducing the total capacity of the railroad lines. This situation consequently extends the time involved in traffic movement and materially increases the cost.

The density of the Hungarian railroad network, 1 route-kilometer for each 11 square land kilometers, ranks between that of Czechoslovakia and Poland among the European Satellites. The railroad network provides adequate coverage of most areas of the country, with all basic lines radiating from Budapest, the principal rail center. Other major centers are located at Debrecen, Miskolc, Veszprem, and Gyor. Adequate rail connections are maintained with each of the countries bordering Hungary.* Particularly good connections exist with the USSR through Zahony, with Czechoslovakia through Salgotarjan, and with Austria through Sopron, over which extensive international passenger and freight traffic is moved. The condition of this network is generally poor because of heavy demands and inadequate maintenance and replacement. Although domestic production of rails normally would meet Hungarian needs, a large amount of such production is exported to the USSR. Replacement of rails has thus been restricted to only the most pressing requirements, and this policy will compound the problem in the future. Almost all wooden ties have to be imported, and only minimum replacements have been made since World War II. The Hungarians have experimented with concrete ties, but these have been utilized chiefly on secondary lines, yards, and other supplementary trackage. All electrified main lines utilize single-phase, 50-cycle, 110-kilovolt industrial power except for a small number of local lines in and around Budapest, which use 1,000-volt direct current. Distribution on both sections is by overhead line, and all electrified main lines are multitracked. 7/

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narrow-gauge line in MAV is approximately 600 km in length, and Soviet broad-gauge (5-foot) track extends across the Soviet-Hungarian border to the transloading station at Zahony. This connection, like most other Satellite-Soviet connections, is actually a transloading complex composed of four stations that specialize in specific commodities. At this point, Chop in the USSR is used for general cargo, and the Hungarian stations of Zahony, Tuzser, and Komoro are used for general cargo, grain, and petroleum, respectively. 5/

* Hungary has 20 international railroad connections, including 7 with Austria, 4 with Yugoslavia, 2 with Rumania, 6 with Czechoslovakia, and 1 with the USSR. About seven other connections are closed to international traffic, and a number of former connections have been severed by the removal of track or by the failure to replace border bridges. 6/

The poor lateral connections among the main lines radiating from Budapest dictate that most traffic must move through that city's installations.* Under normal conditions the facilities are adequate to meet traffic demands, but any disruption of traffic at Budapest has far-reaching effects on the entire system. A second major weakness of the system is the small number of bridges that span the major rivers of Hungary, which flow north to south. The uprising of October 1956 had little effect on the physical network -- the level of traffic was restored to normal by about February and March 1957 -- but it did delay the implementation of plans outlined for railroad improvements during the Second Five Year Plan (1956-60).

The original Second Five Year Plan called for substantial improvements in the railroad network** and for ambitious increases in capital additions to the railroads. The plan apparently was designed to improve the quality of fixed line facilities in order to meet substantial increases in traffic. If these projects had been carried out, they would have represented the first really significant additions to the Hungarian rail network since before World War II. 10/

Official announcements of the Three Year Plan (1958-60), which superseded the Second Five Year Plan, contained no reference to improvements planned for railroad lines or structures. Although some improvements undoubtedly occurred -- possibly on the projects originally scheduled for 1956-60 -- actual achievement may have been less than the original goals.

At the end of 1960 the rolling stock inventory of Hungary is estimated to have consisted of 2,460 locomotives, 62,000 freight cars, and 5,500 passenger cars.*** The entire inventory is in poor condition as a result of intensive utilization and minimal maintenance. The locomotive inventory is badly mixed, and a number of US Army surplus locomotives† manufactured during World War II are still in use. The freight car inventory is composed almost entirely of two-axle

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* Budapest has three principal classification yards, two smaller classification yards, three major passenger terminals, two major freight terminals, two major repair shops, and a number of small stations. [redacted] 50X1

** The plan called for 170 km of double tracking, the installation of automatic block signals on 200 km of line, the renovation of 2,400 km of line, the completion of electrification on the Budapest-Hatvan-Miskolc line, the beginning of electrification on the Budapest-Szolnok line, and the improvement of a number of stations. 9/

*** See also Table 3, Appendix A, p. 26, below. These figures do not include narrow-gauge rolling stock.

† The 2-8-0 series, with a tractive effort of 31,500 pounds. 11/

cars, and only about one-fourth of the inventory is less than 25 years of age. This inventory consists chiefly of gondolas, boxcars, and flatcars, thus allowing for little variety in the type of service that is offered. Although the passenger car inventory contains many modern four-axle cars, most of the cars are old two-axle and three-axle units equipped with bare wooden benches. The shortage of passenger cars has made it necessary to use boxcars in commuter traffic for some time. 12/

Increases in rolling stock and motive power during 1950-60 were not large when compared with the increases in traffic performance Table 1 shows a comparison of rates of growth of freight and passenger rolling stock and traffic from 1950 to 1960.

Table 1

Index of Rates of Growth of Railroad Rolling Stock and Traffic in Hungary 1950 and 1960

1950 = 100

	1950	1960
Freight cars a/	100	119
Ton-kilometers b/	100	246
Passenger cars a/	100	125
Passenger-kilometers b/	100	203
Locomotives a/	100	110

a. See also Table 3, Appendix A, p. 26, below.
b. See also Table 4, Appendix A, p. 27, below.

The disparity between the indexes of freight cars and ton-kilometers* does not of itself indicate a present shortage of freight car space [redacted] 50X1
Increased utilization of the inventory is evidenced by a 25-percent increase in the average number of tons hauled per car per year during 1953-59 and by a substantial decrease in the turnaround time.**

It is estimated that about 55,500 cars were required to move traffic in 1960,*** including export, import, and transit freight

* Cargo tonnages are given in metric tons throughout this report.
** Reported turnaround time for 1960 is not yet available.
*** See Table 5, Appendix A, p. 28, below.

as well as domestic traffic. Hungarian cars probably were used for export and transit traffic (much of which was Soviet traffic through Hungary), but import traffic, except that from the USSR, usually has been hauled on cars belonging to other countries. Because of the imbalance of shipments, problems of car distribution, and the desire to avoid the payment of per diem rental fees in foreign exchange (French gold francs) for foreign cars, it is sometimes more expedient to move these cars back empty than to hold them for homeward loading. Adjusting the car requirements for these factors, the estimated inventory balanced against requirements indicates that on the average about 10 percent of the total freight car park was in reserve or undergoing repairs during the year.* This inventory probably was not enough for peak loading periods when freight car utilization was above average.

[redacted] car shortages probably are due to general problems of car distribution and car interchange in export traffic rather than to actual shortages. Refrigerator and tank cars in the past have been in chronic short supply, and car rentals from Western countries and from other Satellite countries have been Hungary's source of supplemental supply for such cars. The magnitude and frequency of [redacted] shortages of freight cars, however, point to a delicate balance between the supply of freight cars and the number required. Strict enforcement of loading and unloading times as well as increased demurrage charges (especially on foreign cars for which rent must be paid in the form of foreign exchange) is frequently emphasized as a remedy for excessive turnaround time and the resulting shortage of cars.

Planned inventory acquisitions under the Three Year Plan placed emphasis on shifting the railroads from steam to diesel and electric traction.** 14/ No mention was made of total planned freight car acquisitions during the Three Year Plan period, but the plan for 1958 called for 1,420 freight cars, and the plan for 1959 called for 2,400 cars in addition. Hungary announced that about 6,700 freight cars were added during 1958-60, and this increment probably resulted in an absolute inventory increase of about 3,800 cars. 15/ The normal annual retirement of freight cars (from accidents and obsolescence) is about 1.6 percent of the total inventory.

A shortage of freight cars and a lack of adequate allocations from domestic production in recent years have caused Hungary to purchase freight cars from other countries -- Rumania; Poland; and,

* See Table 5, Appendix A, p. 28, below, and Table 3, Appendix A, p. 26, below. A total of 55,500 Hungarian cars were required compared with an estimated number of 62,000 cars available.

** Hungary planned to add 11 electric locomotives, 152 diesel locomotives, and 30 motorized railroad cars to the inventory during 1958-60.

more recently, Western countries, particularly Austria and the Netherlands. 16/ A contract recently signed with the Netherlands indicates that Hungary will continue to purchase cars from Western countries at least until 1962. 17/ Purchase of cars from foreign sources is a direct result of the current Hungarian practice of deemphasizing domestic production (because of the agreements by the Council for Mutual Economic Assistance /CEMA/ on specialization of rolling stock).

2. Highway Facilities

The Hungarian road network in 1960 consisted of about 29,000 km of all types of roads, only 6 percent of which were classified as improved roads.* 18/ Although this network is extensively developed by Bloc standards, it is in poor condition and is incapable of supporting extensive long-haul (more than 50 km) traffic. Hungarian authorities state that about one-half of the network is in poor condition, about one-third in satisfactory condition, and only about 16 percent in good condition. 19/ The network is not well maintained, and this fact is one of the primary reasons why highway transport is not yet a significant factor in intercity freight movement.

An official Hungarian study indicates that within 15 years highway transport may account for nearly three-fourths of the total tonnage carried by the transportation system and about one-fifth of the total ton-kilometers. The present system is not capable of accomplishing these tasks, and the poor condition of the roads greatly increases maintenance costs. The authorities plan to achieve increased highway traffic performance chiefly through better organization and efficiency in the utilization of equipment and labor rather than any sharp expansion of this transportation sector. 20/

Passenger travel by bus has increased in popularity in recent years in Hungary with the introduction of bus service to more and more outlying cities and towns. The addition of bus service (very often a truck with benches) to areas formerly not served by any regular commercial facilities for intercity passenger transport has done much to increase the highway share of the total passenger-kilometer performance of intercity transport in Hungary.

There was a sharp change in emphasis in road construction in Hungary during the early 1950's: investment in new construction, which had dominated the 1950-53 period, gave way to emphasis on the repair and maintenance of the established system. Moreover, there was a substantial reduction in the average annual expenditure on the road system during 1950-55, and the general decline in the investment

* Called both "state" and "public" roads. The figure probably does not include roads under the jurisdiction of provincial and municipal governments.

priority of road construction does not indicate large increases in investment outlays for new road construction in the immediate future. Even though the Hungarian authorities planned to make 17,000 km of road "dust free" during 1956-60, present policies do not point toward any great improvement in the highway system.

The Hungarian motor vehicle inventory in 1960 is estimated to have consisted of 25,500 trucks, 4,700 buses, and about 30,800 "other" vehicles.* The truck inventory is composed of a large variety of vehicles from both foreign and domestic sources, a situation that compounds the spare parts problem and contributes directly to the high percentage of trucks under repair. Whether or not the total truck capacity is in general short supply is not known, but there may be considerable reserve capability available at the present level of operating efficiency. As in the case of railroads, loading and unloading practices introduce delays and prevent a rapid turnaround of trucks.

Because of the sizable addition to the truck inventory during 1950-60, the average age of the present inventory is not very high. The poor condition of the roads, however, probably has had an adverse effect on the condition of these vehicles, and, as a result, the inventory is believed to be in only fair condition. Because this inventory is composed almost entirely of vehicles with a carrying capacity of about 3 tons, its economic utilization is limited. There probably is a need for more light delivery vehicles for urban pickup and delivery service and more high-capacity trucks for interurban service. Domestic production of trucks showed only a modest increase during 1950-60, while both exports and imports increased.** The total effect has been a decrease in the number of trucks available annually for addition to the inventory.

3. Inland Water Transport

The Hungarian inland waterway system consists of about 1,300 km of navigable routes on which about 1 percent of the total Hungarian freight traffic is hauled. Inland water transport is little developed or used in Hungary, principally because of the absence of an internal connection between the country's two main rivers, the Danube (on which most water traffic moves) and the Tisza -- travel between them requires a long detour through Yugoslavia. A Danube-Tisza canal,

* See also Table 3, Appendix A, p. 26, below.

** During 1950-60, domestic production increased from 2,499 to 2,918 trucks, exports increased from 5 to 2,528, and imports increased from 787 to a figure estimated at 2,700. The number of trucks available for additions to the inventory decreased from 3,281 in 1950 to a figure estimated at 3,100 in 1960.

presently under construction, may expand waterway traffic, although there are still problems in making the canal navigable. The inland waterway system does not greatly supplement either railroad or highway transport for domestic freight movement. Expansion of facilities and of the inland water fleet has been slow in the past, and no known plans exist for significant expansion.

The carrying capacity of the inland water fleet is estimated to have shown only a modest increase during 1950-60* compared with the increase in tons carried.** Damage from World War II was a major cause of the lack of growth in fleet capacity, and only in recent years has this capacity returned to prewar levels.

The original Second Five Year Plan called for only modest additions to the inland water fleet,*** 21/ and the Three Year Plan made no specific provisions for inland water transport. Whatever additions were made probably did little more than compensate for withdrawals over the same period, but the quality of the fleet should have improved slightly. The Second Five Year Plan provided for a sizable increase in inland waterway performance primarily by increasing the number of barge operating hours per day by 24 percent. It was hoped that this increase would partly relieve rail transport, but it has not done so in any significant quantities, and the importance of inland water transport has declined steadily during the past decade. It is estimated that inland water transport will at best maintain its present position in relation to other modes of transport through 1965.

The recent Soviet proposal of a unified European inland waterway system envisages a north-south connection between the Danube and the Rhine-Main and a north-south canal between the Danube and the Oder, with a lateral connection to the Elbe. Recognizing that the completion of this plan will enhance the importance of Danube shipping, Hungarian authorities have expressed the need for improving the antiquated fleet and port facilities, particularly the Budapest-Csepel national and free port. 22/

* No figures on carrying capacity are available for 1950-60. The deadweight tonnage (DWT) increased from about 136,000 in 1936 to about 159,000 in 1956, or by 17 percent. (Deadweight tonnage is a measure of the carrying capacity of a vessel expressed in metric tons -- that is, the difference between the displacement of the vessel light and its displacement loaded.)

** Tons carried doubled during 1950-60 (see Table 7, Appendix A, p. 30, below).

*** The plan called for the addition of 15 motor tugs and 50 dumb (nonpowered) barges of 1,000-ton capacity each.

The current composition of the Hungarian inland water fleet (see Table 3*) is the result of keeping a static inventory of passenger ships and increasing the number of dumb barges and cargo vessels** during 1950-60. Tonnage moved by inland water transport and ton-kilometer performance more than doubled during the same period. This performance, achieved primarily through increased utilization of the fleet, appears to be high compared with the small increase in the number of vessels during 1950-60.

Hungary faces the problem of shortages of tugboats*** and barges, which it is attempting to solve by more intensive utilization of existing fleet capacity -- that is, a more rapid turnaround and a better repair system. 23/ The general condition of the fleet is believed to be only fair, however, and the ports are poorly developed. It is estimated that small future increases in performance will be achieved through modest improvements in efficiency of fleet operations, although there is a definite limit to the increased performance that can be achieved by this means. Beyond this limit, additional investment will be necessary.

4. Pipelines

The use of pipelines as a mode of transport in Hungary has been limited largely to the movement of natural gas from domestic producing wells to industrial and municipal centers for use as fuel. Domestic pipelines have a diameter of about 8 inches and provide a cheaper and more convenient means of transporting natural gas than could be provided otherwise. A joint Hungarian-Rumanian pipeline project was completed late in 1958 to supply high-grade natural gas to the Hungarian chemical industry at Tiszapalkonya. The line reportedly has an annual capacity of 200 million cubic meters of natural gas.† 24/

The Second Five Year Plan indicated that a pipeline system 400 km long "should" be constructed to carry gas and petroleum. 25/

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* Appendix A, p. 26, below.

** The increase in cargo vessels was due to the addition of several merchant ships.

*** Although referred to as tugboats, these are more properly towing vessels with some carrying capacity.

† The total length of the pipeline is 365 km, of which 135 km are in Hungary.

It is not known to what extent the plan was carried out, but the completion of the joint Hungarian-Rumanian gas pipeline indicates some degree of plan fulfillment.

The importance of pipeline transport in Hungary will increase when the Soviet-Satellite pipeline is completed. The Hungarian part of this pipeline will be about 130 km long, branching from the Czechoslovak line south through Dregelypalank, bypassing Budapest, and terminating at Szazhalombatta -- a small city just south of Budapest on the Danube River, where an oil refinery will be built. Construction of this line is scheduled to begin during 1961 and to be completed by mid-1962. 26/ Future plans also call for a 110-km pipeline leading eastward to Cegled for the distribution of products. 27/ The completion of this project should result in a sharp shift of petroleum transport from railroads and waterways and thus should partly relieve the present heavy traffic on the Budapest-Zahony rail line.*

C. Performance and Future Trends

1. Performance

Although the present Hungarian transportation system leaves much to be desired in the matter of efficiency, it has proved adequate to fill the freight and passenger traffic demands placed on it in recent years. In comparison with Western transportation service and even with that of East Germany, Czechoslovakia, and Poland, the Hungarian transportation system does not always handle traffic quickly or safely or at the lowest cost. The system does meet the demands placed on it, however, and it has not as yet become a deterrent to economic growth.

Comparison with the average transportation performance of other countries indicates areas in which Hungarian transportation could be improved. Other European Satellites operate in general with the same type of equipment, over similar terrain, and at a comparable stage of technological development. Thus, other things being equal, the average performance in these countries should be similar to that in Hungary.

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* Although petroleum accounts for only about 4 percent of the total railroad tons carried, a large part of this traffic moves on the Budapest-Zahony line. The small percentage is deceptive also because of the high percentage of empty haul as cars are moved to the Soviet-Hungarian border for loading.

In railroad transport the average load per freight car in Hungary is exceeded by all the Satellite countries for which data are available.* In traffic-kilometers per kilometer of route, only Bulgaria and Rumania rank below Hungary. Hungary also ranks last in terms of traffic-kilometers performed per railroad worker, indicating a low level of labor productivity. In terms of traffic-kilometers performed per capita, however, Hungary ranks fourth, being exceeded by Czechoslovakia, Poland, and East Germany. Precise comparative data on inland water and highway transport are not readily available for the Satellites, but Hungary probably ranks below Czechoslovakia, Poland, and East Germany in output of both of these modes of transport.

There seems to be considerable room for improvement in the efficiency of utilization of Hungarian equipment and in the productivity of the labor force, particularly in rail transport. The alternatives to an increase in utilization are additions of capital equipment and perhaps even of labor inputs. The low level of labor productivity seems to indicate that the major problem in this area is more qualitative than quantitive. The data seem to indicate that Hungary is not getting as much output from its transportation system as is possible, and only in this sense can transportation be deemed inadequate, for shortages might not occur if available labor and equipment were used more effectively.

During 1950-60 the figure for railroad tons carried more than doubled, to 96 million tons, although the railroads' share of the total tons carried by inland transport declined from 78 to 44 percent. Ton-kilometer performance in 1960 was 2.5 times that of 1950, but the railroads' share of the total performance declined only slightly.

The performance of motor truck transport** has increased at a faster rate than that of railroad transport. During 1950-60, tons carried increased about 10 times, to 121.5 million tons, and the motor truck share of the total tons carried by inland transport increased from 20 to 55 percent. Ton-kilometer performance increased about 10 times during the same period, but the motor truck share of the total transport performance was only about 10 percent.

The performance of inland water transport has shown a slower rate of growth than that of either railroads or motor trucks, and although this performance about doubled in terms of both tons

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* Excluding Albania the average load in Hungary of 15.5 tons was exceeded by from 3 to 21 percent in other Satellite countries in 1958.
** See Table 6, Appendix A, p. 29, below.

carried and ton-kilometers during 1950-60, the relative position of inland water transport declined.*

The total number of passengers carried by the Hungarian transportation system more than doubled during 1950-60, from 287 million to about 860 million passengers. A similar increase occurred in passenger kilometers, while the average length of haul remained almost the same. Although the performance of all modes of transport increased in absolute terms, the railroad part of the total performance increased slightly, the highway share declined, and inland water performance remained an almost insignificant part of the total.

2. Future Trends

The Hungarian uprising of 1956 and the poorly coordinated and wasteful use of scarce investment funds during 1950-60 both contributed to a scarcity of capital for the transportation system. Because of the policy of according a low priority to transportation, this scarcity of capital has prevented railroad and road renovations as well as additions and improvements to equipment. The input of new capital has dwindled to the point where it no longer is equal to capital retirement. The result has been a constantly growing average age of most transportation facilities and an annual increase in the demand for capital replacements.

Labor productivity probably will be increased within the present capital plant but not enough to compensate completely for the scarcity of capital. In all three modes of transport, capital replacements and additions will ultimately be necessary. The present rate of capital addition will not create an increase in labor productivity in either railroad or inland water transport sufficient for projected growth in the demands for service. In motor transport, labor may be expected to increase capability through improvement in vehicle utilization.

Shortages may be expected to continue unless transportation is utilized more efficiently or unless the available capability is expanded by capital additions and improvements in all modes of transport. An effective transportation system must combine inputs of new and replacement capital into all modes of transport with more productive employment of the existing system.

During 1961-65 the performance of all modes of transport will increase in absolute terms. The rate of growth of highway transport will exceed that of either rail or water, but railroads will

* Inland water transport in 1960 accounted for 1.0 and 6.5 percent of the total amount of transport tons carried and ton-kilometers, respectively.

remain the principal mode of transport. Increases in railroad performance will be effected chiefly through a program of dieselization and increases in efficiency, with only modest additions to the inventory of rolling stock. Highway transport performance will be increased through moderate increases in inventory accompanied by increased utilization of the existing truck park. The Hungarian authorities plan to increase inland water performance through increases in inventory and a policy of port improvement. There are no indications, however, that these plans are being implemented, and it is believed that water transport performance will increase at a slow rate during 1961-65. The part of the total performance accounted for by inland water transport probably will decline during the next 5 years.

III. Finance

A. Price Policies

Early in 1959 a simplified railroad freight classification and rate structure was put into effect in Hungary, designed to increase revenue; to force diversions of short-haul traffic (less than 31 km) from railroad to highway transport; and to reduce the number of classes of goods, which under the new classification system were reduced from 5 to 2 for less-than-carload (LCL) shipments and from 49 to 9 for carload (CL) shipments. 28/ The new rate structure also increased the minimum weight charge for LCL shipments from 10 to 50 kilograms. This change probably will help bring the revenue from small shipments closer to the costs involved. 29/

Distance zones for CL shipments were revised from 5-km zones to uniform 10-km zones up to a distance of 500 km, to 20-km zones for distances between 500 and 800 km, and to 50-km zones for distances in excess of 800 km. Changes also were made in the classification of groups, and the nomenclature of goods was simplified. The minimum tariff distance was raised from 10 to 30 km. 30/ Raising the weight and distance minimums should have the effect of diverting LCL and short-distance hauls to motor transport or at least should help make such traffic pay its own way. If railroad operations can be made compensatory, the balance of the transport sector account will change from a net "deficit" to a net profit.*

There is no evidence of changes in the rate structure of either motor or inland water transport. Motor transport rates need no change for motor transport to continue to operate without a subsidy. Some increases in waterway rates may be feasible as a result of increased railroad rates.

B. Operating Costs

The internal financial condition of Hungarian transportation, as represented by the official combined profit-and-loss statement of railroads, motor trucks, and inland water transport before 1959,

* See B, below.

showed an apparent net deficit. The railroads incurred the major portion of this "deficit," and motor transport showed the only net "profit." The figures may be deceptive, however, because the railroads may be simply carrying a higher depreciation (or amortization) rate than is necessary rather than showing this amount in a cash surplus fund.* The costs of new road construction are not charged to highway transport.

Available statements on income show that the net annual "deficit" of the railroads has been increasing at a rather significant rate, chiefly because of the percentage increase in the depreciation account. The percent of total costs assigned to other factors has remained reasonably constant. It seems possible that this railroad "deficit" is merely a bookkeeping device, for the depreciation account has increased in inverse ratio to the amount of capital investment funds received from the central government. Such a device would serve the following two primary purposes: first, funds would thus be made available for capital investment, and, second, the deficit position of railroad operations would provide a good reason for rate increases. If rates are increased, investment funds for the railroads could be obtained from customers of the railroad system rather than from taxpayers.

C. Comparative Costs

1. Factors Affecting Cost

Railroads will continue to be Hungary's principal mode of transport. The density of the network poses a problem of high fixed cost for rail operations, which in turn keeps the average unit cost of goods transported at a high level. About 90 percent of all rail traffic is carried on approximately one-half of the total track network. 31/ The average intensity of use of various segments of the line varies from 10 tons per day on lines of light density to 24,000 tons per day on lines of heaviest density. 32/ The average operating cost of these lines is high, but they contribute to the total load of the system and in many cases offer district economies over the introduction of motor transport.

Proposals have been made to eliminate or reduce railroad service in some areas of chronic low traffic density and to replace it with truck transport, which can be more easily adjusted for areas that require only periodic service. Trucks also would eliminate some trans-loading problems. Such proposals would not apply, however, to lines

* The depreciation rate of Class I railroads in the US, where depreciation should be higher than in Hungary because of newer equipment and more frequent renewals, amounted to 6.4 percent of total costs in 1959 compared with 18.7 percent carried in the Hungarian financial statement of 1955.

of light density which are considered to have strategic importance or to areas in which no satisfactory road system presently exists.

The Minister of Transportation and Postal Affairs on 30 September 1959 ordered immediate termination of railroad passenger and freight service on some secondary lines, 33/ after which the areas were to be served by motor trucks. Although this action applied to only 25 km of line, it is highly significant as a step toward abandoning uneconomic rail facilities and replacing them with less costly service.

2. Effects of Costs on Traffic Shifts Between Carriers

The Hungarian government's attempt to make rail transport compensatory may have changed the relative cost structure of transportation service so as to divert some short-haul traffic from railroads to motor transport. This change would extend the absolute advantage of motor transport in cost to the shipper of short-haul movement from its present range of 10 to 12 km to distances approaching 50 km, thus improving the cost position of motor transport in comparison with the railroads.

It is estimated that inland water transport will continue to be less important than other carriers, with little additional tonnage acquired from new traffic or from railroad or motor transport. The cost structure of inland water transport may change slightly in absolute as well as relative amounts if efforts are made to reduce or eliminate the difference between costs and earnings.

3. Effects of Transportation Price Policies on the Economy

If it is assumed that the depreciation account of each mode of transport has improved its cash flow position, the reported deficit position of railroad and inland water carriers does not accurately reflect the subsidy that is indicated by the accounts. If the depreciation account provides funds for adequate replacement of natural depreciation plus an excess (as may be indicated by the ratio of depreciation cost to total cost), the excess could be used either for capital additions to transportation or for transference to the central budget for allocation to some other economic sector. Such a transaction would indicate that transportation charges are compensatory and that the deficit is artificial. If the depreciation account accurately reflects material depreciation and is actually expended during the fiscal period, however, the deficit would then represent an actual cash or credit transfer to transportation from the central budget and thus would indicate a noncompensatory ratio of earned revenues to costs.

If transportation revenues do not cover costs and if subsidization from the central government is necessary, the costs of operating the transportation system are levied on the entire economy. Conversely, if rates are based on actual costs, the cost of operating the transportation system is distributed among the shippers. Government policy in this matter could affect the geographic distribution of industry.

D. Capital Investment

1. General

During the past 10 years the share of transportation and communications in total investment by the central Hungarian government has varied from a high of 19.3 percent in 1950 to a low of 6.8 percent in 1954.* After 1950, by which time the war-damaged system had been partly restored, the rate of investment funds showed a general downward trend. This curtailment of investment funds (particularly during 1953-57), together with intensive utilization, resulted in a general deterioration of the transportation system. By 1957 a larger share of the total central government investment funds apparently was necessary, and the rate of investment increased during 1958-59, then decreased once more during 1960.

The decline in central investment funds allocated to transportation and communications actually represented an internal shift in emphasis in the allocation of Hungarian investment funds toward the several sectors of the economy. The share of transportation in total central investment declined on an annual basis, while annual gross investment of the economy rose to a peak of 16.8 billion forints** in 1953 and then declined to an annual outlay of 11.1 billion forints in 1957, a 34-percent decrease compared with 1953.

Over the 5-year period 1950-54, transportation received 11.5 percent of the total gross investment. The total 5-year allotment was sizable yet did not completely restore the war-damaged facilities to good operable condition. The shift in investment priorities at the expense of transportation (and communications) was not, therefore, a result of any absolute satisfaction of the large requirements of transportation for reconstruction, but it represented a diversion of scarce capital into industry rather than into transportation.

* See Table 2, Appendix A, p. 25, below.
** Forint values in this report are given in current forints and may be converted at a noncommercial rate of exchange of 23.48 forints to US $1. This rate does not necessarily reflect the value of forints in terms of dollars.

In 1955, an interim year during which plans were made for the Second Five Year Plan, 7.7 percent of Hungarian gross investment was expended on transportation. In 1956 the share of transportation was 8.0 percent of the total gross investment, whereas the Second Five Year Plan called for transportation and communications to receive about 12.8 percent of the total gross investment.

The year 1957 was a period of readjustment after the 1956 uprising and was used for formulation of the Second Three Year Plan (1958-60) (the First Three Year Plan covered 1947-49), which replaced the Second Five Year Plan (1956-60). The Second Three Year Plan allotted 4,093.4 million forints (12.4 percent of the total gross investment) to transportation and communications for investment purposes, thus leaving the relative position of the sector largely unchanged from the percentage allotted under the 1956-60 Plan. Indications are, however, that the goal of 12.4 percent of the total gross investment during 1958-60 was not reached, inasmuch as the transportation and communications sector received only 10.6 and 12.7 percent in 1958 and 1959, respectively, and only 9.4 percent was planned for 1960.

2. Investment in Railroads

Railroad transport received a greater part of investment in transportation than the other modes of transport during 1950-54 and continues to do so. Originally the Second Five Year Plan called for investing 51.4 percent more in railroad transport than was invested during the First Five Year Plan. Because of the uprising of 1956, the original Second Five Year Plan goal of 4,834 million forints for investment in railroads probably was not accomplished, but it probably was more closely approached than was anticipated in the formulation of the Second Three Year Plan.

3. Investment in Roads and Bridges

The need for major efforts in rebuilding roads and bridges was recognized during the early years following World War II, and significant outlays were made for roads and bridges. The damage to roads and bridges was substantially repaired, and a good deal of improvement was undertaken. The apparent drop in appropriations for roads probably was the result of some absolute decrease in funds allocated for this purpose, but it also appears that the funds allocated to roads and bridges may have been shifted to be included in the "other" transportation category after 1956.

Investment in highway transport for 1956-60 was to provide dust-free cover for 17,000 km of highways. The 1958-60 Plan makes no mention of the current plans for highway improvement.

4. Investment in Other Modes of Transport

Investment in the remaining aspects of inland transport such as waterways, fleet inventory, and motor vehicle inventory has fluctuated more widely than investment in railroads. A breakdown of actual amounts invested in each of the above categories is not available, but it is likely that air transport and inland waterways receive only modest amounts and that the bulk of the nonrailroad residue is allocated to highway transport.

The Second Five Year Plan scheduled a total of 10.1 billion forints for investment in transportation and communications. Of this total, 4.8 billion forints were to go to rail transport. If past allocations are any indication, 8 to 10 percent of the total went to communications, leaving approximately 4.3 billion forints for investment in all other modes of transport for the 1956-60 plan period. No information is available as to what allocation was made of this sum among the modes of transport other than railroads. The suspension of the Second Five Year Plan in January 1957 left the investment plans for motor and inland transport somewhat obscure, and the Three Year Plan announcements made no mention of the investment that could be anticipated in these fields.

5. Investment Outlook

The proportion of total investment in transportation going to each of the various modes of transport is expected to follow a pattern placing the main emphasis on rail transport and secondary emphasis on motor transport. Inland water transport probably will continue to get a token place in investment allocations. Investment in transportation probably is greater than it has been since 1954, in both absolute and relative terms. Progress under the Three Year Plan probably was better than planned, and if transportation was allotted 11 or 12 percent of the total investment funds, the absolute increase derived from a growing total annual investment should have improved the badly deteriorated transportation facilities.

APPENDIX A

STATISTICAL TABLES

Table 2

Investment in Transportation and Communications in Hungary
1950-60

Million Current Forints

Year	Total Capital Investment a/	Transportation and Communications a/	Total Transportation b/	Rail Transport b/	Roads and Bridges b/	All Other Transportation b/
1950	9,665	1,863	1,647	817	382	448
1951	13,127	1,786	1,656	679	324	653
1952	15,953	2,350	2,151	699	472	980
1953	16,848	1,777	1,574	601	256	717
1954	11,771	806	724	397	55	272
1955	11,207	950	866	510	25	331
1956	11,572	1,010	928	485	21	422
1957	11,082	876	800 c/	391 c/	0 d/	409 c/
1958	13,663	1,447	1,331 e/	640 e/	0 d/	691 e/
1959	30,463	3,857	3,652	1,865	0 d/	1,787
1960	28,600 f/	2,700 f/	2,452 d/	1,156 d/	0 d/	1,296 d/

a. [redacted]
b.
c. 36/
d. Estimate based on the average percentage for each category during 1950-56 except for roads and bridges, which were assumed to be included in the "all other" category during 1957-60.
e. 37/
f. 38/. Plan data.

50X1

Table 3

Transportation Inventories in Hungary by Mode of Transport a/ 1950 and 1956-60

Units

Mode of Transport	1950	1956	1957	1958	1959	1960
Railroad						
Locomotives	2,231 b/	2,360	2,420	2,400	2,450	2,460
Steam	2,163 b/	2,270	2,300	2,270	2,200	2,200
Diesel	5 b/	20	50	60	180	190
Electric	63 b/	70	70	70	70	70
Freight cars	52,200 b/	58,200	58,200	59,500	60,800	62,000
Passenger cars	4,400	5,100	5,100	5,100	5,100	5,500
Highway						
Trucks	4,400	20,000	21,000	22,300	23,600	25,500
Buses	2,800	3,800	3,700	4,000	4,400	4,700
Other	N.A.	N.A.	N.A.	30,800 c/	30,800	30,800
Inland water						
Tugboats d/	N.A.	42	42	42	42	42
Barges	N.A.	75	75	75	75	75
Passenger vessels	N.A.	286	292	298	304	304

a. Estimated unless otherwise indicated. These figures are for standard-gauge railroad equipment and nonmilitary motor vehicles only.
b. 39/
c. 40/. [redacted] this figure includes 17,900 automobiles and 12,000 "special vehicles." The "special vehicles" probably include fire trucks, ambulances, police vehicles, and possibly city buses. 50X1
d. Although referred to as tugboats, these are more properly towing vessels with some carrying capacity.

Table 4

Performance of Railroad Transport in Hungary a/
1950-60

	Freight Transport								Passenger Transport		
	Million Metric Tons										
	Tons Carried										
Year	Narrow-Gauge Railroads b/	Standard-Gauge Railroads c/	Export Tonnage c/	Import Tonnage c/	Transit Tonnage c/	Total Tonnage Carried d/	Ton-Kilometers d/ (Million)	Average Length of Haul e/ (Kilometers)	Passengers Carried d/ (Million)	Passenger-Kilometers f/ (Million)	Average Length of Haul g/ (Kilometers)
1950	N.A.	N.A.	N.A.	N.A.	N.A.	41.465	5,420.8	131	255.2	7,134	28
1951	N.A.	N.A.	N.A.	N.A.	N.A.	48.236	6,273.0	130	339.3	10,586	31
1952	N.A.	N.A.	N.A.	N.A.	N.A.	59.825	7,442.4	124	354.8	10,628	30
1953	2.367	57.887	1.680	5.015	1.815	68.764	8,173.2	119	362.6	10,656	29
1954	2.196	53.816	2.011	5.379	2.109	65.511	8,168.7	125	363.3	10,491	29
1955	2.231	56.544	2.694	5.756	2.822	70.047	8,801.8	126	365.7	10,262	28
1956	2.126	49.661 h/	2.221 h/	5.866 h/	3.376 h/	63.250	8,164.2	129	327.5	9,204	28
1957	2.529	55.672 f/	1.806 f/	9.313 f/	3.633 f/	72.953	9,490.2	130	354.1	10,398	29
1958	2.363	61.654 f/	2.517 f/	7.856 f/	4.127 f/	78.517	10,235.2	130	397.5	11,875	30
1959	2.854 i/	67.119 j/	2.619 j/	8.608 j/	5.300 j/	86.500	11,711.7	135	437.2	12,837	29
1960	2.900 k/	76.778 l/	2.900 k/	8.600 m/	4.800 n/	95.978 o/	13,346.5 o/	139	483.7 o/	14,500 l/	30 l/

a. Including data from standard-gauge railroads and narrow-gauge railroads for "limited public use" but not including data from narrow-gauge railroads for forest and industrial use.
b. Total reported tons carried less standard-gauge domestic, export, import, and transit tonnage.
c.
d. 50X1
e. Ton-kilometers divided by tons carried.
f. 50X1
g. Unless otherwise indicated, passenger-kilometers divided by passengers carried.
h. 44/
i. Reported total tonnage less standard-gauge tonnage.
j. 45/
k. Estimated to be 3 percent of total tons carried.
l. Estimated.
m. Estimated to be 9 percent of total tons carried.
n. Estimated to be 5 percent of total tons carried.
o. 46/

Table 5

Railroad Operating Factors and Freight Car Requirements in Hungary
1956-60

	Unit of Measure	1956	1957	1958	1959	1960
Performance a/						
Domestic traffic	Million metric tons	49.661	55.672	61.654	67.119	76.778
Export traffic	Million metric tons	2.221	1.806	2.517	2.619	2.900
Total domestic and export traffic	Million metric tons	51.882	57.478	64.171	69.738	79.678
Import traffic	Million metric tons	5.866	9.313	7.856	8.608	8.600
Transit traffic	Million metric tons	3.376	3.633	4.127	5.300	4.800
Total tons carried	Million metric tons	61.124	70.424	76.154	83.646	93.078
Operating factors						
Freight car turnaround time b/	Days	4.6	4.2	3.9	3.8	3.7 c/
Average load per loaded car b/	Metric tons	14.7	15.2	15.5	16.5	17.0 c/
Times each car used per year d/	Units	79.3	86.9	93.6	96.1	98.6
Tons hauled per car per year e/	Metric tons	1,170	1,320	1,450	1,590	1,680
Average daily carloadings f/	Units	11,400	12,700	13,500	13,900	15,000
Freight car requirements g/						
Domestic traffic	Units	42,600	42,100	42,500	42,400	45,800
Export traffic	Units	1,900	1,370	1,740	1,650	1,730
Domestic and export requirements	Units	44,500	43,500	44,200	44,000	47,500
Import traffic	Units	5,030	7,050	5,420	5,430	5,130
Transit traffic	Units	2,890	2,750	2,840	3,340	2,860
Total car requirements	Units	52,400	53,300	52,500	52,800	55,500

a. See Table 4, p. 27, above. Standard-gauge only.
b.
c. Estimated.
d. 365 days divided by turnaround time.
e. Times each car used per year multiplied by average load per loaded car. Data have been rounded to three significant digits.
f. Total tons carried divided by 365 days and the result divided by the average load per loaded car. Data have been rounded to three significant digits.
g. Tonnage divided by 365 days, with the result divided by the average load per loaded car and multiplied by turnaround time. Data have been rounded to three significant digits.

50X1

Table 6

Performance of Motor Vehicles in Hungary 1950-60

Year	Freight Transport							Passenger Transport		
	Million Metric Tons Carried			Metric Ton-Kilometers						
	Transport Group a/	Other b/	Total c/	Transport Group a/ (Million)	Other b/ (Million)	Total c/ (Billion)	Average Length of Haul d/ (Kilometers)	Passengers Carried a/ (Million)	Passenger-Kilometers e/ (Billion)	Average Length of Haul f/ (Kilometers)
1950	6.66	4.24	10.90	93.5	46.5	0.14	13	28.2	0.40	14
1951	17.92	11.08	29.00	221.3	128.7	0.35	12	51.0	0.72	14
1952	26.79	16.61	43.40	375.7	234.3	0.61	14	66.1	1.03	16
1953	38.37	23.83	62.20	536.2	333.8	0.87	14	90.7	1.47	16
1954	34.59	21.51	56.10	600.3	349.7	0.95	17	114.4	1.80	16
1955	36.76	22.84	59.60	590.1	359.9	0.95	16	138.0	2.04	15
1956	39.69	24.61	64.30	588.4	371.6	0.96	15	146.3	2.15	15
1957	40.33	24.57	64.90	600.5	359.5	0.96	15	172.6	2.48	14
1958	43.92	27.28	71.20	604.1	395.9	1.00	14	216.1	2.89	13
1959	53.43	33.07	86.50	702.4	417.6	1.12	13	269.4	3.40	13
1960	70.64 g/	50.86	121.50	897.4 g/	682.6	1.58	13	372.3 g/	4.20 c/	13

a. [redacted] 50X1
b. Estimated total performance less transport group performance.
c. Estimated.
d. Ton-kilometers divided by tons carried.
e. [redacted] 50X1
f. Passenger-kilometers divided by passengers carried.
g. 50/

Table 7

Performance of Inland Water Transport in Hungary a/
1950-60

Year	Freight Transport: Metric Tons Carried (Thousand)	Freight Transport: Ton-Kilometers (Million)	Freight Transport: Average Length of Haul b/ (Kilometers)	Passenger Transport: Passengers Carried (Thousand)	Passenger Transport: Passenger-Kilometers (Million)	Passenger Transport: Average Length of Haul b/ (Kilometers)
1950	1,110	478.4	431	3,287	59.6	18
1951	1,514	660.5	436	2,841	65.0	23
1952	1,659	775.8	468	2,603	60.3	23
1953	1,883	862.0	458	2,801	61.6	22
1954	1,760	842.7	479	2,357	58.0	25
1955	1,749	764.7	437	2,809	67.1	24
1956	1,509	598.0	396	3,418	86.2	25
1957	1,543	671.3	435	3,626	74.7	21
1958	1,891	856.6	453	3,637	79.0	22
1959	2,104	888.8	422	3,699	79.1	21
1960 c/	2,310	1,030.0	441	3,660	87.0	24

a.

b. Ton-kilometers divided by tons carried and passenger-kilometers divided by passengers carried.

c. Estimated.

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HUNGARY: SELECTED RAILROADS, HIGHWAYS, AND INLAND WATERWAYS

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