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CHAPTER 5

Conclusions

OUR examination has led to the conclusion that transportation of more than local importance in the USSR is overwhelmingly supplied by railroad. Our more detailed examination of the statistical record open to us has, therefore, been confined to this form of transportation. We have sought to appraise the rate of traffic growth and to ascertain in a general way how this traffic growth has been accommodated through the development of the railroad system and through the control of railway operations. And we have sought by comparison of operating statistics to understand Soviet rail operations sufficiently to satisfy ourselves that, bearing in mind the bias in the data whose direction is known, the reported traffic could reasonably be expected to be handled with the plant and methods available.

The inquiry has led us through the toils of statistical manipulation, changing coverage and definitions, reporting inadequacies, the absence of conventional audit procedures, and the pressures on employees at all levels to resort to misrepresentations. Yet we have concluded that, when general allowances are made, the statistical record is reasonably congruous and can be interpreted suitably for our purposes. The general level of Soviet development, however, has compelled us to orient our thinking to the first two decades of the present century in our own railway development to find conditions more nearly comparable. Even for this period, however, very significant differences must be noted.

Whether considered in relation to land area, population, or traffic volume, the Soviet rail network is small. It represents essentially a planned system of main routes without competitive overlap and with feeder lines developed sufficiently only to support major sources of tonnage on a minimum basis. Its growth has been carefully controlled and has been minor in comparison to the growth of traffic moved over the system. Development since 1926 has, therefore, been intensive and has centered on procuring as much transport service as possible from the existing network, filling it out only in cases necessitated by new industrial and agricultural development or where hauls could be notably shortened by construction providing cut-offs between existing segments of the system. To a degree unfamiliar in the West, plant location has been forced to conform to the railway location,

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and agricultural areas have been forced to convey their output to the rail system, usually by primitive means.

The growth of Soviet freight traffic has been very rapid; rates of growth have been accomplished over relatively long periods which were equaled or approximated in the United States only during several brief periods before 1900. The growth of rail traffic has been more rapid than that of total traffic, as railroads have been required to bear an increasing share of the demands made by the production phases of the economy. Yet the Soviet Union was in the beginning so ill provided with mechanized transport that this growth is measured from a diminutive base. It is of importance that growth has continued at a rapid rate since the recovery of the pre-World War II level, for 1940 affords a very substantial base from which to measure postwar growth. Yet the rapidity of Soviet growth from 1926 to the present leaves it still with only two-thirds the volume of intercity freight transportation generated in the United States. And on a per capita basis the Soviet provision of freight transportation is a still smaller proportion of the U.S. level. The rapidity with which the volume of freight transportation in the USSR has grown in relation to that in the United States is, however, certainly of great significance. In 1928 the United States produced six times as much transport, in 1940 only 2.7 times as much, and in 1959 only 1.5 times as much. Yet the U.S. volume remains nearly 500 million ton-miles above the Soviet volume in a year whose volume was adversely affected in the United States by a prolonged steel strike and other adverse factors.

During the whole Soviet period freight transportation has never been in abundant supply. Generally it has been tight, and agriculture and industry have been forced to accommodate themselves to a "tempo" of transport operation which seeks to secure a steady use of plant and equipment throughout the year. Added tasks and expense have, therefore, been thrown on other areas of the economy which are rather consistently covered up. Nevertheless, it appears that transportation has never been so seriously underprovided as to place a noticeable restraint on the growth of industrial output. The so-called transportation crisis of the 1930's comes nearest to such a restraint and was regarded as extremely serious. Requirements are not met as promptly at any time as they are in the West, but in any given year the economy's output tends to get moved so that shortfalls of production are not readily traceable to failures of the transport system.

Over the period studied, it is likely that the volume of freight transportation generated affords a reasonable quantitative measure

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of the total output of goods and of the movement of that output from year to year. We may state with considerable confidence that the traffic data, both tons originated and ton-kilometers, are overstated. We cannot measure the amount of this overstatement, but it may easily come to as much as 10 per cent. In short, it is not insignificant and cannot, therefore, be ignored when using the Soviet data. The composition of Soviet rail traffic also affords somewhat of an index to the make-up of the Soviet economy. It is heavy in fuels, ores, primary materials, and basic construction materials. It is light in manufactured products, particularly those representing the higher stages of manufacture.

Soviet transport policy has manifestly sought to keep capital investment at a minimum and to sacrifice the quality of performance as well as the inputs of fuel and labor to this objective. It has not been as successful as the statistics would suggest, for not only is traffic overstated, but equipment is understated. Nevertheless, the utilization secured from track, yards, motive power, and cars is very high, and strenuous efforts are made to improve utilization through exhortation and through a system of incentives and penalties based on efficiency indexes, a practice almost unknown elsewhere in the railroad world. While these practices invite misrepresentation at all levels, they certainly stimulate performance. Of greater importance to high utilization, however, is the limitation of the plant and the restriction of traffic to its confines. The traffic is virtually forced into a remarkably even flow in which weekly and seasonal peaks come close to disappearing. The service, moreover, is almost undifferentiated and both for freight and passenger traffic the primitiveness of service is unmitigated by any concessions to the needs or desires of shippers or travelers. No period in our own transport history provides a reasonable comparison, nor would such a period be expected to exist in a competitive system.

Soviet railway technology has remained primitive, although with the rapid introduction of diesel power and the extension of electrification, higher standards are swiftly being achieved. Except for occasional modern intrusions upon a minor scale, in the prediesel period, we must go back forty years in American railroad history for a comparison that is moderately valid. Yet the lag of technology, on the average, has been no bar to a continuing increase in the capacity of the system and we must bear in mind that the Soviet railroads today produce half again as many ton-miles as the United States railroads. It would be unfortunate to confuse obsolescence with a want of physical capacity. There is, indeed, an argument to be made that the Soviet

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adjustment to its resources and skills has been a reasonably good one over much of the period. It would appear that modernization is now under way on a considerable scale and that the present program, if fulfilled, will substantially transform the railroad system. It is significant, however, that improved quality of the transport service is not cited as a major objective of modernization. Instead, improved technology, especially of motive power, is to be applied in order to attain a further expansion of capacity with a minimum capital investment and without an unacceptable increase in fuel and man-power inputs.

The sharpest contrast between Soviet and Western transport is in the concentration of the Soviet Union on the railroad for both its freight and passenger requirements. The United States since the middle 1920's and Western Europe since the second war have developed mainly by expanding the nonrail forms of transport. No counterpart is observable in Soviet history. It is likely, indeed, that no major nation has ever been so completely dependent on the railroad as the Soviet Union is today. Since rail transportation in the United States now accounts for less than 40 per cent of total intercity freight ton-miles, it is essential to make comparisons of total intercity freight transportation despite very serious statistical inadequacies in both countries in much of the nonrail transport. Moreover, the virtual absence of automobile transportation and the limited volume of air transport must be kept in mind in evaluating a Soviet rail passenger traffic one-half larger than all commercial intercity passenger mileage in the United States, in addition to the fact that the railroad substitutes for much transportation here performed by local and suburban bus systems and by rapid transit lines. Even when suburban traffic is excluded from the Soviet data, the rail passenger traffic still somewhat exceeds the total of our rail, bus, and air passenger traffic excluding commutation.

There is a rational explanation for the Soviet concentration on rail transportation. The natural waterways of the Soviet Union which are capable of improvement for navigation purposes do not mesh well with the traffic flows required by the economy. Pipeline transportation has been of limited usefulness because of the want of concentrated flows which could fill large-diameter pipe. Hence neither of these forms of transport could have been developed, although either might prove more efficient than the railroad under certain circumstances. Motor transport could not be developed, except for local purposes, because of the lack of an improved highway system. No importance

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has been attached to highway development, doubtless because it is recognized that, by comparison with the railroad, truck or bus transportation is highly inefficient except on the shortest hauls and requires unacceptable inputs of fuel, labor, and repair parts, and a rate of vehicle replacement which cannot be sustained without very massive expansion of the automotive industry. Inability to secure from inland and coastal waterways a service in the long-haul transport of bulk commodities comparable to that performed in the United States, together with the long distances separating important industrial and resources concentrations, leads to an average haul for carriers other than water greater than in the United States. The comparative advantage of rail over motor transport increases rapidly with length of haul and the confinement of motor transport development to the very short hauls would seem to represent a decision favorable to the minimization of resources devoted to transport.

The emphasis placed on heavy industry in the Soviet economy and the lack of competitive distribution of consumer goods, even the lack of large-scale distribution of such goods, also create a pattern of traffic requirement capable of standardized handling in the mass and without regard to special service considerations. These conditions produce a climate highly favorable to the intensive utilization of the limited railroad plant. When allowance is made for the certain bias which overstates that utilization, we find no reason to suppose that the Soviet rail system is in any respect incapable of the performance which the traffic statistics—again allowing for bias—credit it with. In short, Soviet rail output is explicable. Even in intensity of plant and equipment, it nowhere exceeds numerous instances in this country where sufficient traffic volume has permitted intensive utilization. Traffic is spread much more evenly over the Soviet system and its flow is subject to a degree of central control that is not sought or achieved in a competitive system. Nor does the Soviet system carry the burden of superfluous and light traffic mileage that is so characteristic of the American system. Hence comparison of averages drawn from the experience of the two countries is highly misleading and contributes little to an understanding of the Soviet position.

