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ECONOMIC INTELLIGENCE REPORT

FREIGHT RATES IN COMMUNIST CHINA
1950-57



CIA/RR 156
November 1958

CENTRAL INTELLIGENCE AGENCY
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(ORR Project 43.1954)

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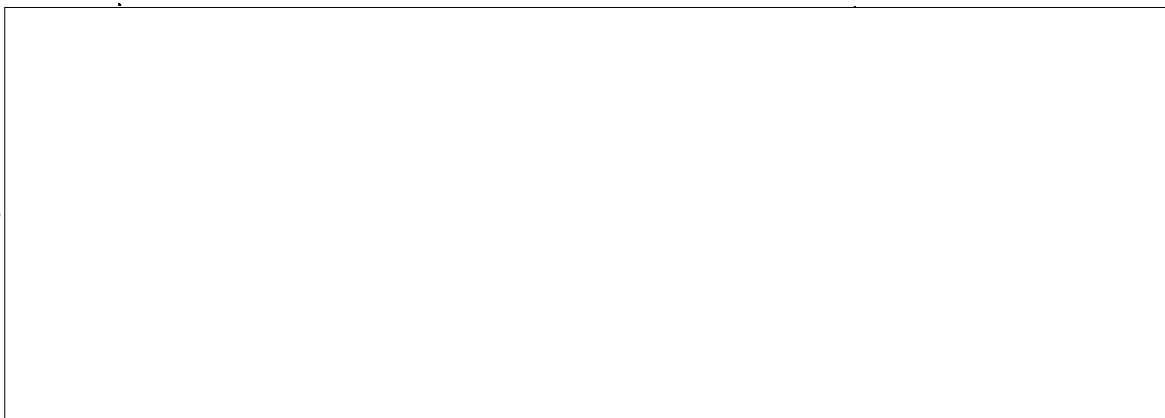
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FOREWORD

This report represents a first attempt to summarize and interpret the available information on freight rates in Communist China. Railroad and waterway freight rates are covered in considerable detail, whereas highway freight rates are accorded somewhat less attention In addition to a discussion of the freight rates pertaining to each form of transportation, rates for the different forms of transportation are compared in order to determine their effects on each other and on the general economy of the country.

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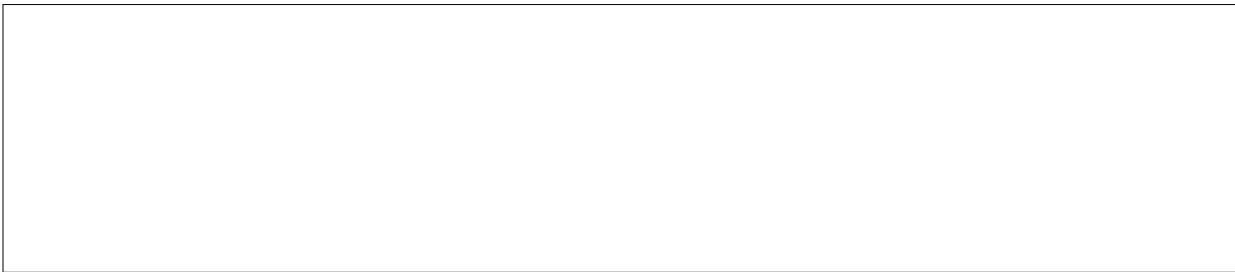
CONTENTS

	<u>Page</u>
Summary	1
I. Introduction	4
II. Railroad Freight Rates	9
A. History	9
B. Freight Rate Structure, 1950-55	11
1. Classification	11
2. Exceptions	12
3. Distance	13
C. Revision of Freight Rates, 1955	14
1. Unification	14
2. New Rate Philosophy	14
3. Implementation	16
D. Rates and Profits	17
III. Freight Rates for Water Transport	18
A. History	18
B. Principles of Ratemaking	19
1. Rates, Profits, and Investment	20
2. Rates for Bulk Cargoes	20
3. Interprovincial and Intraprovincial Rates	21
4. Reduction of Rates with Distance	21
C. Rate Structure, 1956	21
1. Classification	22
2. Distance	24
3. Exceptions and Special Rates	25
IV. Freight Rates for Highway Transport	25
A. Rate Structure	25

C-O-N-F-I-D-E-N-T-I-A-L

C-O-N-F-I-D-E-N-T-I-A-L

	<u>Page</u>
1. Classification	26
2. Exceptions	26
3. Distance	27
B. Highway Freight Rates in Yunnan Province, 1956	27
C. Rate Level	29
D. Rates and Costs	30



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Tables

1. Comparative Levels of Freight Rates for Selected Means of Inland Transport in China, Before World War II	5
2. Comparative Levels of Freight Costs for Selected Means of Modern Transport in Communist China, 1955	6
3. Freight Rates for Shipment of Selected Commodities to and from Southwest China, by River and by Rail, 1956-57	8
4. Rates in Effect for Class 27 Freight in Carload Lots on the Railroads of Communist China, 1950-55	15
5. Classification of Principal Commodity Groups Carried on the Inland Water Transport System of Communist China, 1956	23
6. Freight Rates for Highway Transport on Internal Routes in Yunnan Province, 1956	28

C-O-N-F-I-D-E-N-T-I-A-L

C-O-N-F-I-D-E-N-T-I-A-L

Charts

	<u>Following Page</u>
Figure 1. Communist China: Comparison of Railroad Freight Rates for Commodities in Classes 1, 15, and 30, 1950-55	12
Figure 2. Communist China: Comparison of Waterway Freight Rates for Commodities in Classes 1, 12, and 25, 1956	24

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FREIGHT RATES IN COMMUNIST CHINA*

1950-57

Summary

The control of freight rates in Communist China represents the power to control the vital arteries of the national economy. The ultimate authority to regulate freight rates is vested in the supreme administrative body, the State Administrative Council, which dictates the general features of the rate structure. Actual formulation of rate schedules is delegated to the Ministry of Railroads for railroad rates and to the Ministry of Communications for rates on the major water routes, both inland and coastal. The rates for motor trucks, local water routes, and native transport are established by the local authorities, both provincial and municipal.

In pre-Communist China, competition played a greater part in regulating freight rates, which were considerably lower on the railroads than on other carriers. For example, if the railroad carload rate equaled 100, the junk rate was 530; the river steamship rate, 640; the animal-drawn cart rate, 880; the human carrier rate, 2,400; and the motor vehicle rate, 3,000. These competitively determined relationships probably reflected costs of transportation fairly accurately.

Under the Chinese Communists, operating costs for motor trucks and river steamers have decreased considerably, although they remain substantially above the average for rail operations. Current costs of coastal shipping, however, are lower than railroad costs. For example, if the cost of moving freight by rail equals 100, the cost of coastal shipping is 81, and the cost of transportation on the Yangtze River is 142. In order to divert traffic from the railroads, the government has advocated that railroad freight rates be set higher than waterway freight rates where parallel routes exist and above highway freight rates for very short hauls.

During 1950-55, shipment of freight on the railroads of Communist China was governed by the rate schedule established in August 1950. The rates set up by this schedule for 30 classes of freight generally reflected commodity prices. The schedule also utilized the concept of a decreasing rate per ton-kilometer as the distance increased up to a certain optimum distance. Although the absolute differences between the rates per ton-kilometer for the higher and lower classes of merchandise

* The estimates and conclusions in this report represent the best judgment of this Office as of 1 August 1958.

C-O-N-F-I-D-E-N-T-I-A-L

were great, the relationship remained constant at all distances. Within each class the minimum mileage-block rate was normally about 60 percent of the maximum. Gradually, the Chinese Communists came to realize that the rate structure published in 1950 was closely related to charging what the traffic would bear; this is, high rates were charged for high-priced goods and low rates for low-priced goods. Consequently, many special rates were introduced to bring the rate structure more into line with the needs of the country. For example, special rates were established to encourage industrial plants to locate nearer the source of raw materials; to place plants in locations strategically less vulnerable; to stimulate the sale of products abroad in order to generate additional foreign exchange; to aid coal production; and to promote certain local industries.

One of the most important reasons for revising railroad freight rates in 1955 was the need for a unified rate structure for the entire country. The authorities emphasized that standardization of railroad freight rates would promote especially the development of heavy industry. The old rate structure with its 30 evenly spaced rate classes was abolished. The classes in the new structure were established by grouping together goods of a similar type into a class with appropriate subdivisions. These new homogeneous and more numerous classes (now totaling 77) were combined into 13 larger groups according to function or source. These 13 broad categories were, in turn, divided into two general groups, agricultural products and industrial products. The new rates were designed also to penalize "irrational shipments" and to divert very short-haul traffic from the railroads to trucks and native transport. The schedule provided for an increase in rates per ton-kilometer for some commodities beyond a distance considered to be optimum. The changes in rates which took place under the new schedule tended to offset each other so that there was little downward or upward change in the rate structure as a whole.

A comparison of railroad freight rates from the 1950 rate schedule with figures announced as average railroad costs for 1956 reveals that little or no freight moved at rates below cost. Even freight in the lowest class moving the average length of haul of 489 kilometers (km) was carried at a profit of more than 23 percent per ton-kilometer above the average cost of all freight, whereas the highest class of freight carried the same distance earned a profit of nearly 2,000 percent. This evidence substantiates Chinese Communist statements that the railroads produce large annual profits. These sizable profit margins undoubtedly reflected, in part at least, attempts to divert traffic from the railroads to the waterways.

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The fundamental consideration in setting freight rates for water transport in Communist China is that there should be a "rational" ratio between rates for water transport and rates for other forms of transportation. The "rational" ratio is based on the assumption that movement of goods by water transport costs less than by the other media, especially railroads. Therefore, water transport rates, by reflecting relative costs, should be lower than railroad rates. Even in Communist China, however, it is recognized that costs of water transport are higher than costs of other forms of transport under some conditions. The over-all cost of transport on the Yangtze River, for example, is higher than on the railroads. In order to preserve the so-called "rational" ratio, water transport charges have been reduced to the maximum extent possible, while still maintaining some profit margin. Railroad rates, on the other hand, have been set at a relatively high level, and profits consequently have been high.

A unified system of freight rates for water transport was not established in Communist China until January 1956, although there may have been a fairly widespread coordination of rates for water transport in 1951 as a result of the revision of the railroad tariff in mid-1950. The 1956 rate schedule contained 25 classes of freight, with most commodities of heavy density and low value included in the lower classes. Although there are fewer classes of freight in the rate structure for water transport than in the rate structure for rail transport, the former is more complex. Separate tariffs are given for the north coast, the south coast, and each major inland waterway system crossing provincial boundaries. The rates for south coast shipping are consistently higher than those for the north coast, reflecting the cost situation in the two areas. For all forms of water transport, rates per ton-kilometer apparently decrease consistently as distance increases.

Highway freight rates in Communist China are established by both provincial and municipal authorities. A simplified system of rates for various classes of freight is used, although considerably fewer classes have been set up than for either rail or water transport. In Yunnan Province in 1956 the lowest or fifth class rates on internal routes varied from 74 to 79 percent of first class rates and on interprovincial routes, from 74 to 82 percent of first class rates. Within each class, rates for trucks burning solid fuel generally were less than rates for trucks burning liquid fuel.

[redacted] highway freight rates in general have decreased considerably in recent years, perhaps by 20 to 30 percent between 1952 and 1956 for the country as a whole. In spite of these reductions, highway transport remains considerably more expensive for the shipper than either rail or water transport. Although one authority has estimated that motor truck transport is about 30 times as expensive as rail transport, other information indicates that truck

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transport is from 2 to 10 times as expensive, depending on the type of commodity hauled, the length of haul, and the location or terrain.

I. Introduction.

Transportation in Communist China is largely a state monopoly, and the control of freight rates thus represents the power to control the vital arteries of the national economy. The ultimate authority to regulate freight rates is vested in the supreme administrative body, the State Administrative Council, headed by the Premier. This body dictates the general features of the rate structure and gives the final approval that is necessary for major changes in rates to become valid.

The actual work of drawing up and administering the rate schedule is delegated to the appropriate ministries. Railroad rates are established by the Ministry of Railroads, and rates for the major water routes, both inland and coastal, are set by the Ministry of Communications. The freight rates for motor trucks, local water routes, and native land transport* are established by local authorities, both provincial and municipal. There is some evidence, however, that some truck rates, especially for interprovincial routes, may be governed by the Ministry of Communications. In any case, it can be assumed that the central authorities are not hesitant to provide guidance to the local authorities in their ratemaking functions.

The Chinese Communists appreciate the economic significance of the control of freight rates. Indeed, they have stated publicly that it is especially desirable to use freight rates as a method of control, ^{1/**} but they have to keep in mind various and conflicting goals in employing these controls. On the one hand, they desire that all freight rates be kept low in order to promote development of the economy, and, on the other hand, they look upon the railroads in particular as an important profitmaking organ of the state. Superimposed upon these two conflicting goals is the principle of using freight rates to promote or discourage other economic activities in accord with over-all economic aims.

Before analyzing ratemaking in the various media of transportation, it is desirable to look briefly at relative rate levels among the media and to consider the reasons for the differences that exist. In this

* See Table 1, p. 5, below, for the various types of transportation in the native sector.

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process the conflict existing between the intentions of the planners and the realities of transportation costs becomes immediately apparent. Because of the general inability of modern transportation to meet the existing and rapidly increasing demand for transportation, the authorities are anxious to make maximum use of all available means of moving freight. In particular, this means placing more of the burden on traditional native transport, which has reserve capacity, and upon the waterways, which can increase their capacity without costly construction of new routes and roadbeds. Efforts to direct traffic into these channels, however, have been frustrated by the fact that native transport and water transport (except on the lower Yangtze River and major coastal routes) cost more, sometimes much more, than movement by rail.

In the pre-Communist era, when freight rates were regulated more by competition, the comparative levels of rates for the various means of inland transport were as shown in Table 1.

Table 1

Comparative Levels of Freight Rates for Selected Means
of Inland Transport in China
Before World War II ^{a/}

Railroad Rate = 100	
Type of Transport	Comparative Freight Rates
Modern Sector	
Railroads	100
River steamships	640
Motor vehicles	3,000
Native Sector	
Junks	530
Handcarts	
2 men	840
1 man	940
Animal-drawn carts	
4 animals	500
1 animal	880
Camels	1,100
Mules, donkeys, and horses	1,400
Rickshaws	2,100
Human carriers	2,400

a. ^{2/}

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These competitively determined relationships probably reflected costs fairly accurately. Under the Chinese Communists, operating costs for motor trucks and river steamers have gone down considerably, although they still remain substantially above the average for rail operations. Currently, however, coastal shipping costs are lower than railroad shipping costs. The relative levels of costs for the various means of modern transport in 1955 are shown in Table 2.

Table 2

Comparative Levels of Freight Costs for Selected Means
of Modern Transport in Communist China a/
1955

	Railroad Rate = 100
Coastal shipping (north coast)	64
Coastal shipping <u>b/</u>	81
Railroads	100
Yangtze River transport <u>b/</u>	142
Coastal shipping (south coast)	160

a. 3/

b. Excluding port expenses. If the latter were included, water transport costs would be much higher.

It is difficult to account for the fact that the cost of water transport along the south coast is higher than that on the railroads or along the north coast. It may be that the volume of traffic along the south coast is not high enough to utilize vessel capacity as efficiently as along the north coast. A vessel operating with less than a full load incurs higher unit costs than one with a full load. Because voyages along the south coast are shorter than those along the north coast and because most of the ports have less mechanical loading and unloading equipment, the time south coast vessels spend in port is increased. A vessel loading or unloading in a port is incurring costs rather than earning revenue. Hence the less time a vessel spends in port the more its potential earning power is increased because of the greater cargo it can carry compared with such continuing costs as wages, stores, and bunkers. Weather hazards also may be reflected in the higher costs. Storms are more severe and more frequent on the south coast than on the north coast. Although the storms in most cases would not seriously affect the railroads, vessels sometimes have to spend several days in port to escape hazardous sailing conditions. Extra mileage may be involved in finding a safe port, thus increasing

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costs, and costs continue while the vessel's voyage is thus interrupted. 4/ All these factors could increase water transport costs and probably contribute to the situation on the south China coast.

Railroads, on the other hand, are subject to the law of increasing returns. 5/ Because of the heavy investment of the railroads in roadbed and supporting facilities, which is not characteristic of other forms of transport, railroad unit costs tend to decline as the volume of traffic increases, at least up to the point of most efficient utilization of the existing plant. As long as there is a substantial amount of unutilized capacity, increases in traffic will lower unit costs because the fixed or constant expenses can be spread over a larger amount of business. This phenomenon probably accounts, in part at least, for the fact that railroad costs in Communist China are lower than those of other forms of transport except coastal shipping on the north coast.

Any attempt to relate rates to operating costs would concentrate the demand for inland transport almost exclusively on the railroads. In actuality, there tends to be such a concentration of demand where the railroads provide service, but the fact that several cities and most of the towns and villages are not on the railroad lines automatically forces much traffic onto the other media, regardless of cost to the shipper. The pressure of traffic on the capacity of the railroad system is such, however, that the authorities are anxious to divert traffic from the railroads wherever they can. The two most promising prospects for such diversion are those waterways, inland or coastal, which effectively parallel railroad service, and the use of motor trucks and wagons for hauls of under 30 kilometers (km).

In 1956, after the latest revisions of the railroad and waterway freight rate structures, shippers still found it cheaper to use the railroads for most parallel routes. The chief exception was the haul from the northeast (Manchuria) and parts of north China to Shanghai, which, for most bulk goods, was 30 percent cheaper by coastal shipping than by rail. 6/ On most of the remaining competitive runs it has not been possible to shift demand by lowering water shipping rates because of the high costs of operation. On the Szechwan section of the Yangtze River for example, there are cases where the rate per ton of shipment of certain goods by river is more than 60 yuan higher than shipment by rail, although the average difference in rates is only about 5 yuan per ton.* 7/ Table 3** contains comparative rates for shipment of selected commodities to and from southwest China by river and by rail after the opening of the Pao-chi - Ch'eng-tu Railroad in 1956. The table indicates the wide spread between river and railroad rates for traffic in

* Tonnages are given in metric tons throughout this report unless otherwise indicated.

** Table 3 follows on p. 8.

C-O-N-F-I-D-E-N-T-I-A-L

Table 3
 Freight Rates for Shipment of Selected Commodities to and from Southwest China
 by River and by Rail ^{a/}
 1956-57

Commodity	Direction of Shipment	Route	Transportation Rates		Excess of River Rates over Railroad Rates
			River	Rail	
Rice	Downriver	Ch'eng-tu - Shanghai	59.43	38.31	21.12
Rice	Downriver	Ch'eng-tu - Mukden	77.46	44.85	32.61
Rice	Downriver	Chungking-Shanghai	39.65	46.12	-6.47
Rice	Downriver	Chungking-Mukden	57.73	52.29	5.44
Steel	Upriver	Shanghai-Chungking	61.23	41.40	19.83
General cargo	Upriver	Shanghai-Chungking	130.15	127.18	2.97
General cargo	Upriver	Shanghai - Ch'eng-tu	171.76	105.52	66.24
Chemical fertilizer	Upriver	Shanghai-Chungking	73.98	48.20	25.78
Chemical fertilizer	Upriver	Shanghai - Ch'eng-tu	94.64	40.04	54.60

a. ^{8/}

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this area and points up the special advantage of the railroads in carrying commodities into Szechwan in competition with traffic moving upstream on the Yangtze River.

Some inland waterway transport organs operate at losses even under their apparently high rates. Until efforts to lower the cost of water shipping are successful, the only apparent way to divert traffic from the railroads is to boost railroad freight rates substantially on those lines which run parallel to waterways. This is just what Chinese Communist writers on transportation economics have been advocating. 9/

In the case of short-haul traffic, the economics of the situation tend to support the goal of diverting traffic from the railroads to motor trucks and native transport. The dissipation of the country's small freight car park in relatively unproductive short-haul traffic is uneconomic. On such short hauls the daily production of a freight car in terms of ton-kilometers is one-tenth the average daily production for all freight cars. Yet, late in 1956 on a 20-km haul, the rates for shipping such goods as coal, iron ore, bricks and tile, and lumber by railroad were 25 to 30 percent lower than by motor truck or cart. 10/ The obvious remedy, and the one advocated in Communist China, is to raise the short-haul rates for railroads above the truck and cart rates. 11/

Although adjustments in railroad freight rates in 1955 were designed to divert traffic to waterways, trucks, and native transport, no specific evidence indicates that the changes have been effective. These changes fit so well the needs and methods of the regime, however, that they are most likely to occur if they have not already.

II. Railroad Freight Rates.

A. History.*

From 1946 to 1949 the Chinese Communists were operating increasingly large segments of the railroad system on the Chinese mainland. Because this was the period of the civil war, military needs took priority, and the nonmilitary functions of the railroads took second place. The situation is somewhat understated in a 1950 Chinese Communist publication which says that from 1946 to 1949 "the rate structure was simple and imperfect." In the northeast, 10 rate classifications had been developed for freight, and in north China, which had been conquered

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more recently, all freight was lumped into 5 rate classifications.* Much improvising was done to adapt to rapidly changing conditions. When the Communist conquest spread across the Yangtze River into south China in mid-1949, the railroad situation became more stable, especially north of the river, and a new freight rate structure was adopted on 10 July 1949. The new classification provided for 20 classes of freight rates, with the rates in class 1 being 200 times those of class 20.

This new structure had so many weaknesses that it was replaced within 6 months. In fact it had been substantially abolished before that by the widespread introduction of exceptions and unscheduled rate reductions for the higher priced traffic. Among the weaknesses of the structure were the provision of classes for many goods that were rarely, if ever, shipped by rail and the omission of some native goods that normally moved in quantity by rail. Its greatest weakness, however, was that the range of rates between goods in the higher classes and those in the lower was too wide. Consequently, high-priced, high-rate goods were diverted to other means of transport while low-priced goods, many of which were carried below cost, overflowed the railroad freight stations. As a result, railroad operations incurred extensive financial losses.

In the revision of 6 December 1949 the range of 200 to 1 between the first and twentieth classes was reduced to 25 to 1. The new schedule also clarified many obscurities in the earlier tariff and provided more appropriate classifications of goods.

This improvement still did not go far enough, and a new major revision took place on 1 August 1950. The number of classes was raised to 30, and the range was reduced to 17 to 1. The structure was further adapted to the economic and propaganda needs of the regime. For example, key export goods were given lower rates, and newsprint was lowered from class 9 to class 17. Educational equipment was also lowered to class 17, having been previously in the top-cost class 1. The differential between less-than-carload-lot (LCL) shipments was reduced from 2 times the carload-lot rate to 1.7 times because the authorities came to recognize that even in a planned economy LCL shipments are necessary and should not be penalized too severely.

In 1955 another complete reform of railroad freight rates was promulgated. The primary accomplishment of the new rate structure was the abolition of the two-schedule system which maintained separate rates for China proper and the northeast. The new, unified rate schedule also made a number of other adjustments including raising rates on very short hauls. 13/

* The term freight/classification refers to the process of grouping thousands of commodities into a limited number of classes for purposes of ratemaking.

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B. Freight Rate Structure, 1950-55.

1. Classification.

For 5 very important and formative years, shipment of freight on the Chinese Communist railroads was governed by the 1 August 1950 rate schedule. The 30 classes of railroad freight established by this schedule were designed to afford a sufficient number of categories to provide appropriate rates for a wide variety of products. Although the categories were supposed to be based on socialist principles, they generally reflected the price of goods. Thus the lowest rate class, 30, applied solely to ashes, natural ice, water, and snow -- commodities whose value to the socialist state and the "broad masses of the people" was not such that their transport should be encouraged by low freight rates. In class 29, dried manure, sand, coal balls, and coal bricks represented products of substantial (but certainly not maximum) economic usefulness, but the remaining items in the class (mud, earth, and broken tiles) were obviously not materials whose movement by rail should be promoted. Class 28 consisted of stone chips, gravel, and grain husks. Clearly, the low rates for most of the commodities in classes 28 to 30 reflected low values rather than usefulness to the economy.*

The next four categories, however, were very important. They represented some of the commodities most essential in building the nation's economy and included about 75 percent of the total tonnage shipped by rail. The most important single class was 27, which consisted of coal, iron ore, and bauxite -- between 35 and 40 percent of the total rail tonnage. Class 26 included three vital categories: basic industrial materials (coke, lime, scrap iron and steel, and pig iron); construction materials (brick, tile, tile pipe, logs, and telephone poles); and chemical and fish fertilizers. Class 25 included iron and steel shapes, plates, and rods; steel rails; scrap paper; rags; wood scraps; and firewood. A wide variety of products was included in class 24, among the most important being railroad ties; milled lumber; and many staple foodstuffs, such as kaoliang, coarse rice, peanuts, sweet potatoes, and certain types of flour.

The rates per ton-kilometer for classes 1, 15, and 30** are compared graphically in Figure 1.*** It is notable that although the

** Class 1 contains such items as shark fins, swallow nests, pearls, antiques, explosives and munitions; class 15 contains dried fruits, small animals, kerosine, lead, zinc, aluminum, copper, man- or animal-powered vehicles, basic chemical products in liquid form, and some categories of heat and electrical insulating materials; and class 30 contains natural ice, water, snow, and ashes.

*** Following p. 12.

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absolute differences are great, the relationships of the classes remain constant. For example, rates for class 1 items are 17 times those of class 30 at all distances (0.17 yuan* to 0.01 yuan per ton-kilometer on short hauls and 0.1 yuan to 0.006 yuan per ton-kilometer on 2,000-km hauls), and in each class the minimum mileage-block rate is normally about 60 percent of the maximum mileage-block rate. 15/

In spite of the fact that basic industrial raw materials and fuel fall into the low-rate classes, transportation costs still account for a large proportion of the prices of the following goods: 22 percent for coal, 17 percent for timber, and 30 percent for iron ore. 16/ Thus the level of freight rates on these commodities substantially influences their ultimate price and indirectly controls their use.

2. Exceptions.

The Chinese Communist authorities began to realize gradually that the 1950 rate structure was not entirely consonant with their economic and political aims. In March 1951 the magazine, Jen-min T'ieh-tao (People's Railways), stated that the determination of freight rates depended on: (a) the cost of transportation, (b) the amount the traffic would bear, and (c) the economic situation. 17/ A study of the 1950 rate structure indicates that the second of these considerations predominated.

In order to bring the rate structure more in line with the needs of the socialist economy, special rates began to be introduced soon after the 1950 rate schedule was published. Some of these were temporary, some seasonal, and some local. Others presaged permanent changes in the rate schedule. The same article discussed nine kinds of special rates and the purposes therefor. In essence these purposes were as follows:

a. To encourage industrial plants to locate nearer the source of raw materials,** freight rates were reduced 50 percent for industries moving from Shanghai to the interior.

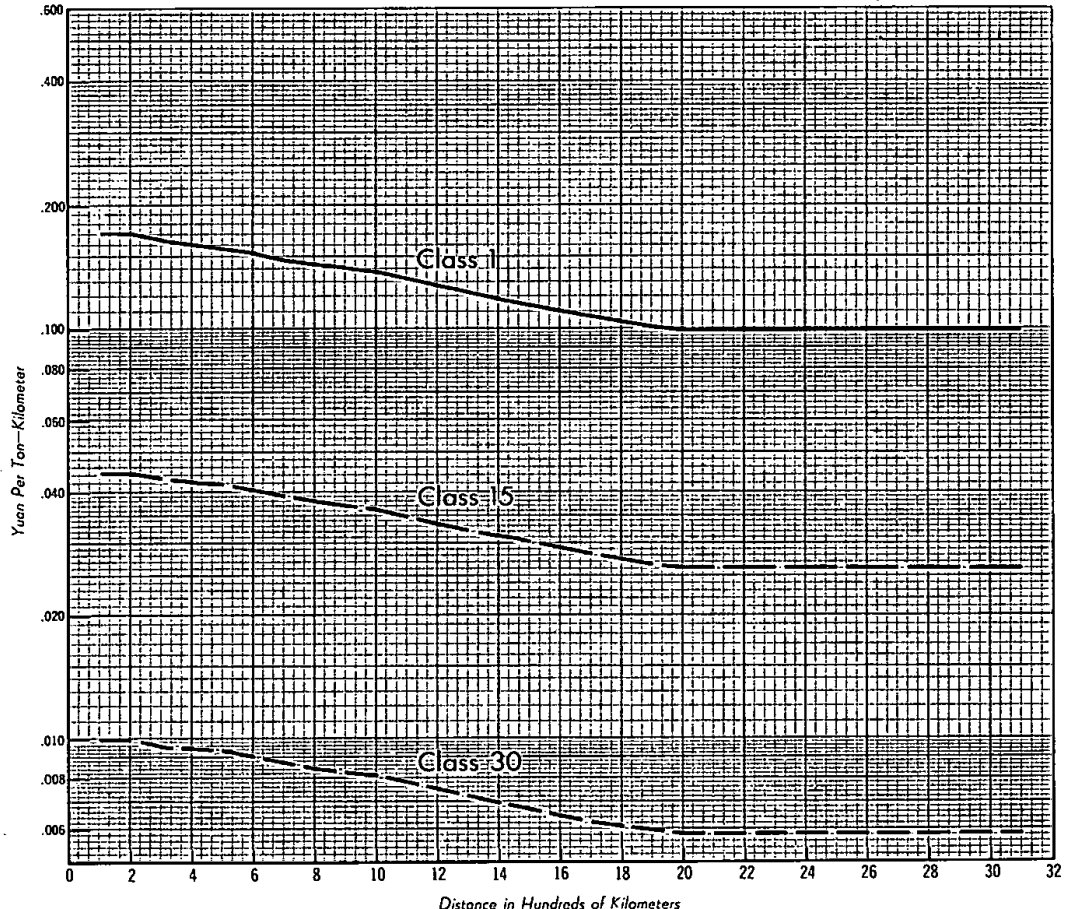
* Because of the difficulty of determining a valid exchange rate, yuan have not been converted into dollars. The rate of 2.46 yuan to US \$1 usually quoted is based on the yuan-sterling rate for telegraphic transfers. This rate is arbitrarily established and maintained and bears no relationship to the value of goods in international trade or to the internal price levels.

** Also, although not stated in the magazine, to place the plants in locations strategically less vulnerable.

Figure 1

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COMMUNIST CHINA
COMPARISON OF RAILROAD FREIGHT RATES
FOR COMMODITIES IN CLASSES 1, 15, AND 30, 1950-55



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b. To supplement the insufficient supply of cotton, imported cotton received a 50-percent reduction of railroad freight rates.

c. To stimulate production and sale abroad of handicrafts and works of art in order to get more foreign exchange, all such products certified for sale abroad were shipped as class 13.

d. To generate additional foreign exchange a number of other products for export were given various rate reductions.

e. To aid production of coal, pit props shipped over a distance longer than 500 km received a 30-percent reduction.

f. To encourage shippers to supply their own freight dunnage, thus supplementing the short supply of the Ministry of Railroads, canvas, ropes, matting, props, and the like, were returned to shippers free of charge, and empty barrels and cases were returned at half price.

g. To promote the distribution of propaganda, all moving picture machines, films, costumes, travel equipment, and the like, when certified by the Ministry of Culture, were carried as class 18.

h. To reduce the spread of contagious diseases among humans and animals, all goods certified for this purpose by the Ministry of Public Health or the Ministry of Agriculture were treated as class 18.

i. For the promotion of local industries, disaster relief, and numerous other special purposes, rate reductions were made on an ad hoc basis.

3. Distance.

The simplest form of rate structure is one in which rates are based on distance. In the typical distance-rate system, the rates do not change with each additional kilometer of distance. Instead, a distance-block system is used, with blocks of varying length. In addition, most distance rates are constructed on the tapering principle: that is, the rates increase with distance, but not as rapidly as distance increases. Although the total rate is greater for longer than for shorter distances, the rate per kilometer is less for the longer distances.

There are several reasons for not increasing freight rates in exact proportion to distance. In the first place, terminal costs are the same regardless of the length of haul. The longer the haul;

C-O-N-F-I-D-E-N-T I-A-L

the greater the distance over which the constant terminal cost can be spread. A second reason for the lower rates per ton-kilometer for longer hauls is that even the line-haul or conveyance cost is considered to be relatively lower for the longer hauls. For longer distances, through-freight trains which make fewer stops and operate more efficiently may be used. A third reason for using the tapering principle is to prevent the rates from restricting the movement of long-distance traffic. Long-distance rates must be kept low enough to enable the traffic to move. 18/

The Chinese Communist planners went nearly all the way with the concept of decreasing the rate per ton-kilometer as the distance increases. This attitude can be illustrated with the rates for class 27 in the 1950 rate schedule. The rates for this class remain an even 0.01360 yuan per ton-kilometer for the first 200 km. The rates from there on drop steadily until 2,000 km is reached. Beyond 2,000 km the rate per ton-kilometer increases slightly, but for all practical purposes never again reaches a rate as high as the one for 1,900 km. The specific rates are shown in Table 4.*

C. Revision of Freight Rates, 1955.1. Unification.

The first of the two main reasons for revising the rate structure in 1955 was the need for a unified rate structure for the entire country. The awkward practice of having different rates for the parts of the country north and south of the Great Wall had endured long after the reasons for the differential ceased to exist, and the desirability of the reform to a single national schedule is too obvious to require discussion here. Suffice it to say that the new rates generally represented a compromise between the original two sets of rates. On balance, there was little upward or downward change in the rate structure as a whole. 19/

2. New Rate Philosophy.

By 1955 the Chinese Communist authorities were frankly admitting in the press that the existing rate structure had been based mainly on the principle of charging freight rates according to the price of goods: that is, high rates for high-priced goods and low rates for low-priced goods.** The considerations guiding the establishment of the new rates contained in the 1955 revision are stated to have been as follows: (a) the demands of national economic development, (b) production and marketing conditions for the category of goods concerned,

* Table 4 follows on p. 15.

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C-O-N-F-I-D-E-N-T-I-A-L

Table 4

Rates in Effect for Class 27 Freight in Carload Lots
on the Railroads of Communist China a/
1950-55

Yuan per Ton-Kilometer			
Distance (Kilometers)	Rate	Distance (Kilometers)	Rate
200	0.01360	2,000	0.00796
300	0.01315	2,100	0.00797
400	0.01292	2,200	0.00797
500	0.01278	2,300	0.00798
600	0.01224	2,400	0.00799
700	0.01185	2,500	0.00800
800	0.01156	2,600	0.00800
900	0.01133	2,700	0.00801
1,000	0.01115	2,800	0.00801
1,100	0.01063	2,900	0.00802
1,200	0.01020	3,000	0.00802
1,300	0.00983	3,100	0.00803
1,400	0.00952	3,200	0.00803
1,500	0.00925	3,300	0.00804
1,600	0.00892	3,400	0.00804
1,700	0.00864	5,000	0.00808
1,800	0.00839	10,000	0.00812
1,900	0.00816		

a. The Chinese rate schedule lists rates accumula-
tively in increments of 10 km. Uneven distances are
rounded upward to the nearest 10. For purposes of
illustration, increments of 100 km have been used in
this table instead of 10.

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50X1

and (c) transportation conditions. These principles are in much better accord with the economic and political philosophy of the regime than the previous practice, which was in fact closely related to charging what the traffic would bear. The authorities emphasized that standardization of railroad freight rates would especially promote the development of heavy industry. Standardization also would help individual enterprises, not only in formulating their production plans but also in accurately working out their production costs, in reducing the difficulties of computing freight charges, and in conserving manpower.

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C-O-N-F-I-D-E-N-T-I-A-L

3. Implementation.

It is not possible to discuss in detail the new rate schedule implemented in 1955, because only that portion containing the general rate regulations and the new classification is available. That portion of the schedule, however, and the analyses and explanations appearing in the Chinese Communist press provide enough generalized information to give a fairly good picture of what was done.

To begin with, the old rate structure with its 30 evenly spaced rate classes was abolished. The classes in the new structure were established by grouping together goods of a similar type into a class with appropriate subdivisions (items). This grouping contrasts with the extreme heterogeneity of the old classes, which included in a single class such varied articles as peanuts, railroad ties, and palm-leaf umbrellas. These new homogeneous and more numerous classes (now totaling 77) were combined into 13 larger groups according to function or source.* These 13 broad categories were in turn divided into two general groups. The first 4 of the 13 categories (including 18 classes) constitute the group called "agricultural products." The remainder form the group of "industrial products." The bases of distinction between these two large groups appear to be the source of the commodity and its end use. Goods which come from the land or sea and are, or were, alive or growing are considered agricultural products. The industrial products group includes mining products, industrial raw materials of all kinds, and finished manufactured goods.

Unfortunately, the section of the 1955 rate schedule containing the rate tables is not available for analysis, and thus critical comparisons and analyses of the rate changes cannot be made. Certain changes, however, appear to be fairly clear. For example, the new rates appear to be designed to penalize what the Communists call "irrational shipments." In order to divert very short-haul traffic from the railroads to trucks and native transport, the rates for short hauls were raised, and a similar increase in rates was established where rail service paralleled water shipping routes. A significant change in the pattern shown in Figure 1** was made when it was recognized that it was not necessarily economical for the state to encourage long hauls without limit. The new schedule provides

* Agricultural products, animals and animal byproducts, marine products, wood products, food products, mineral and pottery products (including petroleum), metal products, textile products, leather and fur products, lumber products, stationery (including raw material for paper), chemical products, and other industrial products (including a wide variety of luxury goods and household necessities as clothing and bedding).

** Following p. 12, above.

C-O-N-F-I-D-E-N-T-I-A-L

for an increase in the rates per ton-kilometer for some commodities beyond a distance considered to be optimum.

The revised schedule of rates published in 1955 reflects the pattern already established by the earlier rate revisions in that it is much more detailed and complex than the one it replaced. This pattern is in line with the patterns of developing economies throughout the world, and this trend can be expected to continue in the inevitable future revisions. More significant is the great increase in the use of freight rates as a tool for state control of the economy. The 1955 rate schedule is much better suited to the purposes of the Chinese Communist leaders than any of those which preceded it.

D. Rates and Profits.

All published accounts of the 1955 rate revision agree that there was no increase in railroad freight charges as a whole. Upward and downward changes were made in rates for different products and different distances, but the changes presumably cancel out. In an article published in a Soviet periodical in October 1957, more than 2 years after the 1955 revision, the Chinese Communist Minister of Railroads wrote that in the main there had been no change in transportation charges since 1950 ^{22/} in spite of the fact that the cost of hauling had dropped from 0.0098⁴ yuan per ton-kilometer in 1950 ^{23/} to 0.00767 per ton-kilometer in 1956. ^{24/} In view of these reiterated statements that there has been no change in general freight charges, it is justifiable to compare rates from the 1950 rate schedule with the 0.00767 yuan-per-ton-kilometer average cost of all freight for 1956. This comparison reveals that the only freight carried at rates below the average cost of all freight in China proper was in classes 28, 29, and 30, for distances greater than 1,760, 1,440, and 1,140 km, respectively.

In the discussion of freight classification, it was seen that the lowest important category was 27 and that little freight moved in the three lowest classes. Furthermore, the kinds of freight listed in these categories, such as gravel, earth, sand, and ashes are the kinds that normally move for short hauls only. Thus it is likely that no significant amount of freight moved at rates below the average cost of all freight. On the other hand, class 30 freight moving the average length of haul of 489 km was carried at a profit of more than 23 percent per ton-kilometer above the average cost of all freight, and class 1 freight carried the same distance earned a profit of nearly 2,000 percent. Furthermore, the commodities in classes 28, 29, and 30, because of their bulk character, probably had an average cost per ton-kilometer far lower than that of all freight. Consequently, it probably can safely be stated that no freight moved at rates less than the average cost of its own carriage.

C-O-N-F-I-D-E-N-T-I-A-L

C-O-N-F-I-D-E-N-T-I-A-L

This evidence substantiates Chinese Communist statements that the railroads produce large annual profits. Instances of the railroads operating at a loss and receiving subsidies from the government reportedly have been eliminated entirely. Since 1950, railroad profits have increased steadily as indicated by the following set of index numbers, where the level of railroad profits in 1952 equals 100 25/:

<u>Year</u>	<u>Index Number</u>
1952	100.0
1953	140.2
1954	161.4
1955	171.4
1956	248.5

In 1957, railroad profits were used not only for construction of new rail lines and rehabilitation of existing lines but also for the development of other industries.

The sizable profit margins experienced by the railroads during 1950-56 undoubtedly reflected, in part at least, attempts to divert traffic from the railroads to the waterways. In spite of relatively high railroad freight rates, the railroads attracted all the traffic they could handle, with consequent high profits. The Chinese Communists have also reported that the large annual profits were the "result of an extensive movement to increase output and to effect a regimen of economy" as well as the "result of introducing a system of business accounting." 26/

III. Freight Rates for Water Transport.

A. History.

In the period immediately following 1949 the Chinese Communists retained the same freight rates for water transport established by the Nationalists. After the consolidation of control by the Communists, rates were modified although mostly on a piecemeal basis. The modifications were all downward in rate level and toward simpler, more standardized principles and classifications.

C-O-N-F-I-D-E-N-T-I-A-L

There may have been a fairly widespread coordination of rates for water transport in 1951 as a result of the revision of the railroad tariff in mid-1950. The only activity of this sort known specifically, however, was the unification of rates in December 1951 and the establishment of 5 classes of cargo and 6 voyage distances for shipping companies operating from Shanghai. 27/ On 1 August 1952, new regulations for water transport on the Amur, Sungari, and Ussuri Rivers were put into effect. During the latter half of 1954, there was a widespread reorganization of rates, regulations, and cargo classifications for all coastal transportation and all inland waterways except those of the northeast. The provisions established in 1952 and 1954 remained in effect until the new unified system was established on 1 January 1956. 28/ The major change since that date was the abolition of separate rates for upstream and downstream transport on the middle and upper reaches of the Yangtze River (Hankow and upstream) effective 1 January 1958. 29/

B. Principles of Ratemaking.

The fundamental consideration in water transport ratemaking in Communist China is that there should be a "rational" ratio between rates for water transport and rates for other forms of transportation. The essence of the "rational" ratio is the assumption that since movement of goods by water transport generally costs less than by the other media, especially railroads, water rates should be lower. 30/ How much lower than other rates is not indicated.

As in the US it is recognized in Communist China that the cost of water transport is not always lower than that of other forms of transport. In the region of the upper Yangtze River, for example, where the strong current makes navigation hazardous and the use of especially powerful vessels necessary, the Chinese admit that the cost of river transport is higher than that on the lower reaches of the river (144 to 258 percent higher) and exceeds the average cost of shipment by railroad for the country as a whole. 31/

There is some similarity between the situation on the Yangtze River and that on the Mississippi River. On the Ohio River and lower Mississippi River the costs per ton are lower than on the upper Mississippi River and Missouri River. Taken as a whole, the cost of transport on the Mississippi River is more than that on the adjacent railroads, except in the case of relatively short hauls, if maintenance and capital investment are included in costs. 32/ On the Yangtze River as a whole, the cost of transport is higher than on railroads. 33/ Even though it is frequently more expensive to ship over water routes between two ports on the Mississippi River rather than by direct rail service between the same points, barge freight rates are systematically

C-O-N-F-I-D-E-N-T-I-A-L

C-O-N-F-I-D-E-N-T-I-A-L

lower than railroad freight rates. The typical differential has been 20 percent. 34/ The Chinese Communists may be confusing motives when they say that water freight rates should be lower than railroad freight rates because the costs are less. They are probably not taking costs into consideration any more than they are the lesser attractiveness of water transport to shippers, a consideration which influences attitudes toward water ratemaking in the US. 35/

1. Rates, Profits, and Investment.

The Chinese Communists want to have good transportation at the lowest possible rates and thus at the lowest possible cost to the economy, as evidenced by the many reductions in rates that have taken place. They do not seem to be willing, however, to reduce rates to the point that profits disappear. They seem to be motivated by the same principles which the Interstate Commerce Commission uses to evaluate water freight rates in the US: (a) the effect of rates on the movement of traffic; (b) the need, in the public interest, of adequate and efficient transport service at the lowest cost consistent with such service; and (c) the need for revenues sufficient to enable carriers, under honest, economical, and efficient management, to provide such service. 36/

Because water transport costs are higher than railroad costs in Communist China, water transport charges have been reduced to the maximum extent possible in order to preserve the so-called "rational ratio." Water transport charges, however, still provide for some minimum profit margin. Railroad rates, on the other hand, have been set at a relatively high level, and profits consequently have been high. 37/ Whether or not there are established criteria for determining the minimum profit margin for water transport or the difference between railroad and water freight rates cannot be determined.

Freight rates in Communist China are expected to be set at such a level that they will provide capital for construction and expansion of facilities. 38/ Whether or not the Chinese adhere to a strict program of making investment in each form of transportation on the basis of the profit from that form of transportation alone is unknown. If, however, profits from water transport must pay for all construction and expansion of water transport facilities and if the profit margin has been reduced to a minimum, there may be more than coincidence in the reported failure to meet capital construction plans for water transport under the First Five Year Plan. 39/

2. Rates for Bulk Cargoes.

One of the primary reasons for maintaining lower rates for water transport than for other forms of transportation is to divert the

C-O-N-F-I-D-E-N-T-I-A-L

movement of bulk cargoes from railroads to waterways, ^{40/} particularly where water and railroad routes are parallel. Areas where this latter condition exists are: (a) the coastal region, (b) sections of the Yangtze River system downstream from Hankow (Han-k'ou) and upstream from Chungking (Chung-ch'ing), (c) sections of the Pearl River (Chu Chiang) system, and (d) sections of the Sungari River. Another reason for the use of rate differentials to encourage the use of water transport for bulk cargoes is the adequate capacity of available water transport. Although it is desirable to fix low rates so that empty ships are used, ^{41/} the government has issued a specific warning against establishing rates which will encourage the use of water transport to the extent that it is overburdened. ^{42/}

3. Interprovincial and Intraprovincial Rates.

The division of ratemaking responsibilities among the Ministry of Communications and local transportation bureaus apparently has led to striking differences in rates, for a complaint has been made that there should also be a "rational" ratio between central government and local transportation prices. At present, local transportation prices are 20 to 100 percent higher than those of state-operated enterprises. In intraprovincial transportation in provinces along the Yangtze River, rates are 70 to 180 percent higher than on the Yangtze River. Some local companies which operate on the Yangtze River as well as on its tributaries suffer losses on transportation along the Yangtze River because of the low rates which apply. An adjustment of rates for short distances on the Yangtze River has been recommended as a means of bringing profits to local companies. ^{43/}

4. Reduction of Rates with Distance.

Some Chinese Communist commentators say that, in establishing freight rates, attention is supposed to be given to "progressive reduction of freight for longer distance" and "progressive increase of freight for longer distance." ^{44/} This seems to mean only that freight rates per ton-kilometer should be reduced progressively with distance to encourage long-distance movement up to some arbitrarily designated optimum distance and then be increased for distances beyond the top optimum to discourage shipments. It has been emphasized, however, that even after the reform of freight rates in 1956, this principle was not put into practice for many kinds of goods.

C. Rate Structure, 1956.

Rates for water transport in Communist China are established by the Ministry of Communications with the approval of the State Administrative Council and apply to seagoing and river steamships and wooden vessels operating along the coast; major inland waterway systems

C-O-N-F-I-D-E-N-T-I-A-L

C-O-N-F-I-D-E-N-T-I-A-L

crossing provincial boundaries such as the Yangtze, Pearl, and Amur Rivers; or other routes designated by the Ministry of Communications. Presumably, these rates apply only to the main course of the rivers or to companies engaged in interprovincial transportation. Rates for intraprovincial water transport are established by the provincial transportation bureaus or other transportation bureaus of equal rank, approved by the provincial peoples committee, and registered with the Ministry of Communications. 45/

1. Classification.

Communist China has divided all commodities transported by water into classes and determined freight rates for each group. The 1956 rate schedule contains 25 classes; the rate for class 1 freight is the highest, and for class 25, the lowest. 46/ Commodities of heavy density and low value are in the lower classes.

The freight rates are further classified as follows:

(a) ordinary rates applicable to general cargoes; (b) special rates applicable to certain cargoes, voyages, seasons, or transportation regions; (c) rates for relay transportation (river-ocean, river-canal, or water-rail); and (d) rates for through traffic applicable to through transportation by river, ocean, or canal. 47/ A cargo entitled to both special and through rates is charged the lower of the two.

Analysis of the commodity groups in the 25 classes covered by the 1956 rate schedule for water transport shows a close correlation between the groups and their suitability for shipment by water and their usefulness to the buildup of the Chinese Communist industrial economy. Commodities included within the lower classes are industrial raw materials (coal, ores, salt, cotton, timber, and petroleum) which are well suited to transport in bulk by water carriers. The middle classes contain a great range of manufactured commodities; daily necessities; and certain raw materials such as fresh hides, hog hair and feathers for fertilizer, soft drinks, tobacco, household furniture, basic industrial chemicals, and manufactured goods. These items are of higher value and lower bulk and are not so well suited to shipment by water. The top classes include fragile, dangerous, or very expensive goods: glassware, carved wooden articles, explosives, toilet articles, cameras, currency, birds' nests, fish lips, and precious metals. 48/

Although there are fewer classes of freight in the water transport rate structure than in the railroad rate structure, the former is more complex. Separate tariffs are given for the north coast and the south coast (with several variations for the north coast) and for each waterway system (with sections applicable to various parts of each

C-O-N-F-I-D-E-N-T-I-A-L

system and/or various seasons of the year and water levels). There is also a complex of special rates for certain routes, commodities, and seasons.

The example of inland waterway transport will suffice, with but minor modifications, to illustrate the basic class structure for water transport. Commodities in the three lowest classes alone account for about 60 percent of all inland water traffic. In Table 5 the commodities and commodity groups are arranged in descending order of their proportion of total inland water ton-kilometer performance in 1956 with the classifications that apply to each commodity or group.

Table 5

Classification of Principal Commodity Groups Carried
on the Inland Water Transport System of Communist China a/
1956

Commodity or Group	Class
Grain	22, 23
Coal	25
Mineral construction materials	20, 23, 24, 25
Timber	20
Ores and ferrous metals	25, 21
Salt	23, 25
Cotton	20
Petroleum and petroleum products	12, 14, 15, 16

a. 49/

In coastal shipping, coal and ores comprise a larger percentage of the total cargo than in inland shipping. Rates for petroleum carried in bulk along the coast are given in a special tariff which does not recognize the same classes that apply to inland shipping. 50/ Presumably, the rate charged for petroleum transported in barrels along the coast is the same rate as on the inland waterways.

Further analysis of water freight rates is shown in Figure 2* which compares graphically the rates per ton-kilometer of classes 1, 12, and 25 for transportation between the major ports on the north coast (Dairen, Chin-huang-tao, Tientsin, Shanghai, Tsingtao, and Chefoo), ports along the south coast, and on the lower Yangtze

* Following p. 24.

C-O-N-F-I-D-E-N-T-I-A-L

C-O-N-F-I-D-E-N-T-I-A-L

River (Shanghai to Hankow). 51/ Other inland waterways or other sections of the Yangtze River are not shown because of the great complexity of the rate structure and shortness of routes.

Figure 2 shows that the rate for south coast shipping is consistently higher than that for the north coast. At a distance of 100 km the rates for the south coast are 57 percent higher, and at 1,500 km, 87 percent higher.

Also, the rate for shipping between the major north coast ports differs from that between secondary ports in the same area. The 1956 rate schedule contains a separate tariff applicable to this situation. 52/ The rates for freight shipments between secondary ports are applicable to shipping between major ports and the secondary ports. 53/ The rates in this tariff vary from 5 percent higher than the rate for the main ports at 100 km to 24 percent higher at 1,500 km.* No separate tariff is included for secondary ports on the south coast. The Chinese Communists apparently do not recognize the division into major and secondary ports for purposes of ratemaking on the south coast although they do for other purposes.

2. Distance.

As distance increases, the rate per ton-kilometer appears to decrease consistently for all water transport, as exemplified by the samples shown in Figure 2.** The amount of decrease varies with the area. For north coast shipping the rate at 500 km is only 30 percent of the rate at 100 km; at 1,000 km, about 22 percent; and at 1,500 km, about 18 percent. For south coast shipping the rate at 500 km is about 33 percent of that at 100 km; at 1,000 km, 25 percent; and at 1,500 km, 21 percent. On the lower Yangtze River the rate at 500 km is only about 94 percent of the rate at 100 km; and at 1,000 km, 85 percent. No voyage on the lower Yangtze River extends to a distance of 1,500 km.

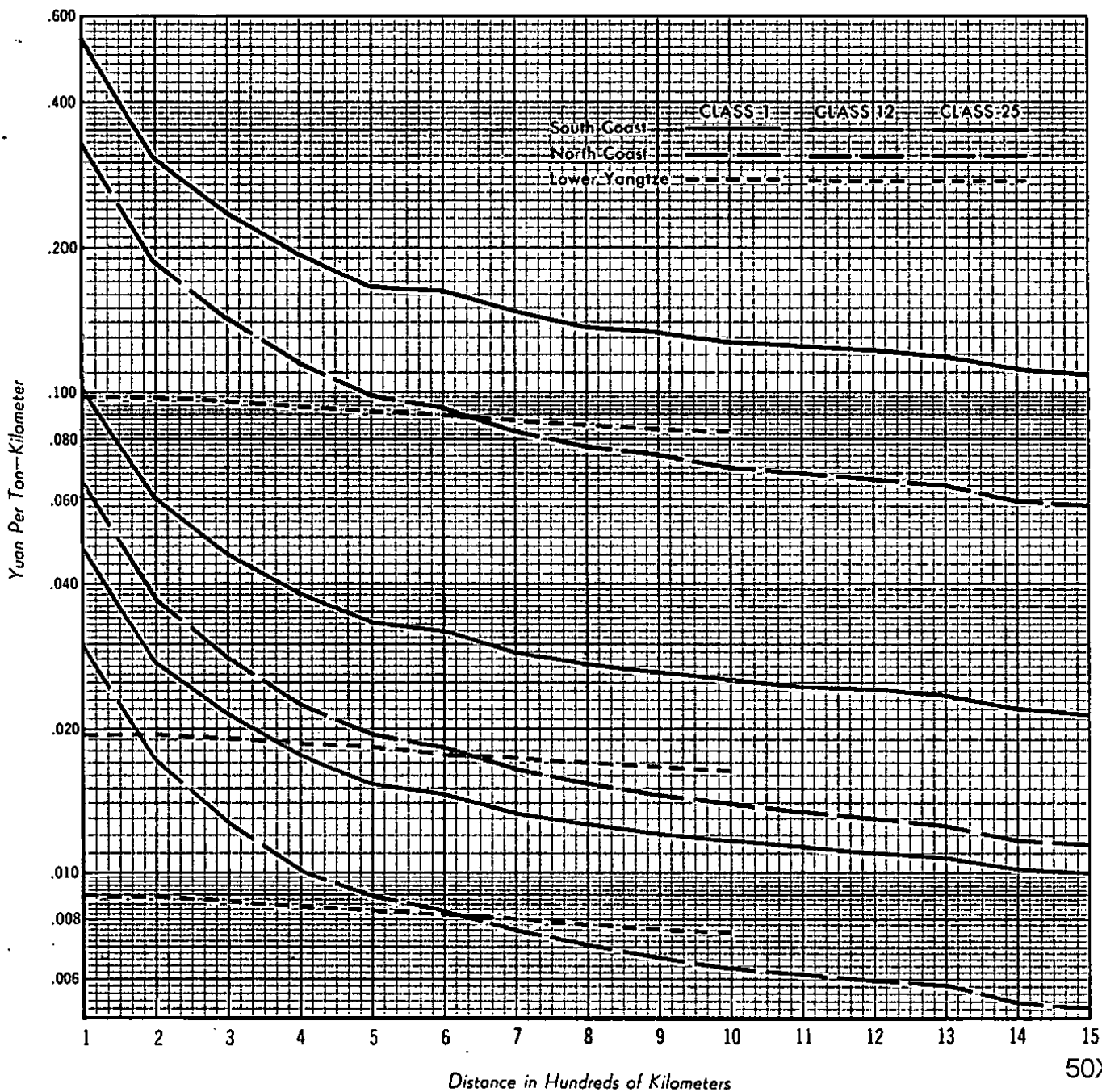
Although some commentators have pointed out that rates should vary upward after an optimum distance is passed, there is no indication that this factor was used in establishing the 1956 rates. Either the factor was not taken into consideration, or the distances in water transport are not considered to extend beyond an optimum distance.

* The rates in this tariff are doubled for shipments on routes operated by chartered foreign-flag vessels, 54/ thus making them the highest found anywhere on the coast. These rates may reflect dangers inherent in voyages in waters subject to Chinese Nationalist patrol, such as in the area of the Taiwan Strait.

** Following p. 24.

Figure 2 50X1

COMMUNIST CHINA COMPARISON OF WATERWAY FREIGHT RATES FOR COMMODITIES IN CLASSES 1, 12, AND 25, 1956



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3. Exceptions and Special Rates.

In order to encourage the use of water transport, special rates have been established. As early as 1952, preferential rates were established for daily necessities and industrial raw materials -- rates which in some cases were lower than the actual transportation costs. 55/ Examination of the rate schedule for water transport which went into effect on 1 January 1956 reveals that rates lower than the ordinary rates are given to the same general commodities that had been specified in 1952. Cargoes for agricultural use, such as fertilizers and certain local specialties, also figure prominently. On the other hand, some commodities which are included within the special rate groups bear rates which are higher than the ordinary rates in order to discourage shipment by water. Examples of commodities in this category are: cigarette paper; bark of softwood trees on the Yangtze River; cement and limestone in bulk; coal transported between Hsin-k'ang (New Harbor), Chin-huang-tao, and Lungkow (Lung-k'ou), and between Hsin-k'ang, Chin-huang-tao, and Wei-hai (Wei-hai-wei) on the coast. 56/

IV. Freight Rates for Highway Transport.

Although highway transport in Communist China has improved considerably in recent years, it remains the least developed form of modern surface transportation in the country. As a result of such factors as high fuel costs, the relatively small capacity of motor trucks, an inadequate highway system, and, until recently, the lack of domestic manufacturing facilities for all types of motor vehicles, highway traffic has been of little economic significance except for short-distance, intercity freight movements and in providing feeder service for railroads and waterways.

A. Rate Structure.

Freight rates* for motor trucks and native land transport in Communist China are established by the local authorities, both provincial and municipal. 57/ Scattered evidence indicates, however, that some truck rates, especially for interprovincial routes, may be governed by the Ministry of Communications. Even though it is doubtful that a unified, nationwide, rate scale is in effect for highway transport, it can be assumed that the central government does not hesitate to provide guidance to the local authorities in their ratemaking functions.

* A comprehensive volume of highway freight rates similar to the ones on railroad and water transport rates quoted previously in this study is not available at the present time. Consequently, the conclusions reached in this section have been based almost entirely on scattered and incomplete references.

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C-O-N-F-I-D-E-N-T-I-A-L

1. Classification.

Communist China apparently uses a simplified system of class rates for highway transport. Considerably fewer classes have been set up than for either rail or water transport. In Szechwan Province in mid-1952, for example, all commodities were divided into 3 classes for both full-truckload (FTL) and less-than-carload-lot (LCL) freight shipments. 58/ The 1953 freight rate schedule for the Shansi Transport Company contained 5 classes for both FTL and LCL shipments. 59/ In Yunnan Province in 1955, there may have been as many as 6 classes of freight because on 1 March 1955 the Yunnan Transportation Office announced that beginning immediately highway freight rates for 523 items in 6 categories were to be reduced 20 percent. 60/ Freight rates which went into effect in Yunnan on 1 January 1956 applied to 5 classes of commodities for both FTL and LCL shipments. Freight moving on interprovincial routes between Yunnan and adjacent provinces also was divided into 5 classes. 61/ In Sinkiang Uighur Autonomous Region in mid-1956, all goods were divided into 5 categories, and rates were charged according to the category in which a particular item had been placed. Industrial equipment, farming implements, and "goods for daily needs" were accorded preferential rates, however, whereas alcoholic beverages, tobacco, and other unessential goods were charged rates slightly above the regular ones. 62/

2. Exceptions.

In all the examples cited above, the highest rate was charged for first-class freight and the lowest rate for third-class or fifth-class freight. Scattered evidence also suggests that road quality, as well as class of goods, may influence rates. In Yunnan Province in 1956, for example, a surcharge for transportation on bad roads had to be paid in accord with the relevant regulations in effect at the time. 63/ Even on good roads, terrain has an effect on rates. Charges for trips which are chiefly uphill generally are higher than for those in the opposite direction. 64/ Beginning in the latter part of 1952 on various routes in the northwest where goods moved mainly in one direction, different rates were charged depending on the direction. At that time the same rates applied to all classes of freight, although there was a surcharge of 20 percent on all goods classified as hazardous. In cases where there was no assurance of a return load, the shipper and the carrier could negotiate and reach an agreement as to the freight rate, but 70 percent above the one-way charge was the maximum amount which the carrier could receive. On all lines in Sinkiang, however, the surcharge for a one-way load was not to exceed 30 percent of the scheduled rate. If the shipper and the carrier entered into a contract covering large-scale shipments and the terms of the contract were reported to and approved by the Transportation Committee in the area concerned, the regular freight rates did not apply. 65/

C-O-N-F-I-D-E-N-T-I-A-L

3. Distance.

The principle of a decreasing rate per ton-kilometer as the distance increases does not appear to apply to highway transport rates. Most of the examples available indicate that highway ton-kilometer rates remain constant on particular routes without regard to distance. The only example to the contrary is a rate schedule published for Sinkiang which went into effect on 1 September 1955. This schedule applied only to distances of 101 km and more. Separate schedules were to be published for distances of 100 km and less. 66/

B. Highway Freight Rates in Yunnan Province, 1956.

The freight rates for transport by motor trucks on the highways of Yunnan, contained in Table 6,* went into effect on 1 January 1956, according to an announcement by the Communications Department of Yunnan Province. 67/ The table illustrates some of the principles mentioned previously, in addition to indicating the general level of highway freight rates in existence in 1956 and the relationship between the different classes of freight, types of shipments, and types of vehicles used.

Instructions accompanying the rates in Table 6 indicated that they were to be enforced uniformly by the provincial transport bureau and that no departure from the published rates was to be made by any motor truck operator in the province. If any truck were obliged to run empty on an outward or homeward run, the rate to be charged for the empty run was to be half the applicable rate for third-class freight. This regulation, however, did not apply to interprovincial motor highway traffic. Charges for transportation on interprovincial highways were generally to be determined by the province in which the transportation took place.

Table 6 is probably indicative of the type of rate schedule set up by the various provinces for highway transport. In the case of interprovincial rates, conferences between the Communications Departments of the different provinces undoubtedly take place during the ratemaking process. The role of the Ministry of Communications in the ratemaking process is not clear, but the Ministry undoubtedly offers considerable direction and probably arbitrates disputes which the provinces are unable to settle among themselves.

It should be noted that in Table 6 rates for fifth-class commodities are the lowest rates quoted. On internal routes, fifth-class rates vary from 74 to 79 percent of first-class rates. Other evidence indicates that on interprovincial routes fifth-class rates

* Table 6 follows on p. 28.

C-O-N-F-I-D-E-N-T-I-A-L

Table 6

Freight Rates for Highway Transport on Internal Routes
 in Yunnan Province a/
 1956

Classification	Unit	Yuan Per Unit Shown	
		Trucks Burning Liquid Fuel	Trucks Burning Solid Fuel
First Class			
FTL b/	Ton-kilometer	0.2754	0.2700
Chartered truck	Ton-kilometer	0.1918	
LCL c/	Kilogram-kilometer	0.00029	0.00029
Second Class			
FTL	Ton-kilometer	0.2595	0.2489
Chartered truck	Ton-kilometer	0.1758	
LCL	Kilogram-kilometer	0.00027	0.00027
Third Class			
FTL	Ton-kilometer	0.2435	0.2277
Chartered truck	Ton-kilometer	0.1598	
LCL	Kilogram-kilometer	0.00026	0.00025
Fourth Class			
FTL	Ton-kilometer	0.2284	0.2190
LCL	Kilogram-kilometer	0.00024	0.00024
Fifth Class			
FTL	Ton-kilometer	0.2143	0.2004
LCL	Kilogram-kilometer	0.00023	0.00022

a. 68/

b. Full truckload shipments.

c. Less-than-carload-lot shipments.

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vary from 74 to nearly 82 percent of first-class rates. Within each class, rates for trucks burning solid fuel are less than rates for trucks burning liquid fuel except in the case of some LCL shipments where the rates are identical. Lower rates for shipments in trucks burning solid fuel probably reflect in part lower costs of operation but also may reflect the slower speeds of these trucks and the consequent longer periods of time for shipments to reach their destinations. Then, too, these rates may have been set at a lower level in order to attract as much traffic as possible and thus promote savings of scarce liquid fuel.

The rates for chartered trucks appear to be unduly low when compared with rates on FTL shipments. However, in addition to paying the flat rate indicated per ton-kilometer, the user of a chartered truck burning liquid fuel also pays for the fuel consumed on the basis of one liter of liquid fuel per 11.52 tkm of loaded distance and 75 percent of this rate for the empty distance. 69/ Trucks burning solid fuel apparently are not used on a charter basis, because no rates for them appear in the rate schedule.

C. Rate Level.

The highway freight rates appearing in Table 6 probably are fairly representative of the general level of such rates throughout Communist China, at least in the interior provinces. One possible exception may be Tibet, where, because of the mountainous terrain and poor roads, the rates are believed to be more than double those of Yunnan. Other scattered evidence indicates that highway rates in general have decreased considerably in recent years, perhaps by 20 to 30 percent between 1952 and 1956 for the country as a whole. 70/

Decreases in rates in some of the provinces give an indication of the magnitude of the changes which have taken place. In Anhwei Province, statistics for 1956 show that rates charged for highway transport were 35.53 percent lower than in 1952. 71/ In Fukien Province the twelfth reduction of highway transport rates took place in January 1955. 72/ During 1950-56, there were several readjustments and reductions of rates in Kiangsi Province, so that by 1956 freight rates for trucks burning liquid fuel were 46.2 percent lower than the rates charged in 1951. 73/ On 1 August 1954, highway freight rates in Kwangtung Province were reduced for the fifth time since 1949. 74/ A further reduction of 17.6 percent took place on 1 July 1956. 75/ In Shansi Province, freight charges in 1954 reportedly were 29.2 percent lower than in 1951. 76/ In Sinkiang Uighur Autonomous Region, highway freight rates were reduced by an average of 7.48 percent as of 1 June 1956. 77/ It was also reported that rates charged in 1957 averaged 21.1 percent below those of 1952 and 59.7 percent below those of 1950. 78/

C-O-N-F-I-D-E-N-T-I-A-L

C-O-N-F-I-D-E-N-T-I-A-L

D. Rates and Costs.

In spite of the rate reductions which took place during 1950-57, highway transport in Communist China still is considerably more expensive for the shipper than either rail or water transport. One authority has estimated that transportation by motor truck is about 30 times as expensive as rail transport and that in certain areas the differential is even larger. He believes that this ratio is roughly equal to that of the prewar period and that it serves to emphasize the poor competitive position of highway transport and its limited usefulness. 79/

[redacted] a considerable differential between railroad and highway costs, but not of the magnitude quoted above. After the Lung-Bai rail line was extended to Lan-chou in 1952, for example, the cost of shipping salt from Lan-chou to T'ien-shui dropped from 76.3 yuan per ton by truck to 15.3 yuan per ton by rail. 80/ On that route, truck transport was only five times as expensive as rail. After the railroad was extended to Yu-men in 1956, fresh fruits and vegetables reached Yu-men from Lan-chou by rail freight at one-eighth the previous cost by truck. After the Pao-chi - Ch'eng-tu rail line was opened for temporary service in 1956, the charge for shipping a carload of cotton textiles from Feng-hsien in Shensi Province to Liang-tang in Kansu Province dropped from 500 yuan by motor truck to less than 100 yuan by rail. 81/ In Fukien Province, considerable savings resulted from the opening of the Ying-t'an - Amoy Railroad. The following tabulation contains figures for the comparative cost of transport from Nan-p'ing in Fukien to Shanghai in Kiangsu for several kinds of agricultural products before and after the building of the rail line as far as Nan-p'ing 82/:

50X1

<u>Product</u>	<u>Cost Before Railroad Was Built (Yuan per Metric Ton)</u>	<u>Expected Regular Railroad Cost (Yuan per Metric Ton)</u>	<u>Ratio of Former Cost to Expected Cost</u>
Mine timber	80.49	9.80	8.2
Live hogs	98.93	32.80	3.0
Tea leaves	108.62	44.78	2.4
Coarse paper	92.58	27.44	3.4
Bamboo poles	92.03	26.84	3.4

The next tabulation contains figures for the comparative cost of transport in the opposite direction, from Shanghai to Foochow, for several kinds of industrial products, before and after the construction of the rail line as far as Nan-p'ing 83/:

C-O-N-F-I-D-E-N-T-I-A-L

<u>Product</u>	<u>Cost Before Railroad Was Built (Yuan per Metric Ton)</u>	<u>Expected Regular Railroad Cost (Yuan per Metric Ton)</u>	<u>Ratio of Former Cost to Expected Cost</u>
Steel rods	97.35	28.05	3.5
Cement	92.38	23.08	4.0
Fertilizers	93.79	20.52	4.6
Cotton cloth	124.50	58.08	2.1

Although the type of transportation and the route used before the railroad was built are both uncertain, it can be assumed that use of motor trucks predominated. If this is the case, motor truck transport was from 2 to 8 times as expensive as rail transport in that area in 1956. The same relationship existed in 1957, when the unit cost of transport by rail was reported as 30 to 50 percent less than that by motor truck, particularly for heavy and bulky freight. ^{84/} In Honan Province in the summer of 1957, prospective construction of a 43-km branch rail line from the Peking -- Han-k'ou line to the Hsin-mi coal mine was expected to reduce the cost of shipping the output of the mine to the main rail line from 19 yuan per ton by truck to 2 yuan per ton. ^{85/} In this location for a relatively short haul, motor truck transport was nearly 10 times as expensive as rail transport, at least for the movement of a bulk commodity like coal.

From the various examples cited above, it appears that motor truck transport is from 2 to 10 times as expensive as rail transport, depending on the type of commodity hauled, the length of haul, and the location or terrain. For extremely long hauls, however, the cost of transportation by truck may approach the figure of 30 times that for rail transport quoted previously. Extension of new rail lines into western sections of the country undoubtedly has released many hundreds of trucks for shorter haul operations on other roads of the highway network and probably has been a factor in reducing the over-all cost differential between the two types of transport. This hypothesis is substantiated in part at least by the reduction in the average length of haul by motor truck transport from 44 km in 1956 ^{86/} to 36 km in 1957. ^{87/}

Although in many instances the charges paid by the shipper for motor truck transport or rail transport represent fairly accurately the cost differential existing between the two modes of transportation in a given situation, this is not always the case. One Chinese Communist writer has pointed out, for example, that a rational price ratio between rail and motor truck transport must be maintained. ^{88/} The cost of short-distance transportation by rail in Communist China is higher than the over-all average cost of rail transport and is considerably

C-O-N-F-I-D-E-N-T-I-A-L

C-O-N-F-I-D-E-N-T-I-A-L

higher than the cost of short-distance motor truck transport. 89/
Thus the use of railroads instead of motor trucks for relatively short hauls is not economic. Although the 1955 revision of railroad freight rates resulted in certain adjustments for short hauls, the problem was by no means completely solved. In 1956, for example, the rate for transporting such goods as coal, iron ore, bricks and tile, cement, and lumber by rail for 20 km was 25 to 30 percent less than the rate for transporting these commodities by motor truck in spite of the cost differential favoring motor transport. Thus short-distance railroad rates needed further readjustment if the use of motor trucks for short-distance transportation was to be promoted. 90/

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