

This PDF is a selection from an out-of-print volume from the National Bureau of Economic Research

Volume Title: Freight Transportation in the Soviet Union, Including Comparison with the United States

Volume Author/Editor: Ernest W. Williams, Jr.

Volume Publisher: UMI

Volume ISBN: 0-691-04131-8

Volume URL: <http://www.nber.org/books/will62-1>

Publication Date: 1962

Chapter Title: APPENDIX C Basic Series on Soviet Transportation

Chapter Author: Ernest W. Williams, Jr.

Chapter URL: <http://www.nber.org/chapters/c1961>

Chapter pages in book: (p. 169 - 185)

## APPENDIX C

### Basic Series on Soviet Transportation

BY GEORGE NOVAK

REVISED AND EXTENDED BY HOLLAND HUNTER

#### *General Note*

Most of these data were assembled in the mid-1950's from primary Soviet sources published during the 1920's and 1930's. Since 1956 many series have been republished and extended in new statistical publications, the most important for transportation being the USSR Central Statistical Administration's *Transport i sviaz'* [Transportation and Communications in the USSR] published in 1957. The new figures generally correspond to those released contemporaneously, and absolute data now available for postwar years generally fall very close to our previous estimates derived from indirect percentage or other relationships.

In all series below, the newly available Soviet figures are given in column 1, with alternative figures given in column 2 only where significant discrepancies appear.

The series cover the Soviet territory as it existed in the given years. For 1913, they cover the pre-World War II territory; and for 1940, the post-World War II territory. At the head of the stub there is a special entry, 1913A, which refers to Tsarist territory for 1913 excluding Finland.

A dash (—) means that there was no production or that it was negligibly small. A blank space means that no definite information was found. Estimates and adjustments of other types are indicated by square brackets. A single asterisk (\*) indicates that the figure refers to the calendar year in which the fiscal year given in the stub ended. A double asterisk (\*\*) indicates that the figure refers to the fiscal year ending in the calendar year given in the stub.

I. RAILROAD FREIGHT TRAFFIC<sup>a</sup>

	C-1		C-2	C-3	
	Tariff Ton-Kilometers		Tons	Average Length of Haul	
	(billions)		Originated	(kilometers)	
	(1)	(2)		(1)	(2)
1913A	76.8	76.0	158.2	485	
1913	65.7		132.4	496	
1914	62.9	74.7	122.9	512	
1915	75.6	83.1	126.1	600	
1916	91.2		147.4	619	
1917	63.0	63.0	115.2	547	
1918	14.1	14.2	37.2	381	380
1919	17.5	17.5	30.5	574	
1920	14.4	13.5	40.3	357	
1921	15.7		37.4	415	399
1921/22	16.1		39.9	402	
1922/23	23.5		58.0	405	407
1923/24	33.7		67.5	500	
1924/25	47.4		83.5	568	
1925/26	68.9		116.7	590	500
1926/27	81.7		135.9	601	
1928	93.4		156.2	598	
1929	113.0		187.6	602	612
1930	133.9		238.7	561	
1931	152.1		258.3	589	
1932	169.3		267.9	632	
1933	169.5		268.1	632	635
1934	205.7		317.1	649	669
1935	258.1		388.5	664	
1936	323.4		483.2	669	
1937	354.8		517.3	686	
1938	370.5		516.3	718	
1939	391.7		553.6	708	
1940	415.0		592.6	700	705
1941	[402]		[549]	732	[693]
1942	[228]		[290]	786	
1943	[256]		313.0	[818]	
1944	[297]		371.0	[801]	
1945	314.0		395.2	794	
1946	335.0		452.6	740	745
1947	350.5		491.1	714	709
1948	446.0		619.8	720	
1949	523.8		735.3	712	728
1950	602.3		834.3	722	727
1951	677.3		909.2	745	
1952	741.3		997.0	744	749
1953	798.0		1,067.4	748	752
1954	856.8		1,131.4	757	762
1955	970.9		1,267.0	766	771
1956	1,079.1		1,371.0	787	
1957	1,212.8		1,487.7	815	
1958	1,302.0		1,616.9	805	
1959	1,429.5		1,763.8	810	
1960	1,504.3		1,884.9	798	

<sup>a</sup> Excluding company material hauled in nonrevenue trains.

I. RAILROAD FREIGHT TRAFFIC (continued)

	C-4	C-5	C-6		
	Average Daily Carloadings (thous. 2-axle units)	Average Load per Car (metric tons)	Operating (billions) (1)	Ton-Kilometers Excess of Operating over Tariff Ton-Kms (per cent) (2)	(3)
1913A	33.0	13.1			
1913	27.4	13.2	[67.7]	[3.0]	
1914					
1915					
1916					
1917	25.8	12.7			
1918	[8.90]	[11.5]			
1919	7.91	10.3			
1920	10.7	9.87			
1921	10.2	10.2			
1921/22	9.59	11.5			
1922/23	11.7	13.6			
1923/24	13.5	13.7			
1924/25	17.4	13.1			
1925/26	24.0	13.3			
1926/27	27.9	13.4			
1928	32.3	13.2	95.4	2.15	
1929	38.6	13.3	117.5	4.03	
1930	46.3	14.1	142.6	6.46	6.5
1931	49.3	14.3	164.0	7.81	8.0
1932	51.4	14.3	177.1	4.60	5.0
1933	51.2	14.3	176.7	4.25	5.0
1934	55.7	15.6	217.4	5.67	5.7
1935	68.1	15.6	268.8	4.14	4.2
1936	86.2	15.4	332.5	2.82	3.3
1937	89.8	15.8	367.8	3.65	3.7
1938	88.0	16.1	384.4	3.75	3.8
1939	93.4	16.2	404.6	3.3	3.3
1940	97.9	16.6	432.5	4.2	4.6
1941	[86.0]	[17.4]	[419.0]	[4.3]	
1942	42.8	[18.6]	[238]	[4.4]	
1943	45.7	18.8	[269]	5.2	
1944	55.7	18.3	[321]	7.99	
1945	62.2	17.5	348.8	11.1	8.0
1946	69.8	17.8	[361.0]	[7.7]	
1947	75.7	17.9	365.2	4.2	
1948	90.3	18.8	[461.2]	[3.4]	
1949	104.7	19.2	[537.4]	[2.6]	
1950	118.1	19.3	613.7	1.9	
1951	127.5	19.5	[689.5]	[1.8]	
1952	138.2	19.8	[753.9]	[1.7]	
1953	147.6	19.8	810.8	1.6	
1954	156.5	19.8	867.9	1.3	
1955	169.3	20.5	980.0	1.1	
1956	[181.5]	[20.7]	1,093.8	1.4	
1957	[195.0]	[20.9]	1,230.1	1.4	
1958	[209.9]	[21.1]	1,319.4	1.3	
1959	[226.9]	[21.3]	1,452.4	1.6	
1960	[240.2]	[21.5]	1,536.4	2.1	

I. RAILROAD FREIGHT TRAFFIC (concluded)

Commodity	C-7 Commodity Composition, Tons Originated (millions)							
	1930 (1)	1935 (2)	1940 (3)	1945 (4)	1950 (5)	1955 (6)	1958 (7)	1960 (8)
Coal and coke	41.4	94.7	152.5	142.3	266.1	389.0	478.8	492.5
Building timber	30.9	42.2	42.8	26.5	72.4	94.1	121.5	140.7
Oil and oil products	13.2	22.4	29.5	21.3	43.2	77.6	112.5	151.0
Mineral building materials	—	61.2	111.7	41.9	157.5	245.6	324.2	430.4
Iron and steel	8.3	19.1	27.1	21.3	43.3	71.8	88.3	106.4
Grain	24.3	30.0	44.6	20.2	38.8	58.0	71.5	78.8
Ores	9.9	26.0	35.2	17.8	48.4	83.8	108.1	127.4
Firewood	15.1	18.3	23.1	17.4	18.9	16.4	18.1	19.7
All other	—	74.7	126.1	86.6	145.7	230.7	293.9	338.0

Commodity	C-8 Commodity Composition, Ton-Kilometers (billions)							
	1930	1935	1940	1945	1950	1955	1958	1960
Coal and coke	25.4	61.0	106.9	98.7	178.2	266.7	348.9	333.8
Building timber	20.3	33.8	43.6	20.7	72.2	119.9	178.4	213.6
Oil and oil products	10.4	22.8	36.4	23.8	52.0	101.6	154.0	205.4
Mineral building materials	—	—	28.2	9.6	46.7	82.1	113.9	155.6
Iron and steel	6.7	18.7	26.2	23.9	47.5	75.7	90.6	110.4
Grain	14.6	20.6	32.8	23.3	30.9	55.1	80.8	90.7
Ores	3.9	16.0	21.5	12.5	27.8	45.0	59.9	71.6
Firewood	3.8	4.7	5.8	2.7	4.5	5.2	6.8	8.2
All other	—	—	113.6	98.8	142.5	219.6	268.7	315.0

## II. RAILROAD PASSENGER TRAFFIC

	C-9 Total Passenger- Kilometers (billions)	C-10 Total Passengers (millions)	C-11 Average Length of Total Trip (kilometers)	C-12 Long-Distance Passenger- Kilometers (billions)
1913A	29.7	244.3	122	27.8
1913	25.2	184.8	136	23.7
1914		234.8		
1915		264.4		
1916		347.9		
1917		353.5		
1918		385.5		
1919		201.6		
1920		142.6		
1921	11.3	83.6	136	
1921/22	9.87	76.6	129	
1922/23	13.9	121.8	114	
1923/24	15.4	154.4	100	13.3
1924/25	19.0	211.8	90	16.4
1925/26	23.4	262.7	89	20.2
1926/27	22.1	254.2	87	18.9
1928	24.5	291.1	84	20.6
1929	32.0	365.2	88	27.4
1930	51.8	557.7	93	44.3
1931	61.8	723.7	85	50.2
1932	83.7	967.1	87	67.0
1933	75.2	927.0	81	59.1
1934	71.4	945.2	76	54.6
1935	67.9	919.1	74	51.1
1936	77.2	991.6	78	59.3
1937	90.9	1,142.7	80	69.5
1938	84.9	1,173.2	72	69.4
1939	93.7	1,267.2	74	[69.2]
1940	98.0	1,343.5	73	73.2
1941				
1942				
1943				
1944				
1945	65.9	843.0	78	50.9
1946	97.9	1,078.1	91	
1947	95.1	1,094.7	87	
1948	82.5	1,049.3	79	
1949	81.3	1,080.1	75	61.4
1950	88.0	1,163.8	76	66.8
1951	98.5	1,315.3	75	73.4
1952	107.4	1,440.7	75	79.6
1953	118.3	1,504.3	79	89.4
1954	129.1	1,573.6	82	98.5
1955	141.4	1,641.4	86	109.1
1956	142.4	1,658.3	86	109.9
1957	153.4	1,754	87	118.7
1958	158.4	1,834	86	121.6
1959	164.4	1,883	87	126.0
1960	170.8	1,950	88	130.1

## II. RAILROAD PASSENGER TRAFFIC (concluded)

	C-13	C-14	C-15	C-16	C-17
	Long-Distance	Average Length	Suburban	Suburban	Average Length
	Passengers	of Long-	Passenger-	Passengers	of Suburban
	(millions)	Distance Trip	Kilometers	(millions)	Trip
		(kilometers)	(billions)		(kilometers)
1913A	169.4	164	1.91	74.9	26
1913	125.5	189	1.54	59.3	26
1914					
1915					
1916					
1917					
1918					
1919					
1920					
1921					
1921/22					
1922/23					
1923/24	74.3	180	2.08	80.1	26
1924/25	105.5	155	2.68	106.3	25
1925/26	131.9	153	3.21	130.8	25
1926/27	122.4	154	3.24	131.8	25
1928	134.1	154	3.84	157.0	24
1929	173.4	158	4.61	191.8	24
1930	240.5	184	7.43	317.2	24
1931	245.9	204	11.6	477.8	24
1932	303.1	221	16.7	664.0	25
1933	297.6	199	16.0	629.4	25
1934	258.3	211	16.9	686.9	25
1935	228.1	224	16.8	691.0	24
1936	249.0	238	17.9	742.6	24
1937	273.4	254	21.4	869.3	25
1938	272.6	255	22.3	905.2	25
1939	286.2	[242]	[24.5]	980.9	[25]
1940	340.4	215	24.7	1,003	24.6
1941					
1942					
1943					
1944					
1945	254.0	200	15.0	590	25.4
1946					
1947					
1948					
1949	202.5	303	19.9	877.6	22.7
1950	209.1	319	21.2	954.7	22.2
1951	214.3	343	25.1	1,101	22.8
1952	222.7	357	27.8	1,218	22.8
1953	229.3	390	28.9	1,275	22.7
1954	235.6	418	30.6	1,338	22.9
1955	249.4	437	32.3	1,392	23.2
1956	244.3	450	32.5	1,414	23.0
1957	248.0	479	34.7	1,506	23.0
1958	251.0	484	36.8	1,583	23.2
1959	248.0	508	38.4	1,635	23.5
1960	237.0	549	40.7	1,713	23.8

## III. FREIGHT TRAIN PERFORMANCE

	C-18 Average Section ("Commercial") Speed (kms-hr.)	C-19 Average "Technical" Speed (kms-hr.)	C-20 Average Gross Train Weight (metric tons)	C-21 Average Net Train Weight (metric tons)	C-22 Total Train- Kilometers (millions)
1913A				302	244.7
1913	13.6	16.5	573	[302]	211.9
1914				269	
1915				279	
1916					
1917	13.1				
1918	13.0				
1919	12.5			162	
1920	12.2			196	
1921	12.7			209	
1921/22	12.3			228	65.1
1922/23	13.3	18.3		272	81.4
1923/24	13.5	20.4		320	101.7
1924/25	13.2	20.6	740	371	124.2
1925/26	13.2	20.9	765	395	170.6
1926/27	13.3	20.9	818	411	194.9
1928	14.1	21.1	817	420	218.8
1929	13.3	21.1	854	443	252.5
1930	12.2	21.8	937	523	266.9
1931	13.2	22.3	967	549	293.0
1932	14.3	23.0	966	543	320.3
1933	13.8	22.3	959	533	326.4
1934	14.2	23.5	994	556	386.2
1935	15.6	24.4	1,035	590	450.0
1936	18.3	29.8	1,160	661	503
1937	19.5	31.4	1,199	677	543.3
1938	19.1	31.9	1,262	[703]	[546.8]
1939	19.3	32.7	1,296	711	569.1
1940	20.3	33.0	1,298	726	595.7
1941			[1,315]		
1942					
1943					
1944					
1945	17.2	29.2	1,249	686	508.5
1946	17.9		1,221	[670]	[538.8]
1947	18.9	32.9	1,238	[687]	[531.6]
1948	17.4		[1,340]	[750]	[614.9]
1949	18.4		[1,390]	[785]	[684.6]
1950	20.1	33.8	1,430	815	753.0
1951	22.0	34.5	1,478	839	[821.8]
1952	23.3	34.9	1,521	859	[877.6]
1953	23.5	35.0	1,579	894	906.9
1954	22.9	35.2	1,660	936	927.2
1955	24.7	37.1	1,758	1,002	978.0
1956	24.8	37.6	1,831	1,052	1,039.7
1957	25.6	37.8	1,887	1,089	1,129.6
1958	26.6	38.5	1,972	1,126	1,171.7
1959	27.2	39.2	2,037	1,167	1,244.6
1960	28.3	40.4	2,099	1,201	1,279.3

IV. LOCOMOTIVES

	C-23 Locomotives in Inven- tory Fleet (thousands)	C-24 Total Tractive Effort of Locomotives in Inventory Fleet (th. m. tons)	C-25 Average Daily Kilometers per Locomotive-Day (kilometers)			
			All	Steam	Electric	Diesel
			(1)	(2)	(3)	(4)
1913A	20.0	204.3	119.1			
1913	17.0	174.0	119.1			
1914						
1915						
1916						
1917			91.5			
1918			58.6			
1919			67.9			
1920			59.5			
1921			84.2			
1921/22	19.1		90.5			
1922/23	19.5		107.0			
1923/24	20.2		114.6			
1924/25	20.3		120.5			
1925/26	19.3		122.0			
1926/27	18.5		130.9			
1928	16.5	186.0	137.5			
1929	[16.6]	[192.6]	151.5			
1930	[17.0]	[204.0]	153.3			
1931	[18.6]	[230.6]	159.7			
1932	19.2	246.6	164.6			
1933	[20.2]	[262.6]	163.5			
1934	[21.0]	[279.3]	168.5			
1935	22.1	306.5	189.1			
1936	23.0	323.8	232.3			
1937	23.6	337.5	245.6			
1938	[24.3]	[355.4]	250.8			
1939	25.0	373.2	251.2			
1940	[28.0]	[418.5]	255.1			
1941						
1942	[23.8]					
1943	[25.8]					
1944	[26.4]					
1945	[27.0]	[430]	215	213	307	376
1946						
1947						
1948			214			
1949			232			
1950	[31]	[520]	245	243	302	300
1951			250	247	313	286
1952			252	250	302	284
1953	34.0	[600]	256	253	306	291
1954	35.0		257	253	312	294
1955	36.0	[640]	286	277	332	362
1956			296	282	428	388
1957			317	299	457	427
1958			328	302	497	447
1959			345	309	535	470
1960			367	317	557	486

V. FREIGHT CARS

	C-26 Active Fleet, Revenue Trains (th. car-days per day in 2-axle units)	C-27 Fleet Under RR Jurisdiction (th. car-days per day in 2-axle units)	C-28 Percentage of Four-Axle Units in Total Inventory Fleet	C-29 Turnaround Time, Active Fleet	
				(days) (1)	(hours) (2)
1913A	397.6	470.4			
1913	336.2	397.2		12.27	294.5
1914					
1915					
1916					
1917	238.1				
1918	212.9				
1919	184.9				
1920	257.9	[410.1]			
1921	218.5	[417.1]		21.5**	516.0**
1921/22	218.7	407.0		22.8	547.2
1922/23	200.8	391.9		17.1	410.4
1923/24	216.3	423.5		16.0	384.0
1924/25	233.1	433.5		13.4	321.6
1925/26	300.1	436.4		12.5	300.0
1926/27	314.9	450.3		11.3	271.2
1928	341.4	472.0	5.5	10.56	253.4
1929	393.3	494.5	[6.2]	10.19	244.6
1930	432.8	507.2	6.9	9.34	224.2
1931	472.8	529.4	[7.6]	9.58	229.9
1932	480.7	545.8	8.3	9.35	224.4
1933	490.2	555.4	9.0	9.57	229.4
1934	487.5	565.2	10.5	8.75	210.7
1935	523.7	604.6	12.1	7.69	184.6
1936	580.7	[670.6]	15.6	6.74	162.8
1937	627.0	723.2	19.6	6.98	167.5
1938	662.1	757.4	22.7	7.52	180.5
1939	677.0	[780.0]	24.9	7.25	174.0
1940	721.2	836.7	30	7.37	176.9
1941	[726]			8.44	202.6
1942	590	669		13.8	331.2
1943	576	725		12.6	302.4
1944	[655]	[820]		[11.7]	[281.3]
1945	674	[838]	[28]	10.84	260.2
1946	699		28	9.99	239.8
1947	731			9.65	231.6
1948	788			8.73	209.5
1949	866			8.19	196.6
1950	885	[1,028]	[36.4]	7.49	179.8
1951	909			7.13	171.1
1952	949			6.87	164.9
1953	980			6.64	159.4
1954	1,045		53.4	6.68	160.3
1955	1,055	[1,230]*	[55]	6.23	149.5
1956	[1,145]			6.31	151.4
1957	[1,193]			6.12	146.9
1958	[1,224]		70.5	5.83	139.9
1959	[1,298]			5.72	137.3
1960	[1,343]			5.59	134.2

V. FREIGHT CARS (concluded)

	C-30	C-31	C-32	C-33	
	Average Daily Kilometers per Active Car-Day (kilometers)	Average Total Turnaround Trip (kilometers)	Average Loaded Turn- around Trip (kilometers)	Average Empty Turnaround Trip (kilometers) (1)	Per Cent of Total Trip (2)
1913A	75.0	904	645	259	
1913	[75.0]	920	[657]	263	28.6
1914					
1915					
1916					
1917	65.8				
1918	27.9				
1919	35.9				
1920	34.8				
1921	37.9**	815**	505**	310	38.0**
1921/22	37.9	864	550	314	36.3
1922/23	48.0	821	522	299	36.4
1923/24	56.3	901	582	319	35.4
1924/25	67.0	898	634	264	29.4
1925/26	72.9	911	650	261	28.6
1926/27	80.4	909	647	262	28.8
1928	84.6	892	637	255	28.6
1929	87.3	890	642	248	27.9
1930	89.5	836	611	225	26.9
1931	90.9	871	644	227	26.1
1932	97.3	910	664	246	27.0
1933	97.6	934	673	261	27.9
1934	117.5	1,029	732	297	28.9
1935	128.4	987	719	268	27.2
1936	140.3	946	692	254	26.9
1937	139.8	976	721	255	26.1
1938	138.4	1,041	753	288	26.8
1939	145.2	1,053	757	296	28.1
1940	139.9	1,032	732	300	29.1
1941	130.3	1,100	806	294	26.7
1942	94.6	1,305	920	385	29.5
1943	108.2	1,363	924	439	32.2
1944	[109.0]	1,275	877	398	31.2
1945	123.5	1,339	979	360	26.9
1946	120.5	1,204	873	331	27.5
1947	111.6	1,077	767	311	28.8
1948	123.8	1,081	784	297	27.5
1949	133.9	1,097	792	305	27.8
1950	146.4	1,097	801	296	27.0
1951	159.0	1,073	781	292	27.2
1952	165.2	1,135	818	317	27.9
1953	171.8	1,141	825	316	27.7
1954	173.3	1,158	838	320	27.6
1955	188.2	1,172	844	328	28.0
1956	191.2	1,206	868	338	28.0
1957	206.4	1,263	[902]	[361]	[28.6]
1958	216.5	1,262	893	369	29.2
1959	222.5	1,271	902	369	29.0
1960	227.0	1,269	908	361	28.4

## VI. RAILROAD NETWORK AND TRAFFIC DENSITY

	C-34 Total Road Operated, Annual Averages (th. kms)	C-35 Total Road Operated, End of Year (th. kms)	C-36 Freight Traffic Density (th. ton-kms per km of road operated)	C-37 Passenger Traffic Density (th. ton-kms per km of road operated)
1913A	70.5	71.7	1,089	421
1913	58.5	58.5	1,122	431
1914	67.6	[62.3]		
1915	64.0	[65.1]		
1916	55.3	[69.3]		
1917	63.3	70.3	997	
1918	26.8	[71.3]	528	
1919	31.5	[71.4]	556	
1920	56.8	71.6	253	
1921	66.5	71.8	236	170
1921/22	69.4	71.9	231	142
1922/23	69.6	72.3	338	200
1923/24	73.9	74.5	457	209
1924/25	74.4	74.5	638	256
1925/26	74.6	75.7	924	313
1926/27	75.7	76.9	1,078	292
1928	76.9	76.9	1,215	318
1929	77.0	76.9	1,467	416
1930	77.1	77.9	1,738	672
1931	80.2	81.0	1,896	770
1932	81.6	81.8	2,075	1,027
1933	82.1	82.6	2,065	916
1934	83.2	83.5	2,472	858
1935	83.8	84.4	3,079	811
1936	85.1	85.1	3,801	907
1937	84.9	84.9	4,179	1,071
1938	84.9	85.0	4,362	1,079
1939	85.7	86.4	4,570	1,094
1940	95.5	106.1	4,346	1,018
1941				
1942		62.9		
1943	72.3	81.7	3,540	
1944	96.2	110.7	3,090	
1945	111.8	112.9	2,809	589
1946	113.5	114.1	2,952	863
1947	114.8	115.5	3,053	828
1948	115.7	115.8	3,855	713
1949	115.9	116.0	4,519	701
1950	116.5	116.9	5,170	755
1951	117.3	117.8	5,774	840
1952	118.2	118.6	6,272	909
1953	119.3	119.9	6,689	992
1954	120.1	120.3	7,134	1,075
1955	120.5	120.7	8,057	1,173
1956	120.7	120.7	8,940	1,180
1957	121.0	121.2	10,023	1,268
1958	122.0	122.8	10,672	1,298
1959	123.6	124.4	11,566	1,330
1960	125.1	125.8	12,025	1,365

## VII. RAILROAD LABOR FORCE AND PRODUCTIVITY

	C-38		C-39		C-40 Operating Labor Force (th. workers)
	Composite		Labor Productivity		
	Passenger Ton-Kilometers		Based on		
	Passenger Tariff Ton-Kms	Passenger Operating Ton-Kms in Revenue Trains	Based on Composite Tariff Ton-Kms (th. compos. passenger ton- kms per operating worker)	Composite Operating Ton-Kms in Revenue Trains	
	(1)	(2)	(1)	(2)	
1913A	106.5		130.6		823
1913	90.9	[92.9]	132.9	[134]	691
1914					
1915					
1916					
1917					
1918					
1919					
1920					
1921	27.0				
1921/22	25.9				
1922/23	37.5				
1923/24	49.2				
1924/25	66.5				
1925/26	92.3		106.2		869
1926/27	103.8		113.9		911
1928	117.9	119.9	136.6	138.9	863
1929	144.9	149.5	167.0	172.2	868
1930	185.7	194.4	195.3	204.4	951
1931	213.9	225.8	195.6	206.4	1,094
1932	253.0	260.8	240.1	247.4	1,054
1933	244.6	251.9	239.6	246.7	1,021
1934	277.2	288.8	241.4	251.6	1,148
1935	326.0	336.7	261.0	269.6	1,249
1936	400.6	409.7	329.4	336.9	1,216
1937	445.8	458.7	356.6	367.0	1,250
1938	462.2	469.3	353.4	358.8	1,308
1939	485.4	498.3	[369.1]	[381.3]	[1,307]
1940	513.0	530.5	368.0	380.6	1,394
1941					
1942					
1943					
1944					
1945	379.9	414.7	250.3	273.9	1,514
1946	432.9	[458.9]	274.3	[290.8]	1,578
1947	445.6	460.3	282.3	291.0	1,580
1948	528.5	[543.7]	327.5	[341.7]	1,591
1949	605.1	[618.7]	365.2	[373.4]	1,657
1950	690.3	701.7	403.2	409.9	1,712
1951	775.8	[788.0]	439.5	[446.5]	1,765
1952	848.7	[861.3]	454.8	[461.5]	1,866
1953	916.3	929.1	482.0	488.7	1,901
1954	985.9	997.0	501.0	506.6	1,968
1955	1,112.3	1,121.4	561.8	566.4	1,980
1956	1,221.5	1,236.2	616.9	624.3	1,980
1957	1,336.2	1,383.5	669.8	693.5	1,995
1958	1,460.4	1,477.8	731.3	740.0	1,997
1959	1,593.9	1,616.8	799.3	810.8	1,994
1960	1,675.1	1,707.2	833.0	848.9	2,011

VIII. POWERED FREIGHT TRAFFIC ON INLAND WATERWAYS

	C-41		C-42		C-43	
	<i>Ton-Kilometers</i>		<i>Tons Originated</i>		<i>Average Length of Haul</i>	
	Under Ministry and Other Organizations		Under Ministry and Other Organizations		Under Ministry and Other Organizations	
	Ministry (billions)	Organizations (2)	Ministry (1)	Organizations (2)	Ministry (1)	Organizations (2)
1913A						
1913	26.2	30.9	34	34.3	771	901
1914						
1915						
1916						
1917						
1918						
1919						
1920						
1921						
1921/22						
1922/23		10.5*		14.6*		715*
1923/24	7.52*	8.80*	9.26*	13.5*	812*	652*
1924/25	10.6*	12.0*	12.6*	17.2*	840*	700*
1925/26	12.9*	15.5*	16.2*	21.7*	797*	714*
1926/27	14.2*	16.5*	16.9*	23.4*	844*	706*
1928	15.9	17.5	18.3	25.5	867	687
1929	18.4	20.7	23.2	32.0	794	646
1930	22.9		36.6	41.1	625	
1931	27.0		44.8		603	
1932	25.1		47.0		534	
1933	25.8		44.7		578	
1934	29.0		52.7		550	
1935	33.9		64.7		524	
1936	31.1		69.9		446	
1937	33.0		66.9		494	
1938	32.0		66.6		481	
1939	34.6		73		474	
1940	35.8	35.9	72.3	72.9	495	492
1941						
1942						
1943						
1944						
1945	18.3	18.6	36.1	36.6	507	509
1946	19.9	20.4	38.9	39.9	512	511
1947	24.4	25.1	46.1	48.2	530	520
1948	30.9	32.1	59.9	63.5	516	506
1949	37.2	38.8	72.6	78.0	512	497
1950	45.5	45.9	85.5	91.5	532	502
1951	51	51.5	96.6	102.8	528	501
1952	57.1	57.8	104	109.8	549	527
1953	58.6	58.9	107.4	116.1	546	507
1954	61.7	62.4	120.3	128.2	513	486
1955	66.6	67.4	129.3	139.1	515	484
1956		70.5		147.1		480
1957		76.4		159.2		480
1958		85.5		178.3		480
1959		93.6		192.2		488
1960		99.6		210.3		474

## IX. MARITIME FREIGHT TRAFFIC CARRIED IN SOVIET BOTTOMS

	C-44		C-45			C-46
	<i>Total Ton-Kilometers</i>		<i>Total Tons Originated</i>			Average
	For Terminated Trips		For Terminated Trips			Length of Total Haul
	(billions)	(1)	(1)	(2)	(3)	(kilometers)
1913A	[23.6]		14.7			[1,605]
1913	[22.2]		13.9			[1,593]
1914						
1915						
1916						
1917						
1918						
1919						
1920			2.87			
1921			3.49			
1921/22			3.71*			
1922/23			4.08*			
1923/24			3.98*			
1924/25			5.26*			
1925/26			6.03*			
1926/27			6.92*			
1928	[10.1]	9.10	8.30		7.85	[1,217]
1929	10.4	9.39	9.10	8.84	8.55	1,143
1930	13.2	10.1	12.4	12.3	11.3	1,065
1931	16.0	14.7	15	14.6	13.9	1,067
1932	20.1	18.2	15.1	14.8	14.8	1,331
1933	24.4	23.4	16.2	15.9	15.9	1,506
1934	27.6	26.4	22.6	22.2	21.7	1,221
1935	34.1	33.2	26.1	25.4	25.0	1,307
1936	41.1		30.6		28.6	1,343
1937	36.4		29.4			1,238
1938	33.9		30.3			1,119
1939	[29.8]		[30.2]			[987]
1940	23.1		31			745
1941						
1942						
1943						
1944						
1945	34.2		20.2			1,698
1946	29.4		20.3			1,453
1947	34.8		24.3			1,432
1948	34.8		26.9			1,294
1949	37.2		30.9			1,204
1950	39.7		33.7			1,179
1951	40.3		36.5			1,107
1952	44.3		41.2			1,075
1953	48.2		45.5			1,053
1954	56.6		48.5			1,169
1955	68.9		53.7			1,284
1956	82.4		57.7			1,430
1957	92.7		65.7			1,411
1958	106.3		70.8			1,503
1959	115.7		73.5			1,574
1960	131.5		75.9			1,733

IX. MARITIME FREIGHT TRAFFIC CARRIED IN SOVIET BOTTOMS (concluded)

	C-47 Domestic Ton-Kilometers (billions)	C-48 Domestic Tons Originated (millions)		C-49 Average Length of Domestic Haul (kilometers)
		(1)	(2)	
1913A	[15.8]	12.5		[1,267]
1913	[15.1]	11.9		[1,269]
1914				
1915				
1916				
1917				
1918				
1919				
1920				
1921				
1921/22				
1922/23				
1923/24			3.30*	
1924/25			4.38*	
1925/26			5.19*	
1926/27			5.96*	
1928	[6.24]	[6.93]	6.73	[900]
1929	[6.67]	[7.74]	7.42	[862]
1930	[10.0]	[10.7]	10.6	[939]
1931	[11.5]	[13.3]	12.9	[864]
1932	[13.9]	[13.3]	13.1	1,035
1933	[13.6]	13.5	13.2	[1,004]
1934	[15.3]	19.1	18.7	[798]
1935	15.1	20.9	20.2	723
1936	16.7	24.8		672
1937	17	24.3		702
1938	18.8	[26.6]		[706]
1939	23.0	28		821
1940	21.6	30.3		714
1941				
1942				
1943				
1944				
1945	[10.1]	[12.6]		799
1946	[12.4]	[15.5]		[802]
1947	[14.7]	[18.6]		[790]
1948	[16.6]	[21.3]		[779]
1949	[19.6]	[25.4]		[772]
1950	[21.2]	[27.9]		[760]
1951	[22.9]	[30.5]		[751]
1952	[25.8]	[34.8]		[741]
1953	[28]	[38.3]		[731]
1954	[28.2]	[39.1]		[721]
1955				
1956				
1957				
1958				
1959				
1960				

X. OIL PIPELINE TRAFFIC

	C-50 Ton- Kilometers (millions)	C-51 Tons Originated (thousands)	C-52 Average Length of Haul (kilometers)
1913A			
1913	[327]	370	883
1914			
1915			
1916			
1917			
1918			
1919			
1920			
1921	79**	89**	883**
1921/22	155	176	883
1922/23	103	117	883
1923/24	348	394	883
1924/25	403	582	692
1925/26	388	627	619
1926/27	536	990	541
1928	683**	1,108**	616**
1929	1,131**	1,619**	699**
1930	2,232	3,997	558
1931	2,624	4,423	593
1932	2,863	5,077	564
1933	3,380	5,808	582
1934	3,504	6,580	532
1935	[3,500]	4,800	[529]
1936	[3,600]	6,900	[514]
1937	3,600	7,500	480
1938	[3,600]		
1939	[3,700]		
1940	3,800	7,900	481
1941			
1942			
1943			
1944			
1945	2,700	5,600	482
1946	3,600		
1947			
1948			
1949			
1950	4,900	15,300	320
1951	5,500	18,400	299
1952	6,400	23,200	276
1953	7,600	29,400	259
1954	10,200	39,700	257
1955	14,700	51,700	284
1956	20,500	65,300	314
1957	26,600	80,900	329
1958	33,800	94,900	356
1959	41,600	111,300	374
1960	51,200	129,900	394

## XI. MOTOR FREIGHT TRAFFIC

	C-53 Ton- Kilometers (billions)	C-54 Tons Originated (millions)	C-55 Average Length of Haul (kilometers)
1913A			
1913	0.1	10.0	10.0
1914			
1915			
1916			
1917	0.1	10.0	10.0
1918			
1919			
1920	0.1	10.0	10.0
1921			
1921/22			
1922/23			
1923/24	0.2	15.0	10.3
1924/25	0.2	16.0	10.3
1925/26	0.2	17.0	10.2
1926/27	0.2	18.0	10.1
1928	0.2	20.0	10.0
1929	0.3	29.0	10.4
1930	0.5	48.0	10.4
1931	0.8	76.0	10.5
1932	1.1	100.0	10.7
1933	1.3	130.0	10.0
1934	2.4	233.0	10.3
1935	3.5	343.1	10.2
1936	5.5	539.2	10.2
1937	5.9	569.1	10.4
1938	6.8	642.7	10.5
1939	7.9	826.8	9.6
1940	8.9	858.6	10.4
1941			
1942			
1943			
1944			
1945	5.0	420.0	12.0
1946	7.5	610.0	12.3
1947	10.6	803.5	13.2
1948	13.3	1,092.4	12.2
1949	17.0	1,481.3	11.5
1950	20.1	1,859.2	10.8
1951	24.1	2,252.3	10.7
1952	27.6	2,652.8	10.4
1953	31.4	3,002.7	10.4
1954	37.5	3,305.9	11.4
1955	42.5	3,730.0	11.4
1956	48.5	4,200.9	11.5
1957	61.7	5,216.4	11.8
1958	76.8	6,474.4	11.9
1959	87.6	7,398.6	11.8
1960	98.5	8,492.7	11.6