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The Economic Origins of Soviet Autarky 1927/28–1934

Forty years ago the USSR was rushing toward a degree of economic isolation unparalleled by any industrial economy at peace.[1] The autarkic position reached by the Soviet economy in the mid-1930s seemed to be a fundamental characteristic of Soviet policy. In the past two decades, however, Soviet foreign trade has grown rapidly. Thus, it is of both current and historical interest to understand and reassess the circumstances under which the USSR sharply curtailed economic relations with the world capitalist economies in the 1930s. Conventional interpretation stresses that Stalin, during the First and Second Five-Year Plans (1928/29–1932, 1933–37), deliberately pursued economic autarky—a policy intended to reduce Soviet foreign trade as quickly as possible to a "tolerable minimum" and without regard to the possible economic gains from higher levels of foreign trade.[2] According to this explanation, the initial expansion of trade between 1927/28 and 1931 is interpreted as a policy of "imports of machinery intended to end imports" and the subsequent cutback in imports is cited as evidence of its success.[3] In the following analysis of the policies and events that culminated in Stalin's "autarkic policy," it is argued that the collapse and stagnation of Soviet foreign trade after 1931 were unforeseen and caused by events beyond the control of Soviet planners.[4]

1. Soviet foreign trade data are from Ministerstvo Vneshnei Torgovli SSSR, *Vneshniaia torgovlia SSSR za 1918–1940 gg.: Statisticheskii obzor* (Moscow, 1960) unless otherwise noted. Data for 1913 refer to imperial Russia. Split year refers to economic year, October 1 to September 30. All values for foreign trade are in terms of gold rubles and reflect world trade prices converted into rubles at the parity exchange rate. Weights are in metric tons. Volume and price indexes for total imports and exports and selected commodity groups are from Michael Dohan, "Volume, Price, and Terms of Trade Indices of Soviet Foreign Trade 1913–1938," in Michael Dohan and Edward Hewett, *Two Studies in Soviet Terms of Trade 1918–1940* (Bloomington, Ind., 1973) (hereafter Dohan 1973).

2. This interpretation is oversimplified but reflects the essence of most Western discussion of Soviet foreign trade during the early Five-Year Plans. See Franklyn Holzman's "Foreign Trade," in *Economic Trends in the Soviet Union*, eds. Abram Bergson and Simon Kuznets (Cambridge, Mass., 1963) (hereafter Holzman 1963), pp. 301–6.

3. Robert Campbell, *Soviet-type Economics* (Boston, 1974), pp. 132–33, 157; and Holzman (1963), p. 302.

4. In his excellent survey Franklyn Holzman (Holzman, 1963) also raised the possibility that the Soviets were forced into a greater degree of autarky than they wanted for some but not all the reasons I cite in this paper. He notes, in particular, the sharp

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Two historical events require explanation. First, during 1927/28–1938 the Soviet economy grew rapidly. Ordinarily a comparable expansion of imports would have occurred. But, after expanding rapidly in the first three years of the First Five-Year Plan, Soviet exports and imports fell sharply in 1932. By 1934, imports had dropped to below 1927/28 levels and remained low through 1938. These basic trends and the consequent isolation from world trade may be seen in table 1. As a result of rising GNP and declining foreign trade, Soviet trade participation (defined as the ratio of imports to GNP) fell much below levels for Russia in 1913 or for other economies at comparable stages of development. Second, the Soviet official press called for great efforts to hasten the "economic independence" of the USSR and heralded achievements in this direction as great economic victories for socialism and testimony to the wisdom of Stalin's economic policy.[5] Taken together, these facts form the foundation for the conventional Western interpretation of the origins of Soviet autarky.

The motive for autarky most frequently cited by Western observers is Soviet fear of capitalist aggression, both military and economic.[6] Such considerations undoubtedly influenced the tempo and structure of the industrialization drive, but they do not explain the reduction of trade at its most crucial period 1932–35.[7] In recent years, a variety of other causes for the decline in Soviet trade have also been suggested, including Stalin's xenophobia and distaste for the uncontrollability of the foreign sector,[8] effects of the world depression,[9] and systemic characteristics of a Soviet-type economy which hinder the coordination of a highly variable foreign trade sector with a central plan.[10] These explanations, while insightful, are incomplete and oversophisticated. They ignore the large-scale changes occurring in the Soviet and world economies at the time.

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decline in the terms of trade and the high financing costs of short-term debt, but he does not assign as much weight to these and other economic causes for Soviet autarky as I do.

5. See the oft-cited D. D. Mishustin, *Vneshniaia torgovlia i industrializatsiia SSSR* (Moscow, 1938) and references in notes 90–96 below.

6. Alexander Gerschenkron, *Economic Relations with the USSR* (New York, 1945), p. 140.

7. In fact, military and economic benefits of trade would have argued for an expansion of trade to accelerate the building of war industries and to stockpile raw materials.

8. Leon Herman, "The Promise of Economic Self-Sufficiency under Soviet Socialism," in *The Development of the Soviet Economy*, ed. Vladimir Treml (New York, 1968), pp. 213–48.

9. See Holzman (1963), pp. 304–5; and Howard Sherman, *The Soviet Economy* (Boston, 1969), p. 188.

10. Herbert Levine, "The Effects of Foreign Trade on Soviet Planning Practices," in *International Trade and Central Planning*, eds. Alan Brown and Egon Neuberger (Berkeley, 1968), pp. 255–76.

The collapse of Soviet foreign trade in the 1930s had its roots in the pre-World War I structure of the Russian economy and foreign trade sector.[11] At that time, imports supplied large portions of raw materials for light industry and more than one-half of the installed machinery.[12] In addition, about 75 percent of exports was derived from agriculture, with grain and related products alone accounting for 43 percent in 1909–13 (table 2).[13] These characteristics were to cause major problems following the Revolution.

In the years immediately after 1917, Russia's foreign trade fell to almost nothing because of the Allied blockade and the economic chaos of War Communism. Any quick restoration of foreign trade to 1913 levels during the New Economic Policy depended on the Soviets' ability to get the peasantry to restore output and, especially, marketing to prewar levels. The Soviet government was unable to do this, and chronic shortages of marketed grain and other agricultural products repeatedly disrupted Soviet plans to restore exports along traditional lines.[14] Grain and flour exports even in the best NEP year, 1926/27, only reached 2.2 million metric tons compared to 9.5 million in 1913 (table 4). As a result, foreign trade lagged far behind the rest of the economy—by 1926/27 export volume (unadjusted for territorial loss) had attained 33 percent and imports 38 percent of 1913 levels (table 1).

Throughout the NEP, a lack of import capacity interfered again and again with domestic economic policy. There were chronic shortages of cotton, wool, hides, dyes, paper, nonferrous metals, and other materials, which had been supplied in large part by imports prior to 1913. Some investment projects may have been postponed because of specific shortages of imported machinery (rather than a general lack of saving), but it was the shortage of raw materials, not a lack of manufacturing capacity, that hampered consumer goods output during the NEP.[15] As a result, the government took extensive steps, during the NEP, to develop import substitutes and especially of products for which import substitution had been occurring before 1913.[16]

11. This section is based primarily on my Ph.D. dissertation, "Soviet Foreign Trade in the NEP Economy and Soviet Industrialization Policy" (M.I.T., 1969) (hereafter Dohan 1969).

12. Dohan (1969), pp. 118–48; and Holzman (1963), pp. 295–98.

13. V. C. Groman, "Khlebnaia produktsiia i khlebnyi eksport SSSR," in *Entsiklopediia sovetskogo eksporta*, ed. B. S. Belen'skii et al., 2nd ed., vol. 1 (Moscow, 1928) (hereafter *Ensoveks*), pp. 220–38 and the many articles on grain trade in the same volume.

14. Dohan (1969), pp. 182–469, describes the NEP foreign trade plans and the difficulties in their implementation. For procurement difficulties in 1927/28 see *Sovetskaia torgovlia*, 3, no. 45/46 (1928); and Gosplan SSSR, *Kontrol'nye tsifry narodnogo khoziaistva SSSR na 1928/29 god* (Moscow, 1929) (hereafter Gosplan 1929), p. 489.

15. L. Z. Zalkind, "K kontrol'nym tsifram tovarnooborota na 1927/28 g.," *Sovetskaia torgovlia*, 2, no. 24 (1927): 3; *Sovetskaia torgovlia*, 3, no. 45/46 (1928): 31–42; and Gosplan (1929), pp. 175, 201–2.

16. Gosplan (1929), p. 173.

Table 1. *USSR: Foreign Trade and Other Aggregate Indicators, 1926/27–1938* (millions of gold rubles)

	1913	1926/27	1927/28	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
Current World Prices													
A. Exports	1506	779	782	924	1036	811	575	470	418	367	310	376	293
B. Imports	1375	714	946	880	1059	1105	704	348	232	241	309	292	313
C. Balance of Trade	+131	+66	−164	+43	−22	−294	−129	+121	+186	+126	+2	+85	−20
D. Balance of Payments: Current Account		+44	−199	+2	−97	−399	−191	+74	+164	+132	−12	+82	−23
E. Precious Metal Exports, Net		34	155	11	5	120	103	111	119	49	19	239	138
Soviet Foreign Debt													
Shenkman Data: October 1													
F. Actual Plus Contingent = "Total"		392	485	615	865	1295	1335						
G. Actual		252	370	415	625	855	975						
H. Official Data ("end of year")			470[a]			1400[b]		450[c]		139[b]	85[a]		
Constant Prices													
I. Exports (1927/28 world prices)	2443	803	782	1009	1508	1654	1293	1257	1189	1065	844	881	787
J. Imports (1927/28 world prices)	1998	768	946	935	1151	1366	1001	619	558	625	636	582	647
K. World Trade: Quantum Index	77–81	96	100	105	98	90	78	79	82	86	90	101	93
L. Soviet GNP (1937 domestic prices) (billions of rubles)			124	127	135	137	136	141	155	179	193	212	216
M. Industrial Output Index (1927/28 prices)		97	100	109	124	129	131	136	162	187	222	228	235
N. Net Agricultural Output Index (1926–27 prices)		94	100	102	108	95	82	86	85	95	89	119	101

Table 1. *(Continued)*

	1913	1926/27	1927/28	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
O. Livestock (millions of head, January 1)													
Horses			32.1	32.6	31.0	27.0	21.7	17.3	15.4	14.9	15.5	15.9	16.2
Cattle			60.1	58.2	50.6	42.5	38.3	33.5	33.5	38.9	46.0	47.5	50.9
Hogs			22.0	19.4	14.2	11.7	10.9	9.9	11.5	17.1	25.9	20.0	25.7
Sheep			97.3	97.4	85.5	62.5	43.8	34.0	32.9	36.4	43.8	46.6	57.3

Notes and Sources for Table 1:

Rows A–C: *Vneshniaia torgovlia SSSR za 1918–1940 gg.: Statisticheskii obzor* (Moscow, 1960). Precious metals are excluded.

Row D: Current balance is calculated as the difference between reported exports and reported imports, both net of any trade in precious metals, plus the net balances of interest, currency remittances, tourism, diplomatic and related expenditures, shipping, brokerage and commissions, foreign labor and technical assistance, and other miscellaneous expenses. Data are from P. D. J. Wiles, *Communist International Economics* (New York, 1969), pp. 100–101. Unlike Wiles's calculations, my estimates are not adjusted to account either for shortfall in actual export receipts below reported exports because of warehousing abroad during 1926/27–1931 (about 6 percent of reported exports) or for the excess of cash receipts above reported exports from the sale of these warehoused commodities during 1933–36. The shortfall would worsen the current balance, the excess would improve it. Nor are they adjusted for contraband trade which presumably was financed from existing stocks of valuta in the hands of the public rather than from official sources. Invisibles for 1929 and 1930 are based on 1928/29 and 1929/30 estimates, for 1938, on 1937 estimates.

Row E: Gold, silver, platinum. Data for 1926/27 and 1927/28 from E. M. Shenkman, "Russlands Zahlungsbilanz und Zahlungsverkehr mit dem Ausland," *Weltwirtschaftliches Archiv*, no. 36 (1932), p. 553. Other years compiled from recipient country trade statistics (United States, Germany, England, France, Japan) in Michael Dohan, "Soviet Foreign Trade in the NEP Economy and Soviet Industrialization Policy" (Ph.D. diss., M.I.T., 1969), pp. 837–60.

Rows F–G: Shenkman (1932), p. 547. The year 1926/27 refers to 1927; 1927/28 to 1928.

Row F: Includes "real liabilities" plus loans secured by exports warehoused abroad and liabilities for orders placed but not delivered. Data for 1932 refer to "July 1932." See note 65.

Row H: [a] A. Rozengol'ts in *Vneshniaia torgovlia*, 6, no. 18/19 (1936): 12–13. Datum for 1927/28 is January 1, 1929; end of 1931 was 1,220 million dollars. Datum for 1936 is July 1936. [b] A. Rozengol'ts, "SSSR—samaia kreditosposobnaia strana," *Vneshniaia torgovlia*, 5, no. 19/20 (1935): 6. [c] American-Russian Chamber of Commerce, *Handbook of the Soviet Union* (New York, 1936), p. 343. See also *Pravda*, January 4, 1934, November 7, 1935, and November 25, 1936.

Table 1. (*Continued*)

Rows I–J: Value data for 1927/28 times volume indexes with 1927/28 price weights from Michael Dohan, "Volume, Price, and Terms of Trade Indices of Soviet Foreign Trade 1913–1938," in Michael Dohan and Edward Hewett, *Two Studies in Soviet Terms of Trade 1918–1940* (Bloomington, Ind., 1973), pp. 24 and 27.
Row K: *Review of World Trade 1938* (Geneva: League of Nations, 1939), p. 60. 1929 weights.
Row L: R. Moorsteen and R. Powell, *The Soviet Capital Stock, 1928–1962* (Homewood, Ill., 1966), pp. 361–63.
Row M: W. Nutter, *Growth of Industrial Production in the Soviet Union* (Princeton, 1962), p. 522. Data for 1929 and 1930 are for 1928/29 and 1929/30.
Rows N–O: D. Gale Johnson and Arcadius Kahan, "Soviet Agriculture: Structure and Growth," U.S. Congress, Joint Economic Committee, *Comparisons of the United States and Soviet Economies* (Washington, D.C., 1959), pp. 205, 230–35.

Policy debates leading to the Five-Year Plan often concerned the feasibility of "socialism in one country" and the proper relationship of the Soviet economy to the (hostile capitalist) world economy.[17] Underlying these debates were the limits placed on growth by chronic contemporary import shortages and the ever-present threat of economic blockade (as had occurred during 1918–20).[18] Actual discussion of "economic independence" was quite subdued, however, and focused primarily on developing domestic machine-building and other defense industries, on promoting technological independence of the USSR, and on the possibility of using internal saving (rather than foreign loans) to finance the investment program. During this period, a policy of economic independence was conceptualized not in terms of reducing foreign trade, but rather in terms of securing military needs and freeing the economy from limits imposed directly by foreign trade problems and indirectly by the peasants' failure to market grain and other produce.

On the eve of the First Five-Year Plan the USSR's exports and payments position worsened. The grain marketing crisis of 1927/28 had halted modest yet important grain exports, and planners had little hope of a quick resumption. At the same time, imports surged ahead as planners attempted to meet industrialization's growing demands for machinery and raw materials. Thus, the year 1927/28 ended with a large trade deficit (table 1, row C).

It was against this background that the planners drafted the Five-Year Plan for 1928/29.[19] Under the plan, chronic import shortages were to be surmounted by ambitious programs to expand both export and import substitute sectors. Indeed, expanding foreign trade was a basic assumption of the draft plan. Foreign trade plans (table 2) optimistically projected a 21 percent increase in exports each year, making it one of the most rapidly growing sectors. Imports were also to be expanded rapidly after a small cutback to eliminate the large trade deficit carried over from 1927/28. The draft Five-

17. Richard Day, *Leon Trotsky and the Politics of Economic Isolation* (Cambridge, Mass., 1973), pp. 118–25; and Alexander Erlich, *The Soviet Industrialization Debate* (Cambridge, Mass., 1960).

18. See, for example, A. Mikoian, "Znachenie eksporta v narodnom khoziaistve SSSR," in *Ensoveks*, p. 16.

19. This section is based on Gosplan SSSR, *Piatiletnii plan narodno-khoziaistvennogo stroitel'stva SSSR* (Moscow, 1929), pp. 9–12, 99–102; G. Geller and A. Sovalov, "Osnovnye problemy razvitiia vneshnei torgovli v piatiletie 1928/29–1932/33," *Voprosy torgovli*, 1928, no. 12, pp. 37–49; M. Kaufman, "Eksport i narodnoe khoziaistvo," *Voprosy torgovli*, 1929, no. 1, pp. 25–35; a series of articles on the final variant of the Narodnyi Komissariat Torgovli's foreign trade plan for the First Five-Year Plan, published in *Voprosy torgovli*, 1929, no. 5, pp. 89–136; M. Kaufman, "Itogi i perspektivy vneshnei torgovli," *Planovoe khoziaistvo*, 1929, no. 4, pp. 90–93; and "Der Fünfjahresplan des Aussenhandels," *Sowjetwirtschaft und Aussenhandel* (hereafter *Sow. aus.*), 7, no. 13 (1929): 20–34. This journal published by the Soviet trade delegation to Germany was titled *Die Volkswirtschaft der Union der Sozialistischen Sowjet Respubliken* prior to 1931. Dohan (1969), pp. 512–59, describes these plans in detail.

Table 2. *USSR: Foreign Trade Plan for First Five-Year Plan* (millions of foreign trade rubles, current prices)

	Actual 1909–1913	Actual 1926/27	Actual 1927/28	Plan 1928/29	Plan 1929/30	Plan 1930/31	Plan 1931/32	Plan 1932/33	FYP
Exports									
Total Exports	1487	779	782	910	1078	1272	1663	2048	6972
Agricultural Products, Fur, and Fish	1127	449	365	387	424	497	777	1033	3118
Grain Products (including oil seed) est.	636	208	59	(0)	(0)	(74)	(295)	(440)	809
Other Crops (flax, and so forth)	114	39	43	—	—	—	—	104	—
Animal Products	211	(90)	135	—	—	—	—	320	—
Industrial Products	360	331	417	524	654	775	886	1015	3853
Forest, Oil, Manganese	205	194	214	—	—	—	—	634	2258
Food Processing	—	31	49	—	—	—	—	180	—
Textiles	—	—	63	—	—	—	—	115	—
Imports									
Total Imports	1139	713	945	755	950	1220	1550	1705	6180
Machinery	(127)	152	256	158	241	350	510	525	1784
Raw Materials (metals, fiber, and so forth)	(292)	328	384	297	344	400	482	523	2046
Other Goods	(721)	232	305	300	365	470	558	657	2349
Semi-processed (paper, and so forth)	(138)	102	117	—	—	—	—	60	370
Agricultural Producers Goods	(91)	38	39	—	—	—	—	165	622
Consumer Goods and Other	(492)	81	142	—	—	—	—	432	1356
Balance of Trade	+348	+67	−163	+155	+128	+52	+116	+343	+792

Notes and Sources for Table 2:
Data for 1909–1913 from *Entsiklopediia sovetskogo eksporta,* 2nd ed., vol. 1 (Moscow, 1928), pp. 494–97. Classifications are approximate and discussed in Dohan (1969), pp. 751–54. Data for 1926/27–1927/28 are from *Vneshniaia torgovlia 1918–1940* and are reclassified to correspond to data for the period as described in Dohan (1969), pp. 788–92. Data for the final revised variant of the foreign trade plan section of the First Five-Year Plan, drawn up by Narodnyi Komissariat Torgovli, are based on data from references in notes 19–23 of this article and from *Izvestiia,* June 4 and June 6, 1929. Grain exports projected for First Five-Year Plan based on M. Kaufman, "Itogi i perspektivy vneshnei torgovli," *Planovoe khoziaistvo,* 1929, no. 4, p. 88, and an assumption of no grain exports in 1929/30 and the allocation of 20 percent of the sum to be exported in 1930/31–1931/32 to 1931/32. Detailed data and their sources on the foreign trade plan for the First Five-Year Plan are described in Dohan (1969), pp. 512–59, 770–81. Plans based on 1928 prices. Parentheses denote estimates.

Year Plan had based the "minimal variant" on modest foreign borrowing and the "optimal variant" on a substantial increase in foreign borrowing and improved credit terms. But, given the prevailing slogan of "socialism in one country" and the (temporary) deterioration of relations with Germany and Great Britain, the final variant deliberately excluded reliance on foreign credits. Hence, large trade surpluses had to be projected for each year to replenish depleted reserves and to pay for increased technical aid and other invisibles. The trade planners did specify, however, that if available on better terms, additional credit would be exploited.

In drawing up the foreign trade plan, Soviet planners attempted to change the structure of exports away from the traditional predominance of agricultural products, for these had proven very unreliable during the NEP. Planned export growth for the initial years relied on expanding exports of industrial raw materials (timber, oil, manganese) and to a lesser extent on animal products (table 2). Large grain exports were not expected again until the third or fourth year of the plan, but afterward they were to become major sources of export growth, reaching 6.5 million tons in 1932/33 (table 2).[20] These exports were projected on the expectation of increased output and marketing from the modest number of collective farms that were to be established. Given the institutional constraints assumed at the time (modest collectivization, no rationing, market system) and the experience of the NEP, it appears that the planners exploited most of the realistic opportunities for increasing exports. Considerable investment was planned for timber, petroleum, mining, and the processing and storage of agricultural export products as well as for agriculture itself. While inadequate export supplies were seen as limiting export growth at the beginning of the plan period, planners worried that by the end of the Five-Year Plan the major export problem would be inadequate markets.

The much discussed targets to develop import substitute sectors during the Five-Year Plan were only in part dictated by Soviet concern for economic independence and national defense. Considerable import substitution was implicit in the ambitious growth targets, because the demand for imported materials and machinery could not be met by imports alone, even with the very optimistic plans for expanding imports. Thus, plans for rapid expansion of machinery output went hand in hand with plans for uninterrupted growth of machinery imports (following the initial planned reduction in 1929 required for balance of payments reasons). The share of imports in the total domestic supply of industrial machinery was expected to decline from 27 percent in 1927/28 to 22 percent in 1932/33.[21] Plans for large increases in ferrous metals

20. A. Mikoian, *Izvestiia*, March 24, 1929.

21. M. Kaufman, "Import und Volkswirtschaft der Sowjetunion," *Sow. aus.*, 8, no. 11/12 (1929): 17–18.

output, on the other hand, did not represent "import substitution" at all but rather a continuation of Russia's pre-1917 position as its own supplier of ferrous metals (table 4). Despite the deficits being experienced in 1927/28, import plans for ferrous metals were not mentioned.

No indication has been found that foreign trade was to be cut back after the plan was completed.[22] In only a few cases would the planned increase in domestic output have permitted reductions in imports (cotton, zinc, and certain chemicals) or cessation (paper and yarn).[23] Here planned import substitution was based on abundant timber and mineral resources, or was clearly a resumption of pre-1913 trends. According to the trade plan, the demand for producers' imports would become less taut toward the end of the plan, and planners hoped to be able to increase imports of consumer goods (table 2). This import strategy was consistent both with "increasing economic independence (as understood by the Soviets) and the continued growth of trade," and it was to become a basic characteristic of Soviet trade policy in the post-World War II period as well.[24]

Soviet foreign trade expanded more rapidly than planned during 1929–31, despite the onset of the Great Depression. Exports rose, in constant 1927/28 prices, from 782 million rubles in 1927/28 to 1,665 million rubles in 1931; imports rose from 945 million rubles to 1,366 million rubles. (One gold ruble in foreign trade equaled 51.7 cents until early 1933.) The terms of trade declined sharply, however. The 1929 trade surplus was quite small, a small trade deficit was incurred in 1930, and a much larger deficit was suffered in 1931.

In 1929, export growth, as expected, was based on timber, flax, and oil products. The continued expansion in 1930 and 1931, however, was achieved largely by a quite unforeseen resumption of large-scale grain exports[25]—grain exports rose from near zero in 1927/28 and 1929 to about 4.8 million tons in 1930 and 5.2 million tons in 1931 (table 4). (Grain comprised 19 percent of 1930 exports and 18.5 percent of 1931 exports.) Resumption of grain exports at least a year earlier than planned was partially the result of the excellent 1930 harvest, but the surprising magnitude must be attributed to forced "mass collectivization" and associated procurement policies.

22. On the contrary, many economists projected that overall imports would increase even though some items would decrease. See "Industrialisierung und Sowjetimport," *Sow. aus.*, 9, no. 18 (1930): 9–11.

23. Rudolf Anders, "Zum Fünfjahresplan des Aussenhandels der UdSSR," *Sow. aus.*, 8, no. 9 (1929): 3.

24. Michael Dohan, "Foreign Trade Specialization in the Post-War Soviet Economy 1950–1970," in *Economic Development in the Soviet Union and Eastern Europe*, vol. 2, ed. Z. Fallenbuchl (New York, 1976), pp. 90–132.

25. The 1929/30 export plan did not mention grain. See "Kontrol'nye tsifry po vneshnei torgovle," *Sovetskaia torgovlia*, 4, no. 28 (1929): 1–3.

Rapid growth of exports in 1929–31 was achieved primarily by intensifying the policy of *forsirovanie eksporta* (forcing of exports). Under this policy, commercial profitability and market-determined balances between domestic use and so-called "export surpluses" no longer served as criteria for undertaking exports,[26] and the policy was possible only because of the radical changes in Soviet economic and social institutions between 1927/28 and 1930. The introduction of rationing, forced collectivization, and centralized distribution of supplies permitted planners to override market forces and to shift resources to higher priority sectors (including exports). Thus, despite grave domestic shortages during the early 1930s, the country was scoured again and again for exportable commodities (including those of quite minor significance such as medicinal herbs).[27] The available exports, even with an aggressively competitive price policy, often remained unsold during 1929–31 and piled up in warehouses to be sold from inventory or used as collateral for short-term loans. As the stock of warehoused exports grew, actual export receipts fell substantially short of reported exports, and Soviet authorities were forced to fall back on additional foreign borrowing.[28]

During 1929–31, unexpected increases in credits and above-plan exports expanded import capacity slightly more than anticipated. Demands for "above-plan" imports grew even faster, however, as planners turned to imports to cover the growing shortages caused by the inevitable underfulfillment of over-ambitious output plans and by unforeseen demands imposed by collectivization, augmented investment projects, and unanticipated utilization rates for metals.[29] In order to maintain the flow of imports to high-priority sectors, the original import plans for 1930 and 1931 were abandoned and massive quantities of ferrous metals, tractors, and other capital goods (table 4) were imported—a process described as the "metallization of Soviet imports."[30] Imports for light industry and consumers were cut sharply even though domestic production was falling or had not increased enough to replace the lost imports (table 4). Instead of orderly import substitution in 1930 and 1931, we find "import deprivation" as shortages of imported materials (often higher quality than

26. M. Kaufman, "Maksimal'noe vnimanie eksportnomu planu," *Sovetskaia torgovlia*, 4, no. 36 (1929): 1–2; and Paul Czechowicz, "Die Exportpolitik und das Problem der Exportfähigkeit der UdSSR," *Weltwirtschaftliches Archiv*, no. 35 (1932), p. 484.

27. Narkomtorg stressed secondary exports to overcome export difficulties in 1929 and 1930. See, for example, *Sovetskaia torgovlia*, 5, no. 7 (1930).

28. [E. N. Shenkman], *The Balance of Payments and the Foreign Debt of the USSR* [published as memorandum no. 4 of the Birmingham Bureau of Research on Russian Economic Conditions, University of Birmingham] (Birmingham, 1932) (hereafter Shenkman 1932a), pp. 2–3.

29. Eugene Zaleski, *Planning for Economic Growth in the Soviet Union 1918–1932* (Chapel Hill, 1971), pp. 78, 97, 139 passim; R. Anders, "Der Aussenhandel der UdSSR im ersten Halbjahr 1931," *Sow. aus.*, 10, no. 16 (1931): 10.

30. USSR State Planning Commission, *Summary of the Fulfillment of the First Five-Year Plan* (Moscow, 1933) (hereafter *Summary* 1933), pp. 8 and 139.

Table 3. *USSR: Export Prices, Import Prices, and Terms of Trade, 1927/28 = 100*

	1913	1926/27	1927/28	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
Export Price Indexes Total													
A. 1927/28 weights	72	100	100	96	82	60	48	42	35	36	38	49	46
B. 1932 weights	76	98	100	91	75	55	44	39	35	35	37	48	44
C. Current year weights[a]	62	67	100	92	69	49	44	37	35	34	37	43	37
Import Price Indexes Total													
E. 1927/28 weights	75	96	100	97	91	76	68	57	54	50	52	57	54
F. 1932 weights	79	102	100	93	89	79	70	63	61	58	62	67	67
G. Current year weights[a]	76	93	100	94	92	81	70	56	42	39	48	50	48
Commodity Terms of Trade													
H. 1927/28 weights	95	103	100	98	90	80	72	74	66	73	73	86	84
I. 1932 weights	97	96	100	98	84	70	63	61	58	60	60	73	66
J. Current year weights[b]	80	72	100	97	75	61	63	66	84	89	76	85	77
Export Price Indexes (1927/28 weights)													
K. Grain Products (1926/27 weights)[c]	63	98	100	94	48	33	36	29	28	28	32	44	32
L. Other Agricultural Products[d]	72	99	100	105	90	57	49	40	36	39	40	44	40
M. Nonagricultural Products[e]	87	102	100	92	86	67	52	44	30	36	37	45	46
Import Price Indexes (1927/28 weights)													
N. Machinery (German prices)[f]	78	97	100	102	103	100	92	88	86	85	85	86	86
O. Machinery (American prices)[g]	63	99	100	102	95	90	84	69	59	59	59	64	66
P. Industrial Raw Materials[h]	69	92	100	92	80	62	55	40	31	34	36	41	38

Table 3. (*Continued*)

Notes and Source for Table 3:

[a] Implicit price deflator based on indexes of value and volume indexes with 1927/28 weights.

[b] Row C divided by row G.

[c] Includes all grain products (grains, lentils, and flour). Excludes oilseed, often included in Soviet definition of grain. Employs 1926/27 quantity weights because of the relative sparseness of grain exports in 1927/28.

[d] Includes twenty-two agricultural commodities, but excludes grains, lentils, and flour. Based on United States Department of Commerce definition.

[e] Includes thirty-eight export commodities produced by the industrial or nonagricultural sector: mining, petroleum, chemical, metals, timber, fish, textiles, and other manufactured products. Excludes machinery and furs.

[f] Price index computed using index of domestic prices of German industrial equipment as principal representative price index of Soviet imports of industrial equipment; combined with price indexes for agricultural equipment and automobiles.

[g] Similar to row N except employing index of domestic prices for American industrial equipment.

[h] Includes twenty-eight raw materials used in industry including metals, fibers, hides, rubber, cork. Does not include chemicals. Quantity weights used for commodity group indexes, value weights used for aggregate indexes.

Source: Adapted from Dohan (1973), pp. 31–35, 74–75. Items in each index are listed here.

Table 4. *USSR: Output and Foreign Trade of Selected Products and Commodity Groups 1926/27–1938*
(Volume indexes with 1927/28 weights, 1927/28 = 100)

	1913	1926/27	1927/28	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
Export Commodities													
Grain (millions tons)													
Output (gross)[a]		71.7	73.3	71.7	83.5	66.0	63.0	67.1	67.3	69.3	60.0	91.9	70.0
Exports of grains and flour (gross)[b]	9.6	2.2	.3	.3	4.8	5.2	1.8	1.8	.9	1.6	.4	1.3	2.2
Other agricultural export index[c]	343	83	100	112	87	149	99	81	86	64	67	75	44
Animal products export index[d]	273	75	100	91	65	81	69	64	62	42	33	26	8
Major nonagricultural export index[e]	153	85	100	150	177	178	184	176	177	155	139	128	90
Timber (million solid m^3)													
Timber hauled	27.2	26.2	36.0	60.0	96.7	104.1	99.4	98.0	99.7	117.0	128.1	114.2	114.7
Export (equivalents)[f]	15.7	5.3	6.2	11.3	14.8	12.6	12.0	13.2	13.5	14.3	12.9	10.0	7.1
Petroleum products (millions tons)													
Output crude oil	8.8	10.1	11.4	13.5	18.5	22.4	21.4	21.5	24.2	25.2	27.4	28.5	30.2
Exports (gross)[g]	1.0	2.1	2.8	3.9	4.7	5.2	6.1	4.9	4.3	3.4	2.7	1.9	1.4
Import Commodities													
Machinery indexes													
Output (1937 prices)[h]			100	147	208	292	378	432	530	731	858	889	906
Imports (1927/28 weights)[i]	133	72	100	115	214	264	189	76	31	32	63	41	57

Table 4. *(Continued)*

	1913	1926/27	1927/28	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
Rolled ferrous metals (millions tons)													
Output including pipes[j]	3.7	3.7	3.5	4.1	4.7	4.4	4.5	5.2	7.2	9.6	12.8	13.3	13.6
Imports (net) including pipes[k]	.1	.1	.3	.3	.7	1.5	1.0	.5	.4	.4	.2	.1	.1
Copper electrolytic (thousands tons)													
Output[l]	29.6	22.8	28.5	40.1	42.2	42.1	42.8	42.1	50.6	72.2	95.8	92.6	98.1
Imports[m]	7.3	18.5	27.5	25.5	21.1	26.6	14.9	7.9	11.5	32.2	46.2	65.7	82.3
Fibers import index[n]	172	100	100	92	60	52	31	36	35	52	36	39	36
Wool fiber (thousands tons)													
Output, washed	184	168	175	176	135	94	66	61	62	76	95	102	132
Import (net) of fiber, tops, and yarn	44	29	35	36	27	23	21	23	23	31	27	30	30

Notes and Sources for Table 4:

[a] Gross grain output before deduction for use in further agricultural production or processes.
[b] See note c of table 3.
[c] Volume index. See note d of table 3. Includes animal product exports.
[d] Volume index including wool, hides, sheep, calf and goat skin, bristles, horsehair, down, gut, poultry, bacon, butter, eggs.
[e] See note e of table 3.
[f] Raw timber, sawn timber, plywood, staves. Converted to round wood solid equivalents in cubic meters by the coefficient 1.66 per ton of round wood, 1.55 per cubic meter of sawn timber, 2.217 per ton of plywood, 1.94 for ton of other wood.
[g] Includes crude oil and oil products (unadjusted for 5 percent losses in refining).
[h] Civilian machinery output using 1937 domestic price weights.
[i] Components for industrial, transportation, and agricultural equipment deflated by price indexes for industrial equipment in Germany, automobiles in the United States, and agricultural equipment in Germany, and then combined using value weights.
[j] Output of total rolled steel including forged pipe and cast pipe except for 1913, 1926/27. Data for 1929 and 1930 are an interpolation, and for 1938 an estimate based on output without cast pipe.

Table 4. *(Continued)*

[k] Trade data include rolled steel, articles, pipes.
[l] Blister copper reduced 5 percent to account for losses in converting to electrolytic copper.
[m] Includes ingot and rolled. Excludes copper imported as wire, and so forth.
[n] Cotton, jute, sisal, wool, silk, cotton and wool yarn, wool tops.

Sources: Volume indexes adapted from Dohan (1973), pp. 24, 27, 65–75. Agricultural output from Johnson and Kahan, "Soviet Agriculture: Structure and Growth," pp. 230–35. Physical quantities of imports and exports from *Vneshniaia torgovlia 1918–1940*. Timber output from National Bureau of Economic Research, *Statistical Abstract of Industrial Output in the Soviet Union 1913–1955* (New York, 1956), p. 701.1 (hereafter NBER, 1956). Petroleum output from A. Gerschenkron and N. Nimitz, *A Dollar Index of Soviet Petroleum Output, 1927/28 to 1937*, RAND, 4/4/52, RM-804, pp. 8–10; and Louis Segal and A. A. Santalov, *Soviet Union Yearbook 1930* (London, 1930), p. 147. Machinery output from R. Moorsteen, *Prices and Production of Machinery in the Soviet Union: 1928–1958* (Cambridge, 1962), p. 115. Rolled ferrous metals output from NBER (1956), p. 108.1, and A. Gerschenkron and N. Nimitz, *A Dollar Index of Soviet Iron and Steel Output, 1927/28–1937*, RAND, 3/13/53, RM-1055, p. 19. Copper output from NBER (1956), p. 204; and L. Turgeon and B. Bergson, *Prices of Non-Ferrous Metals in the Soviet Union 1928–1950*, RAND, 1953, RM-1030, p. 33.

their domestic substitute) reduced both the output and quality of domestic consumer goods.[31]

In response to the growing shortages and the unexpected large trade deficit in early 1930, the Soviet government began another campaign to economize on imports, including revision of machine building plans to meet most essential machinery needs domestically, acceleration of agricultural materials output to free industry from imports within three years, and a search for new export sources with "redoubled vigor."[32] Targets for metallurgy were also raised in late 1930 and 1931. In retrospect, this campaign to reduce imports was both modest and ineffective, and imports, financed by short-term credits and depletion of foreign exchange reserves, continued to grow faster than exports. This import expansion, however, was based on a weak foundation which quickly crumbled.

Collectivization, or rather its devastating aftermath, was a major contributor to the decline of Soviet trade after 1931, because it depressed the output of agricultural export products throughout the 1930s, caused a temporary bulge in import demand in 1930 and 1931, and diverted export goods (petroleum products) to domestic agricultural use.[33]

At the bottom of the growing export crisis were the disastrous grain crop failures of 1931 and 1932. The huge grain exports of 1930 and 1931 could not be repeated, which dashed any hope of meeting the grain export plan. In addition, catastrophic livestock losses left the vital animal product export plan in shambles (tables 1 and 2). Exports of animal products had composed 16 percent of total exports in 1927/28 and they were expected at least to double by 1932/33 (table 2). Instead, exports fell 9 percent in 1929, 28 percent in 1930, and remained depressed throughout the 1930s (table 4). Exports of other agricultural products also suffered. Thus, by 1932, the overall decline in output of agricultural exports caused by collectivization probably offset much, if not all, of the increase in grain exports attributable to increased

31. W. Nutter, *Growth of Industrial Production in the Soviet Union* (Princeton, 1962), pp. 71–72, 431, 455; and Zaleski, *Planning for Economic Growth,* pp. 142–43, 160–61.

32. Zaleski, *Planning for Economic Growth,* p. 106; and V. Kasyanenko, *How Soviet Economy Won Technical Independence* (Moscow, 1966) published originally as *Kak byla zavoevana tekhniko-ekonomicheskaia samostoiatel'nost' SSSR* (Moscow, 1964), pp. 130–32.

33. This section draws from Naum Jasny, *The Socialized Agriculture of the USSR: Plans and Performance* (Stanford, 1949). See also Jerzy Karcz, "From Stalin to Brezhnev: Soviet Agricultural Policy in Historical Perspective," in *The Soviet Rural Community,* ed. James R. Millar (Urbana, Ill., 1971), pp. 36–70. Data on output, acreage, yields, and herds from D. Gale Johnson and Arcadius Kahan, "Soviet Agriculture: Structure and Growth," U.S. Congress, Joint Economic Committee, *Comparisons of the United States and Soviet Economies* (Washington, D.C., 1959), pp. 201–37.

control over agricultural procurements and to reduced livestock feed requirements.

The sudden mechanization of agriculture, forced by the widespread slaughter of horses and oxen, also affected foreign trade. Agricultural fuel use grew more rapidly than anticipated, and the supply of petroleum products available for export was soon reduced.[34] On the import side, the sudden loss of draft power forced an "above-plan" crash program to import tractors and other agricultural producers' goods.[35] Furthermore, when the already ambitious targets for tractor production were raised again in 1930 and 1931, the new plants required large above-plan imports of equipment, construction steel, and raw materials.[36] These above-plan imports further weakened the trade balance and often had to be financed by short-term credits.

Soviet exports increasingly encountered high tariffs and other trade barriers during 1929–31, as the capitalist economies, caught in a widening world depression, sought to reduce imports. Desperate for foreign exchange, however, the USSR continued to expand exports with apparent disregard for either selling price abroad or scarcity at home. "Export forcing" prompted a widespread campaign against "Soviet dumping" and, by mid-1930, Soviet efforts to sell exports through price competition were receiving a very hostile foreign press.[37] Soviet products were subjected to discriminatory tariffs, quotas, prohibitions, and regulations by France, Belgium, the United States, and others.[38] These restrictions, in part, reflected general concern about the

34. Use of motor fuel (mainly kerosene) in agriculture rose from 0.1 million tons in 1927/28 to 1.1 million tons in 1932 (about 52 percent of kerosene output in 1932) and to about 5 million tons in 1938 (Jasny, *Socialized Agriculture*, pp. 769–70).

35. Tractor imports planned for 1929/30 were 12,000 units; actual imports for agriculture in 1930 were 23,000 units. See *Economic Review of the Soviet Union* (hereafter *ERSU*), October 15, 1929, p. 370; Zaleski, *Planning for Economic Growth*, p. 332; *Sotsialisticheskoe stroitel'stvo SSSR: Statisticheskii ezhegodnik 1934* (Moscow, 1935), p. 303; and *Sow. aus.*, 9, no. 7 (1930): 4.

36. See Zaleski, *Planning for Economic Growth*, pp. 92, 118–19, 149, 308, 333, for revised tractor output targets. Equipment imports for the three tractor factories cost 69 million rubles (David Granick, *Soviet Metal-Fabricating and Economic Development* [Madison, 1967], pp. 167–69, 186).

37. See, for example, the more than fifty articles concerning "Soviet dumping" which appeared in the *New York Times* between August 4, 1930 and April 3, 1931.

38. France and Belgium established special licensing procedures for several Soviet products in October 1930 (*New York Times*, October 4 and 26, 1930). The United States imposed temporary embargoes on lumber, matches, asbestos, manganese, apatite, and coal, required proof of no convict labor on timber products, and special sanitary measures on sausage casing and fodder at various times during 1930 and 1931. Other countries imposing discriminatory restrictions against Soviet products included Rumania (December 1930), Canada (February 1931), Yugoslavia and Hungary (March 1931), and Austria (April 1931). See Peter Filene, *Americans and the Soviet Experiment 1917–1933* (Cambridge, 1967), pp. 229–36; American-Russian Chamber of Commerce, *Handbook of the Soviet Union* (New York, 1936), pp. 327, 355–60, 341, 333, and *Izvestiia*, March 2 and 5, 1931 and April 19, 1931.

payments position, but frequently they resulted from lobbying by private interests hurt by Soviet exports (for example, the American Manganese Producers' Association).[39] Many supposedly protective measures, such as the German grain tariffs of 1930, were actually guises for discrimination against Soviet products.[40] Because Soviet exports were concentrated geographically, with England receiving 27 percent, Germany 20 percent, and the United States, Italy, France, and Persia each about 5 percent in 1931, trade barriers imposed by England and Germany would have represented a serious threat to Soviet exports. However, these barriers did not materialize and the actual impact of the anti-Soviet dumping campaign was small.

Nevertheless, the attacks on Soviet exports strongly impressed Soviet authorities, and great efforts were made to refute charges of dumping, forced labor, and unsanitary conditions.[41] In October 1930, retaliatory measures were taken against France and other countries practicing discrimination against Soviet products.[42] Soviet leaders feared that the anti-Soviet export campaign, led by France, would turn into an economic blockade, which could deny the USSR imports required for industrialization.[43] The fear of again being cut off from imports (as well as growing problems in the export sector) may have been one more factor pushing the USSR toward "bacchanalian" targets, as the 1931 and 1932 targets for metals and other import substitutes were raised sharply.[44]

Although the outcry against Soviet dumping diminished in the summer of 1931, the efforts of the capitalist countries to protect themselves from world depression had left free trade in a shambles, and general trade barriers replaced what had previously been merely discriminatory measures against Soviet products. General tariffs on agricultural and other important Soviet export products were raised to unprecedented levels[45] and were in turn sup-

39. *New York Times*, November 12, 1930.

40. As acknowledged even by the German press. See Soviet analysis in *Sow. aus.*, 9, no. 10 (1930): 8 and 10, no. 8 (1931): 2–5.

41. This concern is reflected in the more than forty articles on the anti-Soviet export campaign published in *Izvestiia* from late July 1930 to mid-April 1931, in Litvinov's lengthy defense of Soviet export policies in his opening speech to the European Commission at Geneva in May 1931 (*Izvestiia*, May 20, 1931), in the numerous articles replying to specific charges of dumping in Germany and elsewhere in *Sow. aus.* and *ERSU* (the journals of the Soviet trade delegations), and in N. Lin, "Pokhod protiv sovetskogo eksporta," *Sovetskaia torgovlia*, 5, no. 32 (1930): 11.

42. *Izvestiia*, October 21, 1930. Purchases were also shifted from the United States (*Handbook of the Soviet Union*, 1936, pp. 355–56).

43. V. Molotov's speech to the Sixth All-Union Soviet Congress on March 8, 1931 (*Izvestiia*, March 11, 1931).

44. *Sow. aus.*, 10, no. 4 (1931): 5–6; Zaleski, *Planning for Economic Growth*, pp. 149–58, 199–204; and Naum Jasny, *Soviet Industrialization 1928–1952* (Chicago, 1961), pp. 73–80.

45. H. Liepmann, *Tariff Levels and the Economic Unity of Europe* (New York,

plemented by a web of import quotas, exchange controls, regional groupings, and trade preferences, so that Soviet trade organizations experienced growing difficulties in finding any markets at all.

Two developments in 1931 appeared particularly ominous for the USSR. First, the growing demands by domestic industries for a protective tariff and by the colonies for "imperial preference" made it likely that Parliament would end the traditional British policy of free trade, thereby restricting the USSR's access to a major export market.[46] Second, the USSR's next largest market, Germany, began implementing a series of "general protective measures," including extraordinary tariffs, grain-milling regulations, and a maize monopoly, ostensibly intended to assure trade surpluses for war reparations. In fact, the measures reflected a more basic drive for agricultural and industrial self-sufficiency.[47] Soviet exports to Germany—with whom the USSR had the largest trade deficit—came to depend less on her ability to supply exports at competitive prices than on the German government's willingness to accept them.[48] Consequently, exports to Germany declined. It was only because of incessant Soviet pressure in late 1931, and fear of Soviet default on German-held debts, that the German government finally agreed to negotiate to accept more Soviet exports (for Germany preferred payment in gold and valuta),[49] but these negotiations were to prove futile. By the end of 1931, Soviet trade, like that of most nations, was thoroughly enmeshed in general trade barriers that not only depressed export volume and prices, but also began to force the USSR toward bilateralism, which was to characterize its trade in the post-World War II years.[50]

Soviet export prices fell from 1927/28 to 1932. By 1932, grain and fiber prices had fallen 64 percent, most other agricultural products 50–60 percent, and timber and oil about 50 percent. Import prices also declined, but much more slowly, and the fall in machinery prices was particularly gradual. As a result, the commodity terms of trade (based on current-year weighted price

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1938), pp. 103–10, 354; *Vneshniaia torgovlia*, 3, no. 6 (February 1933): 1–4; Joseph Jones, *Tariff Retaliation* (Philadelphia, 1934), p. 141 ff.

46. Jones, *Tariff Retaliation*, pp. 224–31; and W. Liebman, *Sow. aus.*, 10, no. 18/19 (1931): 19.

47. "Novyi pod"em agrarnogo protektsionizma v Germanii," *Sovetskaia torgovlia*, 4, no. 30 (1929): 1–2; *Sow. aus.*, 10, no. 8 (1931): 2–4; and Liepmann, *Tariff Levels*, pp. 59–65, 119.

48. "Die Sowjetischen-deutschen Wirtschaftsbeziehungen der UdSSR," *Sow. aus.*, 10, no. 23 (1931): 2–4.

49. *New York Times*, December 24, 1931; *ERSU*, February 1, 1932, p. 63. Cf. *Sow. aus.*, 11, no. 9 (1932): 2–4, and no. 17 (1932): 2–3.

50. A. Sergejew, "Zur Frage der Zahlungsbilanz zwischen der UdSSR und England," *Sow. aus.*, 9, no. 23 (1932): 7–13.

indexes) fell to 97 in 1929, 75 in 1930, and 62 in 1931 (table 3). The immediate effect was to depress imports because of the substantial loss of import capacity. In terms of the imports purchasable from the current year's export volume (valued in 1927/28 prices), the import capacity loss attributable to the decline in the commodity terms of trade from the 1927/28 level was 380 million rubles in 1930 and 650 million rubles in 1931 (1931 export volume was 1,654 million rubles).[51]

Obviously, the trade balance worsened. Given 1927/28 terms of trade, the huge actual increase in Soviet exports in 1930 and 1931 would have sufficed not only to pay for actual imports but would have yielded large trade surpluses as well (table 1). Instead, the loss of import capacity contributed to large trade and payments deficits. The uninterrupted decline in export prices from 1927/28 to 1935 also increased the real cost of Soviet external debt (discussed below), so that total real losses caused by unfavorable price trends during the Great Depression were even greater than estimated above.

The unfavorable shift in commodity terms of trade early in the depression years sharply reduced the potential gains from trade for the USSR. For example, compared with 1927/28 ratios, machinery imports in 1931 required two and one-half to three times as much grain to be exported per unit imported (table 3).[52] Planners were now forced to reassess the long-run rationality of expanding foreign trade as a method of supplying large amounts of machinery, metals, and other basic needs to the domestic economy. Given a high rate of time preference by planners for investment goods, short-run machinery imports were perhaps rational during 1929–32, even under such unfavorable conditions,[53] but further development of domestic output may well have become the less costly path to industrialization in the long-run. Agricultural goods had become absolutely scarcer in the short-run (1931–34) and more costly to produce in the long-run—as indicated by the apparent decline in aggregate factor productivity in agriculture between 1928 and 1938 (table 1).[54] In contrast, by 1932, the domestic output of machinery had greatly increased, thereby reducing the "planners' surplus" from machinery imports (table 4). Moreover, real production costs of machinery fell sharply in this period.[55] Thus, the shift in domestic opportunity costs between 1929 and

51. Loss of "import capacity" is calculated as the percent decline in the terms of trade with current year weights (table 3) times the value of exports in 1927/28 prices (table 1). Dohan (1973), pp. 50–55. Also see table 5.

52. See Dohan (1973), pp. 74–75, for commodity group price indexes.

53. Kasyanenko, *Soviet Economy*, pp. 116–28; *Summary* (1933), pp. 7–8; and Mishustin, *Vneshniaia torgovlia*, passim.

54. D. Gale Johnson, "Agricultural Production," in *Economic Trends in the Soviet Union*, eds. Abram Bergson and Simon Kuznets (1963), p. 218.

55. Between 1927/28 and 1932, "real costs of production of machinery" are estimated to have fallen about 68 percent for the 1937 product mix (R. Moorsteen, *Prices and Production of Machinery in the Soviet Union: 1928–1958* [Cambridge, 1962], p. 138).

1932 reinforced changes in the commodity terms of trade and shifted the USSR's *long-run* comparative advantage away from exports of agricultural goods and toward domestic production of machinery and metals.[56]

Borrowing abroad played a larger part in financing imports during 1928–31 than had been anticipated in the Five-Year Plan.[57] Desperate for more imports, Soviet planners welcomed easier access to foreign credits brought about by the Depression. Real Soviet foreign debt rapidly rose from 370 million rubles in October 1928 to about 855 million rubles in October 1931. If we add to this, as was Soviet practice, credits secured by exports warehoused abroad and future liabilities for machinery on order, total real and contingent liabilities were about 1,400 million rubles in 1931.[58] In comparison, total export receipts equaled 811 million rubles at best in 1931 and probably less (table 1). With long-term credits and good prospects for refinancing, this would not have been a problem, but such was not the position of the USSR.

Government guarantees and the amounts and terms of foreign credits usually depended on favorable political relations. Thus, formal credit agreements were concluded with Germany, England, and Italy, but were conspicuously absent in the case of France and the United States.[59] The major Soviet

56. Holzman (1963), pp. 322–25, discusses the dynamic shifts in Soviet comparative advantage resulting from industrialization.

57. This section draws on L. Frei et al., *Finansirovanie vneshnei torgovli* (Moscow, 1938), pp. 254–84; E. M. Shenkman, "Russlands Zahlungsbilanz und Zahlungsverkehr mit dem Ausland," *Weltwirtschaftliches Archiv*, no. 36 (1932), pp. 530–57 (hereafter Shenkman 1932b); Shenkman (1932a); P. D. J. Wiles, *Communist International Economics* (New York, 1969), pp. 97–103; Dohan (1969), pp. 643–46. Shenkman was employed by the Narkomfin during the NEP.

58. The sparse data on Soviet foreign indebtedness published in Soviet sources are confusing because of varying definitions of debt. The term "zadolzhennost'" as used publicly after 1932 probably included *real debt* incurred for imports delivered, for borrowing against exports not yet shipped and *contingent liabilities* for credits secured by Soviet exports warehoused abroad, and for orders placed but not delivered (as defined in Shenkman, 1932a); A. Rozengol'ts clearly uses the term in this meaning in 1933 ("Monopoliia vneshnei torgovli SSSR i kapitalisticheskie strany," speech on April 23, 1933 in Ia. Ianson, *Vneshniaia torgovlia SSSR k XVII s"ezdu VKP(b)* [Moscow, 1935], p. 12). The Soviet figure of "1,400 million rubles at the end of 1931" probably includes about 400 million rubles of contingent liabilities and about 1,000 million rubles of real debt (Shenkman, 1932b, p. 547). A large part of the reported increase in Soviet debt between 1928 and 1931 was contingent liabilities from the growing volume of machinery imports ordered but not delivered and from Soviet borrowing against the growing quantity of Soviet exports shipped unsold to warehouses abroad. Wiles, *Communist International Economics*, p. 103; and Frei et al., *Finansirovanie vneshnei torgovli*, pp. 245–65.

59. For terms of various credit agreements see Frei et al., *Finansirovanie vneshnei torgovli*, pp. 267–78; and *Documentation Relating to Foreign Economic Relations of the USSR* (Monetary and Economic Conference in London, June 1933) (Moscow, 1933). For British credits, see *ERSU*, June 1, 1931, p. 257 and October 15, 1931, p. 471. For Italian credits for 1930 and 1931, see *ERSU*, May 15, 1931, p. 220. German credits are discussed extensively in *Sow. aus.*, 10, no. 17 (1931) and 11, no. 5 and no. 6 (1932).

creditors in late 1931 were Germany (about 500 million rubles) and England (about 300 million rubles). Credit availability, however, was very insecure. Most credit agreements ran for just one year and renewal often depended on the political fortunes of hostile politicians and financial conditions in credit-granting countries, as well as assessments by private bankers and industrialists. Most Soviet borrowing was perforce short and medium-term (12–36 months), and by 1931 the maturity of any additional credits became crucial because of the bunching of outstanding maturities and uncertain prospects of refloating outstanding debt.[60] By late 1931, more than 325 million rubles were scheduled to be repaid in 1932, of which about 230 million rubles were owed to Germany.[61] Similar amounts fell due in 1933 and 1934.

Two serious problems were created for the USSR by her inordinate use of short-term credits. First, within a short time a large share of current export receipts was committed to retire maturing debt. This continual pressure to meet payment deadlines added to the chaotic urgency of export operations in 1929–34.[62] Second, in 1931, a substantial portion (about 20–25 percent) of imports of commodities was financed by net increases in borrowing. In addition, an increasing share of imports had to be financed by new credits because a large portion of current export receipts was being used to retire existing short-term credits. Thus, *current imports had become very vulnerable to any decline in credit supply*. For any given export level, if new credits were no longer forthcoming, both imports based on net new credit and the portion currently financed by refloating existing credits would have to be curtailed, and the USSR could suddenly be converted from a large net borrower into a large net repayer. This vulnerability was to be significant in the reduction of imports after 1931.

The year 1932 turned out to be the worst year in the history of Soviet foreign trade. Contrary to projections, export volume started to decline in late 1931, and exports in 1932 were down almost 20 percent (table 1). Unlike the experience of most commodity-exporting countries at the time, the decline was caused mainly by supply difficulties. (Production of grain, sugar, animal products, timber, and oil all declined [table 4].) Exports also had to compete against rising domestic demand. Growing domestic shortages were reflected in a small reduction in the 1932 export plan for foodstuffs and consumer goods and in extensive failure to deliver goods planned for export.[63] The

60. "300 Mark-Aktion 1931," *Sow. aus.*, 10, no. 17 (1931): 2–8; and *Sow. aus.*, 11, no. 5 (1932): 2–5, and no. 6 (1932): 2–3.

61. Paul Berkenkopf, "Zur Frage der deutsch-russischen Wirtschaftsbeziehungen," *Wirtschaftsdienst*, no. 18 (May 6, 1932), p. 605. Estimates of liabilities falling due in 1932 range as high as 582 million rubles (*Current History*, 36 [April 1932]: 125).

62. *Vneshniaia torgovlia*, 5, no. 21–22 (1935): 9.

63. Kasyanenko, *Soviet Economy*, p. 128; *Sow. aus.*, 12, no. 2 (1933): 12; and

1932 grain harvest was even worse than the 1931 harvest[64] and famine began to appear in rural areas. These difficulties were compounded by continued declines in export prices and in the terms of trade (tables 1 and 3).

Protectionist measures in capitalist countries continued to multiply rapidly.[65] Despite renewed trade and credit agreements with the USSR, Germany was in fact pursuing economic autarky, and again raised tariffs and imposed more limits. Soviet authorities now faced the serious possibility that they would not be permitted to export enough to Germany to pay for current imports and to service debt with reichsmarks.[66] England, as expected, introduced tariffs along with imperial preference in February 1932, and, under pressure from the dominions, denounced the Anglo-Soviet trade treaty in October 1932.[67] The worst fears had now been realized—protectionism threatened the USSR's major markets.

The most adverse development for the USSR in late 1931 and 1932, however, was the decreased availability of credit. German and other creditors began to discourage new credits for Soviet purchases and to press the USSR for partial liquidation of outstanding debt.[68] Given the absence of export and currency reserves, the adverse shift in credit conditions had catastrophic implications for Soviet imports. Faced with declining export volume and having exhausted all credit lines, the USSR virtually ceased placing orders for machinery in Germany between September 1931 and mid-1932. To offset the sudden reduction in import supply, an intensive domestic campaign, replete with factory meetings, news publicity, and "anti-import committees," was undertaken in late 1931 to find ways to eliminate or reduce imports of raw materials and machinery.[69] Domestic versions of imported machinery were rushed into production, products and projects were redesigned to eliminate imports, and, in many cases, imports were simply done without. Import volume tumbled (table 1), and by September 1932 the USSR had a trade surplus for the first time in eighteen months. Although import volume in

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Vneshniaia torgovlia, 3, no. 1 (January 1933): 1–3.

64. Dana Dalrymple, "The Soviet Famine of 1932–1934," *Soviet Studies*, 15, no. 3 (January 1964): 250–84.

65. I. Rabinovich, "Torgovaia politika kapitalisticheskikh stran v 1932 g.," *Vneshniaia torgovlia*, 3, no. 7 (March 1933): 2–4; and "Sowjetmarkt und ausländische Einfuhreinschränkungen," *Sow. aus.*, 11, no. 19 (1932): 2–6.

66. E. Roginskaia, "Torgovaia politika Germanii v 1932 godu," *Vneshniaia torgovlia*, 3, no. 6 (February 1933). Germany's protectionism and its impact on Soviet exports were frequently discussed in *Sow. aus.*, 11, no. 11 (1932): 11, and no. 16 (1932): 2–3.

67. Jones, *Tariff Retaliation*, pp. 232–37; *Sow. aus.*, 11, no. 19 (1932): 6–7; and *Vneshniaia torgovlia*, 3, no. 7 (March 1933): 4–9.

68. *Sow. aus.*, 11, no. 5 (1932): 2–4; Berkenkopf, "Deutsch-russischen Wirtschaftsbeziehungen," p. 605, and notes 74–76 below.

69. Kasyanenko, *Soviet Economy*, pp. 131–37, noted that this campaign, in contrast with earlier efforts, was intended to decrease imports.

Table 5. *The Decline of Soviet Imports 1931–1934*

	Approximate 1931 Prices			
	1931	1932	1933	1934
A. Exports[a]	811	711	677	654
B. Imports[b]	1105	787	433	302
C. Balance of Trade[c]	–294	–76	+234	+352
D. Cumulative Reduction of Imports from 1931 Levels[d]		–318	–672	–803
Cumulative Reduction in Imports Attributable to:				
E. Decline in Export Volume[e]		–100	–144	–157
F. Terms of Trade Loss on Exports[f]		–68	–82	–109
G. Change in Balance of Trade from 1931[g]		–150	–446	–537

[a,b] Export and import values for 1931 are actual. For 1932 they are computed by multiplying the price relative of 1931 prices to 1932 prices using 1932 weights (from Dohan, 1973, pp. 31 and 33) times the actual values for 1932. The data for 1933 and 1934 are computed in a similar manner but since the price indexes are still 1932 weights, the values are only approximate.
[c] Balance of trade in 1931 prices is row A minus row B.
[d] Change in imports in constant 1931 prices from the 1931 level is 1931 imports minus given year imports, valued in 1931 prices.
[e] Decline in export volume is 1931 exports minus given year exports in 1931 prices.
[f] Terms of trade loss: given year exports in 1931 prices times the percent decline in terms of trade (1932 weights from Dohan, 1973, p. 35) from 1931.
[g] Change in the balance of trade times the 1931/given year price relative for imports.
Note: The measured fall-off in import volume between 1931 and 1934 is greatest using 1932 (price) weights because of the relatively high price weights of machinery, the high proportion of machinery in 1931, and its rapid decline between 1931 and 1934 (table 4).

1932 was 29 percent below that in 1931 (table 1), and despite continued export of foodstuffs in the face of spreading famine, a large trade deficit for the year still was incurred. Without improvements in export or credit conditions, further reductions in imports would be as unavoidable in 1933.

The quantitative change in Soviet import capacity (as viewed by a planner) is the algebraic sum of the following, measured in constant (1931) import prices: (1) the change in physical export volume, (2) the change attributable to the shift in the terms of trade, (3) the change required in the net balance of trade needed for balance of payments purposes, such as for financing debt service or replenishing reserves. Table 5 shows how these three factors depressed Soviet import capacity after 1931.[70]

70. Soviet planners at the time emphasized that the reduction in imports was closely tied to the reduction of exports and the need to repay credits. See, for example, *Sow. aus.*, 11, no. 19 (1932): 6–7, and no. 23 (1932): 5–6. Most Soviet analysts during 1932–35 denied allegations that the new production capabilities were intended to reduce total imports and repeatedly pointed to the unsatisfied demand for machinery and materials in many sectors. But by 1938 the tune had changed. Mishustin argued that the decline of exports did not result from the world crisis which was Trotsky's argument, but, rather,

Import volume reached an interwar peak of 1,105 million rubles in 1931 but fell to 787 million rubles (in 1931 import prices) in 1932. Of the 318 million ruble decrease, 100 million was due to lower export volume, 68 million to the adverse change in the terms of trade, and 150 million to a reduction in the trade deficit. In 1933, almost the entire cutback of 354 million rubles may be attributed to a deliberate (but perhaps unavoidable) shift from a large trade deficit to a large trade surplus desperately needed to repay foreign debt (see below). Export volume, in contrast, fell only 44 million rubles. In 1934, more than half the cutback of 131 million rubles was caused by further deterioration of export volume and the terms of trade.

Thus, table 5 indicates that import volume, for the period 1931–34, had to be reduced by 800 million rubles (from a 1,100 million ruble level). One-third of the reduction may be attributed to lower export volume and to worsened terms of trade. The rest must be attributed to the USSR's abrupt shift from a net borrower to a net "repayer" position. In 1931, the USSR had added about 240 million rubles to its "real" foreign debt. In 1933 and 1934, it was repaying debt at an annual rate of about 300–400 million rubles (table 1). It is important, therefore, to understand why exports were reduced and foreign debts repaid.

Soviet export volume fell primarily because of short-run difficulties in supplying exports after 1931—setbacks in agriculture, shortfalls in plan fulfillment in petroleum and timber industries, and other conditions not related to any long-run policy deliberately biased against export development.

By late summer of 1931, the grain crop disaster was apparent. It was obvious that 1932 grain exports would have to be much less than the 5.2 million tons of 1931, and the decision to curtail imports followed shortly. Under the NEP such crop failures would have stopped grain exports entirely, but because of collectivization, rationing, and a willingness to tolerate famine, grain exports were only reduced—to 1.8 million tons in 1932 and 1933. Other things equal, this would have reduced total export volume by about 13 percent.

In the spring of 1932, further problems in agricultural production were predicted because of difficulties with the sowing campaign.[71] Indeed, the year turned out to be an agricultural disaster, as output and exports of most major crops declined (tables 1 and 4). Prospects for restoring animal and poultry exports also faded as livestock herds, poultry flocks, and feed grain availability continued to decline. It was only by severe domestic rationing that the decline in animal product exports during 1929–34 was limited to 20–35 percent (table 4), and finding foreign markets, even for the smaller quantities

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was consistent with the development of domestic capabilities and demand (Mishustin, *Vneshniaia torgovlia*, pp. 91–92).

71. Jasny, *Socialized Agriculture*, pp. 506, 510–12, 541.

of agricultural exports, was difficult because of declining world consumption and spreading agricultural protectionism.

Supplying major nonagricultural exports (oil and timber) also became more difficult in 1932 and 1933 because of production problems and growing domestic demand (table 4). It is not clear, however, that export volume could have been expanded significantly, even had export supplies been available, for exports of products in abundant domestic supply also were falling because of declining world demand.[72] Under these conditions, it seems unlikely that nonagricultural exports could have been expanded enough to offset the sudden decline in grain exports (as had been done in 1927/28). Export prices continued to fall, and the interaction of falling export volume and falling export prices reduced export receipts by 29 percent in 1932 and 18 percent in 1933 (tables 1 and 3). In the absence of more credit and foreign reserves, planners had no choice but to reduce imports commensurably.

In late 1931 the Soviet foreign debt of 1,400 million rubles was of such short maturity that it required retirement within three or four years, assuming no new credit was available on acceptable terms—and, in fact, Soviet foreign indebtedness was almost completely liquidated by the end of 1935 (table 1).[73] Toward the end of 1931, retirement of maturing debts had become difficult because of the decline in export receipts and the unwillingness of current lenders to renew or expand existing credits. Prospects for improvement in Soviet export earnings remained poor, and foreign observers began to question the USSR's ability to service her growing foreign debt.[74] Foreign creditors worried that the continuing slide in export prices would again reduce export receipts even if the 1931 export volume could be sustained; unfortunately, by the end of 1931, export *volume* was falling. Furthermore, growing restrictions on trade and currency movements made it increasingly difficult to export this smaller volume and to earn the trade surpluses in the currencies needed for debt servicing. Both foreign creditors and Soviet officials

72. See, for example, "1933 god," *Vneshniaia torgovlia*, 3, no. 1 (January 1933): 1–3.

73. The means used to retire the debt are still uncertain but included: (1) trade surpluses, (2) shipment of precious metals, (3) earnings of foreign currency shops, (4) decline of contingent liabilities because of the reduction in machinery import orders, (5) net sales of exports warehoused abroad (and repayment of loans secured by these commodities), and (6) devaluation of creditors' currency (especially Great Britain and the United States). Dohan (1969), pp. 603–12; S. N. Prokopovich, *Narodnoe khoziaistvo SSSR* (New York, 1940), p. 210; I. Aizenberg, *Valiutnaia sistema SSSR* (Moscow, 1962), pp. 64–66; and Wiles, *Communist International Economics*, p. 103.

74. See, for example, Joseph Shapen's major article in the *New York Times*, December 6, 1931, and Berkenkopf, "Deutsch-russischen Wirtschaftsbeziehungen," p. 605. For the Soviet response to the rumors of a possible Soviet debt moratorium in the autumn of 1931, see *Izvestiia*, October 2, 1931; "The Foreign Obligations of the USSR," *Bank for Russian Trade Review*, 3, no. 10 (October 1931): 5–6; "Gerüchte," *Sow. aus.*, 10, no. 18/19 (1931): 3–5; and Sergejew, "Zur Frage der Zahlungsbilanz," pp. 7–13.

were worried by these developments—rumors of Soviet default were rife and the discount on nonguaranteed portions of Soviet bills was said to have risen to 40 percent by the end of 1931.[75] But the USSR, unlike some international debtors, meticulously payed its debts during the depression years. (In view of the debt repudiation in 1917, the diplomatic situation, and a continued need for imports, the USSR had little choice but to pay her bills. This pressure to pay explains in part why the USSR continued to export foodstuffs during the famine of 1932–34.) Despite the USSR's good record, her major creditors, beset by their own financial crises and by doubts about the USSR's ability to pay, began to reduce the amount and quality of credits made available to the USSR in late 1931 and early 1932.[76]

Credits were less advantageous to the USSR than was initially believed. Imports financed with credits ended up costing the USSR much more in terms of exports than if purchased on a cash basis. The price of machinery sold on credit to the USSR, for example, was padded. Sellers justified higher prices as compensation for possible credit losses and the high discount rate on uninsured credits (as much as 20 to 40 percent).[77] A more important factor, however, seems to have been the lack of supplier competition. Because a large portion of current imports had to be financed by credit during 1930–33, imports became increasingly focused on a small number of producers, particularly German producers, who could and would supply credit. These suppliers were able to charge higher prices on Soviet purchases (a practice aided by the de facto cartelization of German machinery producers selling to Russia).[78] The Soviets were well aware of this problem, but could do little about it.[79] They knew that the way to increase competition, to lower prices,

75. See note 74; Frei et al., *Finansirovanie vneshnei torgovli*, p. 278; and Nicolas Ruffalovich's letter to the *New York Times*, January 10, 1932.

76. P. Malevsky-Malevich, *Russia USSR: A Complete Handbook* (New York, 1933), p. 558; Berkenkopf, "Deutsch-russischen Wirtschaftsbeziehungen," p. 605; and Shapen's article in the December 6, 1931 *New York Times*. For the impact of the German financial crises of 1931 on availability of credits to the USSR, see *Sow. aus.*, 11, no. 5 (1932): 2–5.

77. A. Zlotnikov, "Importnye tseny," *Vneshniaia torgovlia*, 5, no. 11 (1935): 10. See also Shenkman (1932a), p. 20; G. Fürbringer, "Russland: Der Aussenhandel 1933," *Wirtschaftsdienst*, no. 14 (April 6, 1934), pp. 479–80; and Shapen's *New York Times* article. The Soviet trade delegations, citing their perfect payments record, objected to these practices (*Sow. aus.*, 10, no. 10 [1931]: 2–7) and tried to force suppliers to hold Soviet bills instead of discounting them ("Zur Frage der Russenwechsel," *Sow. aus.*, 11, no. 18 [1932]: 3–4).

78. For Soviet complaints about the "Russian prices" charged by German producers, see Zlotnikov, "Importnye tseny," pp. 8–10; *Sow. aus.*, 10, no. 2 (1931): 7–12; and 11, no. 15 (1932): 9–10.

79. See Frei et al., *Finansirovanie vneshnei torgovli*, pp. 279–80; Rozengol'ts, "Monopoliia vneshnei torgovli," pp. 8–9; A. Rozengol'ts, "SSSR—samaia kreditosposobnaia strana," *Vneshniaia torgovlia*, 5, no. 19/20 (1935): 5–7; Kasyanenko, *Soviet Economy*, pp. 120–21; and note 78 above.

and ultimately to obtain better credit terms was to expand the domestic capacity to produce a wide variety of machinery and to be able to buy machinery from any potential supplier with cash. Both of these objectives required a difficult transition period during which short-term debt, which was currently claiming a large fraction of export receipts, would have to be reduced. By 1934, some success had been achieved in both areas.[80]

Credit also turned out to be less advantageous because, as a result of the steep decline in Soviet export prices, the real rate of interest greatly exceeded the nominal rate—a cost factor only imperfectly understood by Soviet planners.[81] Export prices (current-year weights) fell from 100 in 1927/28 to 49 in 1931, and to 37 in 1933 (table 3). As a consequence, retirement of the principal obtained on credit during 1927/28–1931 required much more in real exports than would have been required had imports been paid for in cash at time of purchase. For the same reason, the real cost of current interest payments was also high. No matter how important foreign borrowing was to the early years of the First Five-Year Plan, in retrospect, it was a very costly device.

In many ways, 1933 and 1934 were a denouement of the forces set in motion in 1931 and 1932. Famine spread in the winter of 1932/33 after the second crop failure in a row. England ended her "most-favored nation" treatment for Soviet imports and placed a temporary embargo on Soviet goods in April 1933.[82] Hitler, now chancellor of Germany, pursued a virulent anti-Communist domestic policy[83] and further tightened protectionist measures—indeed, Soviet economists correctly viewed the *capitalist* economies as moving toward autarky.[84] Soviet export volume and export prices continued to fall. A huge amount of debt was maturing in late 1932 and in early 1933, and for the first time the USSR was actually in danger of default.[85] Obligations to

80. Rozengol'ts, "Monopoliia vneshnei torgovli," pp. 8–9; and Rozengol'ts, "SSSR—samaia kreditosposobnaia strana," pp. 5–7. By February 1934 the discount rate on Amtorg bills fell from 27 percent to 10 percent (*New York Times*, February 11, 1934), and in late 1934 and 1935 long-term low-interest loans were offered by Germany and Czechoslovakia (Frei et al., *Finansirovanie vneshnei torgovli*, pp. 280–83; and B. Borisov, "Kredity i torgovlia SSSR," *Vneshniaia torgovlia*, 5, no. 1/2 [1935]: 13–14).

81. No Soviet analysis of the declining export prices' effect on the cost of credits has been found. Only Fürbringer, "Russland: Der Aussenhandel 1933," pp. 479–80, mentions this problem.

82. "Angliiskoe embargo na sovetskie torvary," *Vneshniaia torgovlia*, 3, no. 9 (May 1933): 4–5.

83. "O sovetsko-germanskikh khoziaistvennykh otnosheniiakh," *Vneshniaia torgovlia*, 3, no. 15 (1933): 7; and numerous articles in *Sow. aus.* in 1933.

84. I. Federov, "Torgovaia politika kapitalisticheskikh stran v 1933 godu," *Vneshniaia torgovlia*, 3, no. 21/22 (1933): 5–9.

85. Approximately 625 million rubles fell due in 1933, and of that total about 320 million rubles were owed to Germany (*Current History*, 39 [October 1933]: 119, and 38 [May 1933]: 161).

Germany were met only after difficult negotiations for a "transition credit" of 70 million rubles—a relatively unpublicized credit which postponed payment of some Soviet debts initially until mid-1934 and, after further negotiation, until mid-1935.[86] A portion of the maturing bills was paid by exporting gold, platinum, and silver (from tsarist coinage withdrawn from circulation in 1932); another share came from the export of "non-trade" items (antiques) and from currency earned in valuta shops; and devaluation of creditors' currencies had also reduced the USSR's real foreign debt slightly.[87] The remainder was financed by a large trade surplus in 1933—121 million rubles—obtained virtually without regard to economic and human costs by maintaining exports and by ordering further cuts in imports to less than one-half the 1931 level.[88]

Even though export volume and prices continued to fall in 1934, another large trade surplus was forced. Moreover, gold output was increasing, and the USSR was thereby able to retire most of its outstanding debt (table 1). To achieve a large trade surplus in 1934, however, imports had to be cut back even more than before—to about one-third of the 1931 level (50–75 percent of the 1929 level)—the lowest import volume during the 1924–40 period. This nadir in Soviet import volume was not, of course, a result of orderly replacement of imports by domestic output, as would have been the case under a conscious policy of autarky. Rather, the reduction in imports during 1932–34 was entirely unplanned and was probably not even foreseen as late as mid-1931. Two observations support this interpretation. First, in many cases reductions in imports were not systematically offset by increases in domestic production, and the consequences were counterproductive not only for consumer goods output but also for priority goals (leading to unused capacity in the machine-building industry and a reduced flow of tractors to agriculture in 1932).[89] Second, exports of grain, other foodstuffs, cotton fiber, fabrics, timber, and so forth were continued despite great scarcities at home and adverse terms of trade abroad, so that Soviet export volume diminished relatively little (8 percent) between 1932 and 1934. Export volume in 1934 was only 28 percent less than the 1931 peak and 18 percent above the 1929 level.

86. See *New York Times*, January 29, 1933; *Sow. aus.*, 12, no. 4/5 (1933): 8, and 13, no. 16 (1934): 8; Fürbringer, "Russland: Der Aussenhandel 1933," p. 480; and Rozengol'ts, "SSSR—samaia kreditosposobnaia strana," p. 6.

87. See note 73 above; Dohan (1969), pp. 839–40; and A. Z. Arnold, *Banks, Credits, and Money in Soviet Russia* (New York, 1937), pp. 425–27.

88. Numerous machine types scheduled for import in 1933 were prohibited on February 24, 1933. See Kasyanenko, *Soviet Economy*, p. 138; and *Sow. aus.*, 12, no. 4/5 (1933): 3.

89. Import shortages are discussed by N. Gassjuk, *Sow. aus.*, 11, no. 15 (1933): 6–12. For impact of shortages, see Dohan (1969), p. 586; Granick, *Soviet Metal-Fabricating*, p. 60; Zaleski, *Planning for Economic Growth*, p. 241; *Sotsialisticheskoe stroitel'stvo SSSR: 1934*, p. 303; and Kasyanenko, *Soviet Economy*, p. 57.

In contrast, world trade in 1934 was 20 percent below the 1929 level (table 1). In the context of world trade, then, Soviet exports were still expansionary in 1934.

The new campaign in 1932–34 to reduce imports and achieve economic independence was accompanied by lavish praise and widespread discussion of the anti-import programs.[90] Stalin's obsession with ideological continuity and "successes" not only prompted this attention, but also led to the selective elevation of his earlier statements and Party resolutions on economic independence to doctrinal status.[91] In the new Stalinist formula, the post-1931 cutback of Soviet imports reflected the correct and successful policy of economic independence instituted under Stalin's leadership following the Fourteenth Party Congress in 1925. This public stance misled Western economists.[92] But, as has been shown, crash import-substitution programs and accompanying publicity were pragmatic responses to contemporary import crises. The alternative would have been to reduce investment and output programs to levels appropriate to import capacity until the export position improved.

The policy of economic independence, according to Soviet authorities, was intended primarily to ensure the USSR the means of defense and growth, and differed from capitalist autarkic policies (as pursued, for example, by Germany)[93]:

> Economic independence means that the most important branches of the national economy are assured domestic raw materials and installations in a degree which makes them independent from individual nations of the

90. V. Prosin, "Vneshniaia torgovlia i bor'ba za ekonomicheskuiu nezavisimost' SSSR," in *Ezhegodnik vneshnei torgovli za 1931 g.*, ed. A. Badmas et al. (Moscow, 1932), pp. 3–39; "Monopoliia vneshnei torgovli i bor'ba za ekonomicheskuiu nezavisimost' SSSR," *Vneshniaia torgovlia*, 3, no. 8 (1934): 5–8; and "Bor'ba za tekhniko-ekonomicheskuiu nezavisimost' na otdel'nykh uchastkakh narodnogo khoziaistva i rol' vneshnei torgovli," in Mishustin, *Vneshniaia torgovlia.*

91. For example, in the post-1931 literature, a resolution of the Fourteenth Party Congress (1925) "to transform the USSR from a country importing machinery and equipment into a country that manufactures machinery and equipment" is elevated to "the most important directive of the Communist Party" (*Summary*, 1933, pp. 14 and 65). In 1925, however, it was controversial and only one of several important resolutions (Day, *Leon Trotsky*, pp. 120–24, 153–58, 167–68).

92. Soviet sources cited by Western economists in support of the conventional view, such as Mishustin, *Vneshniaia torgovlia*, were usually written (or elevated to prominence) only after 1931. See references in Holzman (1963) and Herman, "The Promise of Economic Self-Sufficiency."

93. For this distinction, see *Izvestiia*, February 19, 1933; and B. R., "Wirtschaftliche Unabhängigkeit und Autarkie," *Sow. aus.*, 12, no. 6 (1933): 2–7, who emphasized that economic independence for the USSR basically meant that the USSR *could* reduce relations with the world economies and still continue growth. P. D. J. Wiles is one of the few Western economists who has made a clear distinction between economic independence and autarky (*Communist International Economics*, pp. 419–53).

> capitalist world [and] the impossibility of a country or a group of countries creating a monopoly situation in this or other mutual relations with the USSR. . . . But industrialization is, of course, not designed to reduce imports in general, and imports of machinery and installations in particular. The extent of the imports of the USSR in the Second Five-Year Plan will be determined by what and under what conditions one will sell to us. . . .[94]

During 1932–35, the USSR frequently indicated its willingness to expand trade under the proper conditions.[95] According to Soviet economists writing in that period, the decline in Soviet trade was to be found in the crises and protectionism of the capitalist economies.[96]

Many factors worked against a recovery of Soviet trade after 1934. In part, the deceivers had become believers. Economic independence per se (as measured by low import/consumption ratios) was now seen as desirable; producing import substitutes, a necessity in 1931–34, had become a virtue.[97] After 1934 this negative attitude toward imports and foreign trade may very well have served to depress trade.[98]

Real economic factors, however, were at work too. Despite many new trade treaties, access to former markets continued to be hampered by trade barriers and the emergence of new trading blocs. The Soviet terms of trade, measured by current year weights, had improved primarily because less machinery was imported; but terms for the 1927/28 and 1932 trade composition remained very unfavorable (table 3). Moreover, the shift of "domestic costs" against foodstuffs and in favor of machinery was not reversed. Thus, once the industrial base had been restructured to supply most commodities needed for investment and the foreign debt had been retired, the need to force exports in the face of high opportunity costs diminished. The desire to end food rationing increased the pressure to cut exports in the mid-1930s.[99]

Exports declined slowly between 1934 and 1938 (approximately 5 percent per year), and by 1938 exports were about *equal* to the level in 1927/28.

94. *Za industrializatsiiu*, February 15, 1932.

95. A. Rozengol'ts, "Ekonomicheskie otnosheniia SSSR s kapitalisticheskimi stranami," *Vneshniaia torgovlia*, 4, no. 6 (1934): 2–3.

96. N. Gassjuk, "Der Aussenhandel der UdSSR im ersten Halbjahr des laufenden Jahres," *Sow. aus.*, 12, no. 15 (1933): 6–12. After 1933, Soviet writers were forced to draw a fine line between the idea that exports were influenced by the world crisis (a Trotskyite argument) and the need for better conditions as a basis for expanding trade. See M. I. F., "Nash eksport," *Vneshniaia torgovlia*, 4, no. 1/2 (1934): 3–5. Difficulty in supplying exports is rarely mentioned in any Soviet analysis.

97. See, for example, I. Zabelyshinskii, "Polnost'iu osvobodim SSSR ot importa tsvetnykh metallov," *Vneshniaia torgovlia*, 7, no. 7 (1937): 21–22; and Mishustin, *Vneshniaia torgovlia*, pp. 203–16.

98. See, for example, T. Dolbnia, "O nekotorykh voprosakh nashego importa," *Vneshniaia torgovlia*, 7, no. 6 (1937): 4–5.

99. See Kasyanenko, *Soviet Economy*, p. 128; and "Osnovnye zadachi vneshnetorgovogo plana na 1936 god," *Vneshniaia torgovlia*, 6, no. 2 (1936): 1–2.

Such an export level was comparable to, or somewhat higher than, trade levels of other nations (especially those exporting primary products), and in this context Soviet policy was not particularly autarkic. Imports actually expanded slightly after the low point of 1934, and the large trade surpluses of 1933–35 were allowed to fall to 2 million rubles in 1936. In general, however, neither world nor domestic conditions favored a strong revival of Soviet trade in the years after 1934.

Soviet foreign trade expanded rapidly between 1927/28 and 1931 and then literally collapsed. Western scholars have often suggested that Stalin, as part of industrialization strategy, deliberately pushed rapid import substitution to achieve autarky. I have tried to show that this standard explanation of the Soviet interwar trade pattern, which has its roots in the sharp cutback in imports after 1931 and in official Soviet self-congratulation on the attainment of economic independence, is an incomplete and misleading interpretation.

The evidence suggests, on the contrary, that Soviet planners did not intend to restrict trade during or after the First Five-Year Plan. Import substitution was designed to overcome chronic historical shortages and to ensure supplies of commodities for defense and growth. Unexpected changes in both the capitalist and domestic economies during 1930–32 made it impossible to maintain Soviet trade at the forced 1931 level. These changes included: (1) reduced capacity to produce sufficient exports (especially agricultural goods), (2) loss of export markets because of trade barriers, (3) adverse changes in Soviet terms of trade, (4) accumulation of short-term debt held abroad, and, finally, (5) sudden reduction in the availability and the rising real cost of foreign credit. It was the interaction of these unforeseen factors, rather than a deliberate policy of autarky or the Great Depression, that caused the sudden decline and subsequent stagnation of Soviet foreign trade.

This interpretation, stressing the economic origins of Soviet autarky, has important implications for understanding the current status of Soviet trade. It supports a growing belief that the Soviet economy is not inherently autarkic, but rather that its stance has been much influenced by its experiences with the outside world.[100] Thus, present Soviet efforts to expand trade with nonsocialist nations will—like any nation's—prosper or founder according to its ability to find exports, markets, and reasonable access to long-term credits.

100. That is, in the absence of unfavorable factors Soviet foreign trade would have been much larger during the 1930s. But how much larger? F. Holzman and others question whether foreign trade under a "normal" Soviet-type economic system and industrialization path would have equaled the trade levels which might be attained at a corresponding level of development under a capitalist system with free trade, or whether there are systemic biases against trade inherent in Soviet-type economies and industrialization strategies. There are too many unspecified parameters for me to speculate here. On this question, see Wiles, *Communist International Economics*, pp. 419–53.