

WESTERN TECHNOLOGY AND SOVIET ECONOMIC DEVELOPMENT, 1917 TO 1930. By *Anthony C. Sutton*. Stanford: The Hoover Institution, 1968. xx, 381 pp. \$10.00.

This book is the first detailed study of the large-scale infusion of Western technology and technical personnel into the Soviet economy during the 1920s. The study's major strength is in its empirical findings; unfortunately, the analysis of the data is often weak, and several important questions are not raised.

Part 1 contains a systematic review for each economic sector of the important commercial contracts involving "identifiable technical associations" concluded with Western firms or experts during the 1920s. The author's sources include the State Department Decimal File, German Foreign Ministry records, and numerous company archives and Soviet journals.

Sutton focuses his discussion on two important commercial institutions employed by the Soviet government to mobilize Western technology and technical skills: concessions to foreign equity capital for direct investment, and technical assistance concessions for Western blueprints and technical data, consulting, designing, and management. He also considers several less important mechanisms for transferring technology into the USSR, such as immigration of skilled workers, secret contracts with Germany for military research, development, and production in the USSR, and the purchase of breeding stock, hybrid seeds, and modern equipment.

By collecting scattered, formerly inaccessible data and shaping it into a reasonably complete history of Western technologies and skills in the Soviet economy of the 1920s, Sutton has produced the first study to show that the Soviet program for utilizing these technologies and skills was much larger, more widespread throughout the economy, and more important to Soviet recovery in the 1920s than is commonly believed. The Soviet experience indicates that technical skills and technology can be obtained from private foreign enterprises without being accompanied by the use of foreign private capital and illustrates the importance of government in accelerating the transfer of technology into backward sectors.

In part 2 the author attempts to assess the overall effect of foreign concessions and technical assistance on Soviet economic development. The analysis and conclusions of this part show an incomplete grasp of Soviet foreign trade and economic history and a failure to apply the data to several key questions relating to the importance of transferred technology.

Sutton's major hypothesis that Western technological aid was the single most important source of Soviet economic development during the 1920s is improperly formulated and unsubstantiated. Western technical assistance was undeniably an important element in restoring output in several sectors (petroleum, transportation, mining), but to apply generalizations based on a few sectors to the entire economy has no analytical or empirical justification. In particular, Sutton, heavily influenced by recent studies of the importance of technological progress in economic growth, fails to discuss other important factors, such as the powerful market forces of NEP and expansionary economic policies.

Certainly Sutton is correct in concluding that Soviet modernization, technological innovation, and investment in the 1920s were almost entirely based on Western—rather than Soviet—technology and technical skills. Sutton implies, however, that Soviet technological dependence is a reflection of inherent weaknesses

in the socialist system. But Sutton's study overlooks the widespread importance of Western technology in the pre-1917 Russian economy. In contrast with Sutton's view, an alternative hypothesis worthy of investigation is that the large Soviet program to utilize Western technology in the 1920s reflected the capability of a relatively backward socialist economy to accelerate the transfer and assimilation of advanced technology.

Sutton's analysis of the sectoral impact of Western technology has several shortcomings. Although Western aid was undoubtedly widespread throughout the economy, the conclusion that it was used in 90 to 98 percent of the economy is highly dependent on the sectoral classification system used and, in this case, implies a much greater effect on output and investment than would be the case if the estimate were based on some more relevant measure, such as value of output or investment produced with some form of Western aid. Although no sectoral or aggregate estimates of Soviet expenditure on Western technical assistance are made, Sutton's data suggest that, on the basis of output and capital investment, Soviet heavy industry (mining, metallurgy, metalworking, etc.) most likely spent a disproportionately large portion of these funds compared to the consumer goods industries and agriculture.

The study shows that Soviet concessions involving foreign equity capital usually ended in expropriation or other failure for reasons often not spelled out by Sutton. Sutton asserts that this fate of foreign capital in the USSR was largely the result of bad faith on the part of the Soviet government. This hypothesis needs more documentation. A systematic review of the operation and termination of Soviet concessions might provide some insights into the causes of mutual disillusionment about the concessions policy and into the problems of private foreign enterprises operating in a socialist and increasingly centralized economy.

It is to be hoped that in the two future volumes promised by Sutton some of these issues will be dealt with. Despite the criticisms above, Sutton's book is of value to students of the Soviet economy and of technological innovation in economic development, for the study contains a great deal of interesting data and provides several insights into Soviet growth and the process of technological transfer.

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REGIONAL DISTRIBUTION OF SOVIET INDUSTRIAL MANPOWER:
1940–1960. By *Emilo J. Stanley*. New York: Frederick A. Praeger, 1968. xxv,
209 pp. \$15.00.

An outgrowth of a doctoral dissertation in the geography department at the University of Michigan, this book is basically designed to analyze the regional distribution of Soviet industry through the study of employment data. The focus is on graphic presentation in the form of maps and tables. On the basis of data for the years 1940 and 1960, industrial workers are categorized both by major economic regions and by industrial sectors: energy and fuel, heavy industry (iron and steel), machinery, chemicals, building materials, forest products, apparel, and food processing. Tables break down regional employment by sectors of industry; maps are used to show the distribution of a particular sector by regions. Data were derived from national and regional statistical handbooks published in the Soviet Union in the late 1950s and early 1960s.