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Volume Title: Some Observations on Soviet Industrial Growth

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Volume Publisher: NBER

Volume ISBN: 0-87014-369-7

Volume URL: <http://www.nber.org/books/nutt57-1>

Publication Date: 1957

Chapter Title: chapter 1

Chapter Author: G. Warren Nutter

Chapter URL: <http://www.nber.org/chapters/c2676>

Chapter pages in book: (p. 618 - 619)

SOME OBSERVATIONS ON SOVIET INDUSTRIAL GROWTH*

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I

Imagine an economy born in violence and grown up in turmoil, where the only two spurts of growth stand on either side of a destructive war; where the economy's character has been radically transformed within less than thirty years; where industrial structure and directions of growth have been dictated by the aim of maximizing state power; where prices have borne a haphazard relation to costs; and where a government with flexible standards of candor has exercised rigid control over the trickle of information it has allowed to the outside world. You are asked to determine how fast that economy has been growing and to compare it in performance with other powerful economies of the world.

Your problem is unique: not one of the major pitfalls of economic measurement is missing; any economic aggregate or index number that might be constructed is subject to virtually all the serious faults one can think of. The economy has undergone a metamorphosis that cannot be meaningfully summarized in a measure of over-all growth; the directions of growth have shifted swiftly and violently from time to time; no moderately long and undisturbed period of development has been experienced; and, finally, only a small biased sample of economic data, of doubtful meaning and validity, is available for study.

Under the best of conditions it is a mistake to rely too heavily on broad indexes of industrial production in making comparisons of growth between countries. In addition to revealing nothing about the structural side of growth, such indexes are by no means independent of it. That is to say, the numerical value of a production index may be greatly influenced by the course of expansion followed

*I am grateful to Israel Borenstein, Solomon Fabricant, Adam Kaufman, Geoffrey Moore, and Leo Wolman for helpful comments on earlier drafts of this paper. Special recognition is also due to the competent staff of research workers responsible for collecting and organizing the underlying data, but it cannot be given in a brief footnote.

This paper has been approved for publication as a report of the National Bureau of Economic Research by the Director of Research and the Board of Directors of the National Bureau, in accordance with the resolution of the Board governing National Bureau reports (see the Annual Report of the National Bureau of Economic Research). It is to be reprinted as No. 55 in the National Bureau's series of "Occasional Papers."

by an economy, even though growth in some significant meanings of economic capacity is neither greater nor smaller than it would have been had an alternative course been followed. In any event, what applies to the best of conditions applies with magnified force to the Soviet Union. If sound and relevant judgments are to be made on Soviet economic growth, the evidence must be summarized in a variety of ways, only one of which is the broad production index.

I want to suggest some of these ways, and to explore one in some detail. Despite the ambitious title originally assigned to this paper, my discussion will have to be limited to industrial growth, since that is the area I have been working in. The data that will be presented have been drawn from a study under way at the National Bureau of Economic Research; they are, of course, preliminary and subject to revision. In any event, a full explanation of what lies behind them will be published when the study is completed. It must be said here that all Soviet data are based ultimately on information published in the Soviet Union; and, though efforts have been made to remedy the most obvious deficiencies, no scholar can have a clear conscience in working with Soviet data as if they were fully reliable. A few additional remarks will be made on this crucial point at the conclusion of this paper.

II

Suppose we raise the following question: How successful has the Soviet Union been in matching the industrial achievements of the United States? One way to approach an answer is to make an industry-by-industry comparison of Soviet and American growth in physical output, in each case confining the comparison to periods in which American and Soviet industries were of equivalent size.¹ A comparison

¹ Any study of individual industries involves the many familiar problems of defining each industry in a relevant way and of finding comparable industrial categories for different economies. The problem of definition has been "solved" in part by the availability of Soviet data. In general, the industries—it is perhaps more accurate to say "commodities"—chosen for study are the most narrowly defined categories for which Soviet data on physical output can be found covering the entire Soviet period. Relying on narrow concepts of industries makes for obvious difficulties in interpreting differences in growth as between economies with differing endowments of resources. Thus the petroleum industry has shown a much more rapid development in the United States than in the Soviet Union over comparable periods, while the coal industry has not. The comparatively slower growth of coal in the United States is essentially the result of comparatively better opportunities in the petroleum industry, not of any relatively depressive factors applicable to the "fuel industry" as a whole. It would therefore be useful to examine comparative developments in the fuel industry as well as in its components and similarly in the case of other industrial groups. Analysis of this sort is planned for the study under way at the National Bureau.

It should also be pointed out that there are gross deficiencies in the definitions of industries as given in Soviet statistical materials. Often little is known about a Soviet industry beyond a broadly descriptive title—as "copper," "paper," "canned food," and so on. Under these circumstances, the choice of American counterparts is necessarily somewhat arbitrary, though we have done our best to choose what seemed to be the most similar industries.