## THE ECONOMIC IMPACT—INDUSTRIAL AND REGIONAL— OF AN ARMS CUT\*

By Wassily Leontief, Alison Morgan, Karen Polenske, DAVID SIMPSON, EDWARD TOWER

## I. THE PROBLEM AND ITS ANALYTICAL FORMULATION

1. The object of the computations described in this paper was to determine what effect a hypothetical reduction in military accompanied by a compensating increase in nonmilitary demand would have on the industrial composition and regional distribution of employment in the continental United States. By compensation is meant the maintenance of the total level of employment in the economy.

In a paper published 4 years ago, input-output analysis was used to estimate the effect of such a change in the structure of final demand on the industrial distribution of the labor force for the country as a whole. The present study carries that inquiry one step further. impact of the hypothetical shift from military to civilian demand is projected here not only in interindustrial, but also in interregional terms. Specifically, the territory of the continental United States has been subdivided into 19 distinct regions, and the shift in the industrial composition of output and employment was assessed for each one of them.

Had we attempted to study each region separately and then simply to add the results to arrive at corresponding aggregates for the country as a whole, the total national output figures and the corresponding total input figures for each distinct category of goods and services could not have been expected to match. In other words, the results of such isolated regional studies would not comprise a consistent picture of the national economy as a whole. The simple scheme of multiregional analysis on which the present computations are based provides for simultaneous balancing of all input-output flows from the point of view of each individual region, as well as for the U.S. economy as a whole.

For some goods—let them be called local—a balance between production and consumption tends to be established separately within each region; for other goods—let them be identified as national—such a balance typically is achieved only for the country as a whole. Within each region the output of a national good might exceed or fall short of its total input, the deficit or surplus being evened out by exports to or imports from other regions. Retail trade and auto repair services are characteristically local industries while coal mining and aircraft manufacturing are typically national. The difference

<sup>\*</sup>Reprinted from The Review of Economics and Statistics, vol. XLVII, No. 3, August 1965; also chapter 10 of Imput-Output Economics, Oxford University Press (New York), 1966.

All authors were members of the Harvard Economic Research Project. This study was financed by the National Science Foundation and the Rockefeller Foundation. The computations were performed on the IBM 7094 at the Harvard Computing Center.

1 Wassily Leontief and Marvin Hoffenberg, "The Economic Effect of Disarmament," Scientific American, April 1961.