to nonmilitary categories. This may be accomplished by obtaining the scalar-vector product of the assumed defense cut times the ratios in the military vector, then obtaining the scalar-vector product of the assumed defense cut times any nonmilitary demand vector, and finally subtracting the military product vector from the nonmilitary product vector. The resultant vector yields the net gains and losses in total output by industry for the 57 industries consistent with the magnitude assumed to be shifted from military to nonmilitary demand.

The major advantages of the matrix developed by Leontief and Hoffenberg are its flexibility and generality in computing impacts on the economy's processing sectors for shifts in final demand. Although the table was derived to show the impact of shifting defense expenditures to other categories of final demand, it may be used to compute impacts for any shift in expenditures from one category of demand to another. For example, one could compute the impact of shifting expenditures from investment in producers durables to highway construction or from personal consumption to government nonmilitary or any other combination that might reasonably be expected to accompany a change in economic policy.

The flexibility of this technique does impose some limiting assumptions on the model which may effect the accuracy of the derived impacts. Since the derived ratios are based on a specific set of final demand requirements, the scalar multiplication and subtraction of the product vectors is a short cut technique for computing the new level of total requirements brought about by changing the relative level of two or more final demand component aggregates without changing the internal composition of direct requirements. This implies that the relative composition of direct requirements for each demand component remains constant. Consequently shifts in expenditures from one demand component to another assume that the composition of direct requirements is affected proportionately.

The assumption of proportionate requirements accompanying any variation in the level of demand carries with it certain important implications. First, any cut back in military expenditures assumes that every existing weapon system is reduced in proportion to its original level which means that the technique may preclude analysis of a reduction in expenditures consistent with a nuclear disarmament. Second, any shift offset by increases in personal consumption assumes unitary elasticity of income for all commodities and hence a proportionate increase in demand for the output of all industries. Third, offsets through increased government nonmilitary expenditures assume that all existing programs will be increased proportionately. Although these are simplifying assumptions, if the magnitude approaches say 50 percent of the defense budget then these assumptions might be too restricting.

It is the purpose of this study to extend the pioneering efforts of the Leontief-Hoffenberg model by dropping the assumption of constant proportionality between demand categories and production sectors when allocating offset demand. The elimination of these assumptions requires that a new set of direct requirements or bill of goods be derived for each offset considered. Each set of direct requirements specified must be multiplied by the structural matrix in order to generate the intermediate pattern of demand consistent with the stipulated offset. The resulting product matrices must then be evaluated with reference to the pattern established for the armed economy.