The Protectionist Sentiment in the Seventies: 
Its Implications for Factor Real Incomes in the U.S.¹)

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Abstract: With the unsatisfactory national and international economic performance of many 
Western, industrial economies during most of the 1970's, a protectionist fever is spreading. The 
U.S. is one victim. If the protectionist sentiment is translated into action, relative commodity 
prices in the U.S. will be altered, and other changes will follow inevitably. A redistribution of fac-
tor real incomes is one inevitable consequence, and is the subject of this study. In examining the 
U.S., it was found that a more restrictive U.S. commercial policy would result in a redistribution of 
real income from more skilled to less skilled labor groups. However, under most circumstances the 
redistribution of income can be expected to be small.

Recessions and support for restrictive international commercial policy have 
marched in lock step throughout modern economic history. Thus, the current clamor 
for protection from foreign producers by nations beset with economic ills comes as no 
surprise. While few would contest that each wave of “beggar-thy-neighbor” policies 
changes the economic coastline, the manner and degree to which the economic struc-
ture is altered by the encouragement or discouragement of international trade enjoys 
no such consensus.

The functional distribution of income is one aspect of a nation’s economic struc-
ture. Very few economists would not agree that changes in commercial policy modify 
the functional distribution of income. The theoretical majority viewpoint has been 
articulated primarily by Stolper/Samuelson [1941], Chipman [1966], Kemp [1956], 
Kemp/Wegge [1969] and Uekawa [1971], who have developed or improved upon the 
concept of “relative-factor intensity” to indicate the factors that benefited (suffered) 
as a result of alterations in commercial policy and their subsequent impact on relative 
commodity prices. To briefly summarize their collective thoughts, an expansion (con-
traction) in international trade increases (decreases) the real income of the nation’s 
relatively-abundant factor, the factor used relatively intensively in the production of 
the exported good.

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While the importance of "relative-factor abundance" and "relative-factor intensity" in determining changes in factor real incomes is understood generally, how relative abundance and intensity is defined in practice is not. For example, when Wassily Leontief first discovered that U.S. exports contained proportionately more labor relative to capital than U.S. imports, with the implication that the expansion of U.S. trade would benefit labor at the expense of capital, the result stood in stark contrast to the preponderance of evidence indicating that the U.S. is relatively capital abundant. Thus even in the most highly aggregative model, the Leontief paradox vividly illustrated the difficulty in defining relative factor abundance, a key to defining the income redistributive effects of revised commercial policy.

While the Leontief paradox has been resolved ostensibly by dividing the labor factor into distinct parts, e.g., skilled and unskilled, defining relative factor abundance and intensity when a model includes three or more factors is difficult. Further, there is a paucity of empirical work on the relationship between changes in commercial policy and factor real incomes. The purpose of this paper, then, is to fill this empirical gap, and in the process test the conventional wisdom on relative resource endowments in the United States. Whether specifying a fifty percent across-the-board increase in U.S. tariffs or in each tariff separately, the "unskilled" labor in the U.S. benefited at the expense of "skilled" labor. The gainers and losers were reversed when tariffs were reduced. These results support the assertion that the United States is relatively abundant in human as well as physical capital.

The paper is organized as follows. Section 1 outlines the methodology and model conventions. Section 2 details the model notation. Section 3 formalizes the general model. The results are presented and analyzed in Section 4. Section 5 is a summary of the work. The appendix to the study contains discussion of the data and the data record.

1. Methodology and Conventions

The question of functional incidence is properly the purview of general equilibrium analysis. Theoretical models examining this question are basically supply oriented, the relative intensity of factor use is recognized as the primary determinant of functional incidence. While the relative intensity of factor use is crucial, it offers insights into the direction of change in factor real rewards only after the relative change in commodity prices is established. To develop empirical estimates of functional incidence, then, demand-related phenomena need to be incorporated. For the purposes of this study, therefore, a six-commodity, seven-factor general equilibrium model is employed with the following conventions:

1. Labor is the only "variable" primary factor of production. The total stock of labor is fixed, but the total amount of labor time is allocated to any one of "several activities". The amount of labor time devoted to any one activity is responsive to changes in the schedule of real wages.\textsuperscript{3} The model departs from the

\textsuperscript{3} The fiction of fixed factor endowments characterizing the majority of work in the international trade area was mitigated in this way.