

ABSTRACTS OF DISSERTATIONS AND THESES

Ph.D. Dissertations

Aurora A. Sanchez, *Capital Measurement and Total Factor Productivity Analysis*, School of Economics, University of the Philippines, 1983.

The study addressed itself to productivity, an issue that concerns all; considering that resources do not usually grow as fast as population, to increase output per capita necessarily requires growth of productivity. The study focused on: (1) capital stock estimation, and (2) total factor productivity measurement and analysis.

The various estimates of capital stock for use in productivity measurement were obtained by following different methods of estimation depending mostly on the nature of the data available. The methods adopted seemed to offer a practical and reasonably accepted procedure for estimating the value of capital by type of asset for the Philippines.

The study has come up with total factor productivity (TFP) estimates using different methodologies and capital and labor input variants. TFP estimates based on the refined method or the Christensen, Cummings and Jorgensen (CCJ) approach were found to differ significantly from those based on the conventional method. This finding stressed the importance of the choice of methodology in estimating TFP growth rates. On the other hand, the choice of depreciation assumption and of labor input variant and the inclusion or exclusion of residential construction capital from the capital series has not affected TFP growth estimates significantly.

TFP growth in the Philippines was lower than that of Korea and Taiwan, partly because of the lower rate at which capital in the Philippines was taking the form of more productive capital, and the lower capital utilization rates in the sector that is the major user of capital.

Low TFP growth rates for the economy as a whole has gone hand in hand with low TFP growth in agriculture and manufacturing, the sectors of the economy that count very importantly — agriculture because it supplies the food requirements of the population and the raw materials needed by industry; and manufacturing because of its strategic role in the industrialization process. The low productivity growth in agriculture between 1956 and 1975 may partly be attributed to the limited application of biological technology, an experience contrary to that in Korea and Taiwan where its extensive application has been an important source of productivity increase. In manufacturing, past government policies were shown to have influenced the decline of TFP growth in this sector.

Another possible source of low TFP growth in the Philippines was the suboptimal labor reallocation. The transfer of labor resources to the service sector relative to manufacturing meant less productive use of labor and lower productivity levels for the economy as a whole.

Charles C. McDougald, *Balance of Payments and Output Effects of Direct Foreign Investments in the Philippines*, College of Business Administration, University of the Philippines, 1983.

The purpose of the dissertation was to determine the impact of American direct foreign investment on the Philippine economy.

Capital is required to attain the country's economic aspirations. Domestic capital is not sufficient to develop all the necessary sectors. Foreign loans are a potential source of capital, but they can reach a ceiling. Another source of capital is direct foreign investment.

Critics are quick to point out that direct foreign investment is not good for the country. Most studies about foreign investment are limited to capital and profit flows, and prove that there usually isn't a net inflow of equity-linked financial resources into this country. They surmise that direct foreign investment is therefore not beneficial to the economy.

This study showed that comparing inflows to outflows was not the main point. Such a comparison fails to take into account the impact of direct foreign investment on export promotion and import savings. In this context, the study attempted to determine if the impact produced a net improvement in the nation's ability to earn or save foreign exchange.

A Keynesian demand side linear model was derived in order to measure the initial and recurrent effects of direct foreign investment on the balance of payments and output. A sample was chosen consisting of 26 American firms operating in the manufacturing sector during the period 1975 to 1980. All firms had at least 30 per cent foreign equity.

It was concluded that the sample firms contributed somewhere between \$0.172 and \$0.528 cents per dollar of sales to the balance of payments and between \$0.338 and \$1.297 to the output of the economy.

* * *

Li Hasymi, *Market Labor Supply of Agricultural Households*, School of Economics, University of the Philippines, 1984.

The purpose of this study was to examine the labor supply behavior of agricultural households by extending the Rosenzweig approach to include the labor supply of children and analyzing it on the 1978 Bicol multipurpose Survey.

The agricultural households were divided into two groups — the landholding and landless households. The household members were also classified by status/role, i.e., father, mother, and child.

It was hypothesized that the labor supply responses to wage changes of landed household members would be algebraically greater than those of landless household members. Hypotheses on differential responses of other parameters were also generated. To carry out further estimations, labor force participation was estimated, it being an interesting aspect of the rural labor market in itself.

The differential of the coefficient of own wage in labor supply equations was generally positive, but the relationship between father's own wage and labor supply was not significant and no conclusion could be made. The findings generally supported the hypotheses that the impact of a change in own wage on the labor supply of landholding and landless households, was algebraically greater in the former than in the latter. This was consistent with the hypothesis that the farmer behaves in a neoclassical manner and labor markets are competitive.

In this study, variables such as education, age, travel time from *barangay* to *poblacion*, asset, and size of land owned, were also found to be significant factors affecting labor supply.

* * *

Noer Soetrismo, *Farmers, Millers and Sugar Production in Indonesia*, School of Economics, University of the Philippines, 1984.

This study is an empirical investigation of the supply response of sugar cane farmers and millers, and cost functions of millers. The supply response of farmers and millers was analyzed using Nerlove's approach. Returns-to-scale on sugar processing by millers were examined using a cost function approach.

An important finding showed that farmers were responsive to price while millers were not. Using the cost function approach, the study found that sugar mills faced increasing returns to scale of production. Further investigation showed that sugar mills could not take advantage of the economies of scale because they faced cane supply constraint resulting from restriction on renting of land and a hesitance of farmers to send their cane to the mills for processing.

The study ventured three points with regard to sugar policy in the future. First, if the government wished to increase cane production, it could increase the producer price of sugar without increasing the consumer price, by cutting taxes on sugar. Second, rehabilitation in Java must be accompanied by a reduction of the number of sugar mills operating near each other to gain economies of scale and save land. Third, an appropriate short-run strategy which will result in substantial savings in resources is to import at the low world price. In the long-run, Indonesia must strive to improve productivity and efficiency in domestic sugar production

* * *

Kenneth G. James, *Returns to Labour in the Estate Subsector of the Malaysian Natural Rubber Industry*, School of Economics, University of the Philippines, 1984.

This study of returns to labour on Malaysian rubber estates was mainly devoted to an empirical examination of the share of wages in total output over two time-periods, 1923-38 (referred to in the study as the inter-war period) and 1948-78 (the postwar period). Wages, employment and labour productivity were then examined as components of labour's share in the value of total output, so that incomes for individual workers could be perceived as arising from the interrelationships of these various economic factors.