

Allocative Efficiency in Economic Development by Pan A. Yotopoulos.
Centre for Planning and Economic Research, Athens, Greece, 1967.

The traditional explanation for the poverty of farming communities in underdeveloped areas is the inefficient method of farming. It is argued that the farmers are poor because they are inefficient. They are inefficient because they employ factors of production without any consideration of their opportunity costs. In technical language, the marginal productivities of the factors of production employed by farmers differ widely from their opportunity costs. Professor Yotopoulos, however, refutes the traditional explanation for the poverty of farmers in underdeveloped areas. He shows that the farmers of underdeveloped regions may be poor but not inefficient. They do try to equate the marginal productivities of the factors of production with their opportunity costs. Even then, however, they are poor. Their poverty must, therefore, be explained by factors other than inefficient allocation of factors of production. This is what Professor Yotopoulos tries to explain.

This monograph analyses the farming techniques in a predominantly agricultural and the most underdeveloped region of Greece, Epirus. The results show that the farmers of Epirus are efficient in the sense that the marginal productivities of the factors of production employed in farming in Epirus are not significantly different from their opportunity costs. Yet they are poor.

The analysis is based on the commonly-fitted Cobb-Douglas production function for estimating the marginal productivities of the factors of production. The gross value of the agricultural production is regressed on five independent variables: labour; land; live capital; equipment; and plant. The estimated marginal productivities of these factors are compared with their opportunity costs, *i.e.*, wage rate in case of labour, modal value of the annual rental of land in case of land, and rate of interest in case of capital — live capital, equipment and plant. It is observed that the differences between the marginal productivity and the opportunity cost of a factor are not significantly different.

Given that the farmers in Epirus have allocative efficiency concerning the employment of factors of production, the low productivity of agriculture in Epirus can be attributed to the lack of what the author calls "non-traditional factors: organisation, entrepreneurship, new method of doing things, bold ideas" or, in short, "technological change or structural efficiency". There is little hope for intensification of agriculture in Greece as a means of increasing agricultural production. Increasing inputs per unit of land decrease the marginal productivity of the inputs which cannot be tolerated because the marginal productivity of the inputs is already close to the opportunity cost of the inputs. What is needed is the increase in marginal product of factors of production, *i.e.*, an outward shift in the production possibility curves for the agriculture. Only technological change or structural efficiency can bring this about.

The monograph tries to prove with facts and figures that the farmers in traditional agriculture are poor but not inefficient. Analytically, it has already been proved that the hope for improving the economic conditions of the population in underdeveloped countries lies in technical change and innovation¹. Professor Yotopoulos has given force to the above argument by giving an empirical evidence to it. In this respect, his contribution to the existing literature may be regarded significant.

Mohammad Irshad Khan
Pakistan Institute of Development Economics
Karachi

¹Ranis G. and J. C. Fei, "A Theory of Economic Development", *American Economic Review*, Vol. LI, September 1961.