

Agriculture Total Factor Production in Global Income Classes

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Introduction

The agricultural sector faces opposing pressures of sustaining a growing population while minimizing its unfavorable outcomes on finite environmental resources¹. In an effort to simultaneously move towards these goals, countries around the world have prioritized agricultural productivity. One of the most informative measures of agricultural productivity is total factor productivity (TFP). TFP compares gross outputs of crop, animal and aquaculture products to inputs of land, labor, capital and material resources utilized in farm production². As gross output increases at a faster rate than total inputs, total factor production improves, which eases tensions on environmental resources and food security, and boosts economic growth³. TFP is expressed generally by the equation:

$$TFP = Y/X$$

where Y represents gross output and X represents total inputs.

¹Network on Agricultural Total Factor Productivity and the Environment. Oecd.org. Accessed December 4, 2022. <https://www.oecd.org/agriculture/topics/network-agricultural-productivity-and-environment/>

²Fuglie K, Jelliffe J, Morgan S. Documentation and methods. Usda.gov. Published October 7, 2022. Accessed December 4, 2022. <https://www.ers.usda.gov/data-products/international-agricultural-productivity/documentation-and-methods/>

³Fuglie K, Jelliffe J, Morgan S. Documentation and methods. Usda.gov. Published October 7, 2022. Accessed December 4, 2022. <https://www.ers.usda.gov/data-products/international-agricultural-productivity/documentation-and-methods/>