

World Poverty and the Role of Agricultural Technology: Direct and Indirect Effects

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Appendix 2 Social Accounting Matrices

The archetypes were built on the basis of aggregate information for a set of low income food importing countries in the three continents, and social structure coming from Social Accounting Matrices from Kenya for the Africa Archetype, Sri Lanka for the Asia archetype, and Ecuador for the Latin America archetype. The Africa archetype is based on aggregate information from the following countries: Benin, Burkina Faso, Central African Republic, Ethiopia, Ghana, Guinea, Kenya, Lesotho, Liberia, Madagascar, Mali, Mauritania, Mozambique, Rwanda, Senegal, Sierra Leone, Somalia, Sudan, Tanzania, Togo, and Zaire. The Asia archetype is based on the following countries: Bangladesh, Sri Lanka, Pakistan, Philippines, Papua New Guinea, China, and India. The Latin America archetype is based on the following countries: Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, and Paraguay. To allow comparisons, the values in each SAM have been put in per capita terms (1985 US dollars). These SAMs were constructed from SAMs developed by Sadoulet, Subramanian, and de Janvry (1994). Details of the archetypes may be found in that study.

The three archetypes have similar aggregation schemes. The sectoral aggregation includes three agricultural sectors (export crops, cereals, and other agriculture), food processing, industry, trade-and-services, and administration in the African and Asian archetypes, and two agricultural sectors (export crops and other agriculture), minerals, industry, trade-and-services, and administration in the Latin American archetype. The definition of social classes is adapted to the individual contexts. While in Africa rural households are classified in three farm sizes, Asia has a large class of rural landless and two farm sizes, and Latin America has a landless class and three farm sizes.

Comparing the SAMs, observe that Africa is least developed with a GDP/capita of \$243, followed by Asia with a GDP/capita of \$339, and then Latin America with a GDP/capita of \$1760.² Corresponding to the level of development, agriculture represents 36.6% of GDP/capita in Africa, 28.1% in Asia, and 12.2% in Latin America. With development, the level of interaction between agricultural and non-agricultural sectors increases. This is evident in the fact that agricultural activities in Africa use neither non-agricultural labor nor capital (i.e., negligible amounts rounded off to zero), while in Asia agricultural activities use non-agricultural labor, but not non-agricultural capital, and in Latin America agricultural activities use both non-agricultural labor and capital. In all of the archetypes, agricultural exports far exceed agricultural imports, which means that agriculture is a supplier of foreign exchange for the economy. Agricultural households spend a large portion of their income on non-agricultural commodities.

Reference

Sadoulet, Elisabeth, Shankar Subramanian, and Alain de Janvry. 1994. "Adjusting to a Food Price Increase in the Context of Stabilization Policies: An Analysis Using Archetype Financial CGEs for Developing Countries." In *Modelling Economy-Wide Reforms*, A. Brandão, O. Knudsen and I. Goldin, eds. Paris: Development Centre of the Organization for Economic Co-Operation and Development.

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² GDP/capita is defined as the sum of payments to factors and government.