

Diagnostic Facility for Shared Growth – 3rd Call

Philippines: Uncovering the role of agriculture in poverty reduction in the Philippines: the role of farm income, wages, and food prices

1. Objective(s) of the proposed work:

The growth elasticity of poverty in the Philippines has been shown to be low by international standards (World Bank, forthcoming Shared Growth Study for the Philippines). Moreover, recent work (World Bank, forthcoming Land Reform, Rural Development and Poverty Reduction in the Philippines) has shown that in the Philippines the contribution to poverty of growth in the agricultural economy reduction is similar to that of the non-agricultural economy. This result is consistent with the notion that the role of agriculture in poverty reduction undergoes significant changes as countries transform from agrarian to industrialized economies. According to the WDR 2008, Philippines is right in the middle of such transformation.

The proposed study has two objectives. First, it intends to document, quantify, and compare the direct and indirect effects that agricultural growth in the Philippines has on poverty through three key channels, in this way going beyond the reduced form approach so far followed in analyzing the poverty to income elasticity of agricultural growth. Following Bresciani and Valdes (2007) [eds. Beyond Food Production: the Role of Agriculture in Poverty Reduction], these channels include: (i) the direct farm income channel; (ii) the labor market channel; and (iii) the food price channel. The main hypothesis in this regard, is that (i) the farm income channel has a modest role to play relative to the labor market channel and (ii) while the labor market channel plays a preponderant role in linking agricultural growth to poverty reduction, its role is further enhanced once the set of production linkages between the agricultural sector and the food industry is taken into account.

Second, the study will analyze how the current structure of government intervention in agricultural markets is influencing the work of the three channels. The main hypothesis that the study intends to test is that the current structure of intervention and support, being biased in favor of importables (i.e. rice, sugarcane and corn) and against exportables (pineapple, banana, mangoes, vegetables, etc.), is actually constraining growth in Philippine's agriculture total factor productivity and hindering the development of a competitive and food industry.

2. Technical and innovative aspects of the proposed work:

The study takes stock of recent analysis of the sectoral growth elasticity of poverty reduction carried out for the Philippines and expands that approach with a focus on agriculture by uncovering the channels through which agricultural growth reaches the poor. To do so, it will carry out the following set of activities:

- i. following Anriquez and Lopez (2007) [in Bresciani and Valdes, eds.], it will estimate demand equations for skilled and unskilled labor at the regional level. The demand of skilled and unskilled labor will be modeled as a function of their respective wages, sectoral GDPs, cost of capital, and other region-specific characteristics and time effects. At this stage, sectoral GDP will be defined by separating agriculture from services and

- industry. Moreover, agricultural GDP will be further broken disaggregated, separating import and export-competing crops;
- ii. following World Bank (2007) using input-output tables regularly produced by the National Statistics Office (NSO), an aggregate measure of agribusiness GDP will be estimated. The consolidated agribusiness GDP will be defined as taking into account the share of all industrial and service activities that are interrelated with agriculture (excluding agricultural imports) used directly or indirectly as an input into production. This definition of consolidated agribusiness GDP differs from a more common version by which agriculture and food industry are simply summed and while it excludes from agribusiness those inputs that are not related to agriculture, it includes industries such as packaging that are typically excluded in the common definition;
 - iii. repeat the analysis at step (i) above by including the consolidated agribusiness GDP;
 - iv. model the impact of changes in the composition of GDP on the demand and wage for skilled and unskilled labor, by combining the respective estimated demand functions with supply functions of the two types of labors, in which wage is of course a key variable. The supply functions can be estimated separately or by previously estimated parameters can be used for the purpose;
 - v. using data from the Family Income and Expenditure survey, estimate household income functions in which the key variables are farm and nonfarm income functions. As households allocate fixed resources (i.e. labor) across activities, a 1% increase in farm income will lead to less than a 1% increase in total household income;
 - vi. estimate a food price equation using time series data, in which the food price index is regressed against sectoral GDP, including agriculture.
 - vii. Combining the results of the above steps and using different rounds of recent FIES for validation purposes, the impact of a 1% increased in agricultural GDP on household income is simulated by looking separately at the three effects: farm income, wages, and food prices. The results of this analysis are then compared with those derived by using the consolidated agribusiness GDP.

All the necessary statistical information used in the analysis will be drawn from secondary sources and is readily available (regional accounts and input-output matrices, FIES, Labor Force Surveys, Food Price Index).

3. Relevance to country priorities:

Agricultural policy in the Philippines has been traditionally oriented towards the protection and support of the import-competing traditional crops to the disadvantage of exportable crops. An important objective of the study is to demonstrate that when approached from a supply chain perspective, agricultural exportables contribute significantly to the intensity with which the food sector (i.e. agriculture plus the food industry and allied activities) employ unskilled labor.

Generation of employment and investment in the rural sector is a clear relevant strategic goal of the newly approved CAS. To that end, AAA work is being planned for FY10 with the objective of identifying specific areas in the food supply chain and geographical regions where investment will be required in order to sustain agricultural and agribusiness productivity growth. The proposed study will complement such more applied analytical work by anchoring it into a broader and more in-depth analysis of why production linkages between agriculture and the food

industry need to be better understood in order to fully realize agriculture's role in poverty reduction.

4. Linkages with knowledge sharing, dissemination, and capacity building:

The findings and recommendations of the study will be presented to key stakeholders in government and associations of producers and agribusiness in three separate regional workshops, one for each macro-region of the Philippines (Luzon, Visayas, and Mindanao). In addition, workshops with the Congress Planning and Budget Office and the Senate Economic and Planning Office will be organized so as to bring the findings of the study as near as possible to relevant policy-makers.

The results of the study will also be used as a way of engaging the next administration on the theme of reforming the structure of intervention in the agriculture sector and food industries. A brief on the results of the study will be produced and used to support this particular engagement. They will also be relevant for the analytical work that the Bank will carry out on agricultural/agribusiness productivity as it will allow to better appreciate the importance of the linkages between agriculture and the food industry and the role that the structure of agriculture plays through the labor market in rural areas.

5. Client and donor engagement:

The study will be carried out in close consultation with the National Economic Development Authority (NEDA), the Department of Agriculture (DA), and the Department of Trade and Industry (DTI). Client will be involved at the concept stage and will be invited to provide comments to the findings during the mid-term and finalization workshops. The study will provide to the concerned agencies the following inputs: (i) for NEDA, it will provide a clearer view of the linkages between agriculture and the food industry in particular with regard to employment generation, a key goal in the Philippine's Medium Term Development Plan; (ii) to DA and DTI it will clarify a important a too often overlooked social cost of the current structure of intervention in agriculture and will provide a strong motivation for focusing on the production linkages between agriculture and the food industry. To DA in particular, it will provide a clear motivation for upgrading and strengthening the services it provides to the food processing industry. The results of the study will also be disseminated as part of the Philippines Development Forum activities.