In the beginning of 2008, the food crisis took the center stage of the debate among development practitioners and policy makers around the world. Between March 2007 and March 2008, the international food prices index had increased 82 percent. In Latin America and the Caribbean, seven countries presented double-digit food price inflation. Specialists began advising that rising food prices could push millions of people into poverty worldwide absent any compensating actions. Governments quickly reacted by adopting ad-hoc measures to protect vulnerable consumers, and by intervening in the food market price formation.

The Government of Honduras (GOH) was one of the countries that rapidly tried to design and strengthen a set of supply policy responses to increase domestic food production and expand access to food products. Eighty nine percent of Honduran households are net consumers of the basket of basic food commodities and therefore food has a large weight in the basic wage basket. Agriculture employs about 35 percent of the active population and generates about 75 percent of all exports. However, the country has to import over 10 million quintals of food commodities a year to meet the 20 million quintals of total consumption. Despite public interventions in the agro-alimentary sector, the country continues to show high levels of poverty, presenting the highest rate of rural poverty in Central America -75 percent-, and extreme rural poverty of 63 percent.

The need to develop appropriate short term food policies in one of the most strategic national sectors led the Honduran Secretary of Agriculture and Livestock (Secretaría de Agricultura y Ganadería, SAG) to request from the World Bank and the Regional Unit for Technical Assistance (RUTA) support to assess and improve its policy-responses. This note describes the innovative experience generated from this request: a country-led Poverty and Social Impact Analysis (PSIA). The project was designed to transfer capacity on how to measure distributional impacts of agricultural policies to SAG’s staff and to researchers and students from agricultural colleges. It also aimed at assessing the socio-economic impacts of the GOH’s response to the food crisis through the Bono Tecnológico program. The project was

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1 World Bank, 2008.
2 A quintal is the equivalent of 46.36 kilos.
3 RUTA is a joint, inter-agency and government platform that works at the regional level and in every country in Central America. RUTA is a knowledge management institution that coordinates and catalyzes interagency activities and strengthens regional and national government institutions, as well as civil society groups, to develop more efficient and effective rural policies, strategies, programs and projects. For more information, see www.ruta.org.
developed in partnership with RUTA, and financed by the German Development Cooperation, through the German PSIA Trust Fund.

The Country-led PSIA Approach

Since 2002 the World Bank has been using the PSIA approach to assess social, poverty, and distributional impacts of policy reforms on the welfare of different stakeholder groups, with a particular focus on the poor and vulnerable. PSIA is a systematic analytical approach that involves different quantitative and qualitative tools for an ex-ante analysis of expected poverty and social impacts of policy reforms or policy programs, aiming at contributing to their design or reformulation. Where possible, the PSIA also suggests an ex-post evaluation of the poverty and social impacts of policies and reforms.

A key element of the PSIA approach is guaranteeing country ownership and fostering capacity building. While most experiences of PSIA analyses focus on the element of capacity building and ownership by encouraging stakeholders’ engagement and policy dialogue, the Honduras experience went one step further by promoting a country-led PSIA. Instead of simply applying the PSIA social and economic tools to evaluate a specific policy or reform, the project focused on transferring capacity on such tools to Honduran universities and government agencies, which then had the opportunity to apply the acquired knowledge in the proposed analysis themselves. By doing so, the project tackled the two main requests from the client of providing (i) capacity building and (ii) an assessment of a specific policy - and ensured ownership throughout the process.

Stakeholders’ participation from the very beginning was essential for the project’s success. Government staff and Honduran universities were first invited to an introductory workshop on the PSIA framework and scope. This first presentation was followed by another seminar where all participants agreed upon the policy to be analyzed – the Bono Tecnológico. Later they divided the analytical work among different universities and government agencies, according to their respective capacity, expertise, and availability. Given its expertise in the area, Zamorano University became the main coordinator of the work. Under Zamorano’s supervision, the National Pedagogical University Francisco Morazán conducted the qualitative analysis. Students from three other universities - Autonomous National University (UNAH), the National University of Agriculture (UNA), and the National School of Forest Sciences (ESNACIFOR) - and staff from SAG’s Unit for Investigation, Science and Technology (DICTA) and the Management Planning and Evaluation Unit (UPEG), participated in the training courses and workshops. Under RUTA’s coordination, a committee with representatives from the institutions involved was created to facilitate the preparation and monitoring of the PSIA.

The Bono Tecnológico Program

In 2006 the GOH designed a four-year National Program of Basic Grains (Programa Nacional de Granos Básicos 2006-2010) to improve the country’s grains’ production and national food security by leading Honduras to auto-sufficiency in the sector. This issue became particularly relevant during the food crisis that followed, and the government’s response to the spike in food prices was to reinforce programs geared toward domestic food production and access to food products for the poor. Among these programs was the Technical Production Voucher Project, Bono Tecnológico (BT). The BT is a supply-side response to increase national production by offering an in-kind credit through the provision of high yield seeds and fertilizers and technical capacity to small producers. The sustainability of the programs goals was based on the expected capitalization of communal banks (cajas rurales) for future financing. Beneficiaries would reimburse these banks to create a revolving fund for future credit to producers. In 2006 the project was implemented in 17 states (departamentos), 216 municipalities, and 2,125 communities, benefitting 81,747 small farmers. In 2007 the BT reached another 90,000 small producers.

A Diversified Technical Assistance Program

The technical assistance activities included workshops, trainings and on-demand consultations for the
application of the PSIA methodology, using the BT Program as a case study. In addition to enhancing government’s analytical capabilities, the participation of various higher education institutions in this component provided them with tools to increase their role as counterparts in policy debates, with the aim of contributing to improve policy-making in the agricultural sector in Honduras.

The proposed exercise combined ex-ante methodologies for the quantitative evaluation with an ex-post analysis based on qualitative methods. The tools in which participants were trained were considered easy to transfer. In total, the Trust Fund financed seven workshops and courses, training a total of 60 people. Consultants from RUTA, Zamorano, and the World Bank provided on-demand punctual technical assistance to researchers at different stages to assure the correct application of the research methods. The technical assistance activities included:

- Workshop on competitiveness analysis, where the local research team was trained in simple supply chain productivity analysis as a methodology for the assessment of distributional impacts of exogenous price shocks to the crops in study.
- Training in Social Accounting Matrices.
- Training in the analysis of household surveys (LSMS) to identify and quantify the direct effects of the BT on net producers and net consumers.
- Two-week course on impact evaluation of economic policies.
- Presentations on qualitative tools and close supervision from a national specialist.
- Hands-on training in conducting various assessments related to the Bono Tecnológico.

The work plan therefore included various methodologies of different degrees of complexity, and hands-on training that was directly applied to the BT case study. In order to assess the distributional impacts of the policy, the PSIA project proposed the following technical analytical papers to serve as inputs for a final report:

1. A literature review of international experiences of interventions in the trade of basic grains based on food security reasons.
2. Analysis of the competitiveness of maize under different price scenarios, modeling results with and without the technological vouchers.
3. Analysis of the direct impact of an increase in the price of maize (and indirectly chicken, beef and pork) on the well being of the population.
4. Analysis of the impact on the economy caused by exogenous productivity shocks using a Social Accounting Matrix multiplier model under different scenarios.
5. Qualitative Analysis, through focus group discussions and semi-structured interviews.

**PSIA Findings and Results**

**Goals and Sustainability** - Based on different international experiences of government interventions in the sector of basic grains to improve national food security, the literature review concluded that the BT’s goals exceed its effective scope of achievement. To increase food security at the household level, have small producers adopting new technologies, and strengthen financing mechanisms through the communal banks, are three objectives that can hardly be tackled and realized at the same time and in such a short period of time, concludes the review. Drawing lessons from
similar policies adopted elsewhere, especially the “Starter Pack” carried out in Malawi, the report suggests that for the first objective of food security, flexi vouchers distributed through market channels could be a better option in the short-term. These vouchers allow producers to purchase what they need the most. In addition, experiences of similar transfers of technology have stimulated their incorrect use, and have only had temporary positive effects. The report concludes that policies such as the BT do not address the structural problems of the sector and are only justifiable if they aim at solving food security problems in the short-term.4

**Winners and Losers** - The impact of the Bono Tecnológico program at the household level was first assessed using a partial equilibrium model and the latest Living Standards Measurement Study (LSMS) household survey data (Encuesta Nacional de Condiciones de Vida, ENCOVI, 2004). The exercise simulated, in an ex-ante manner, what would be the impact on the well-being of the population caused by an increase in the production of maize and bean, and the consequent price decreases as a result of the BT, assuming that households do not change their consumption and production decisions any further. The results show that 85.2 percent of Honduran households would present gains, although these gains would be marginal. Their consumption per capita of maize and beans would increase approximately 2.2 percent. The impact would be larger (4.5 percent increase in consumption) in the rural area. On the other hand, 4.9 percent of households would present losses. On the supply side, the BT program would stimulate production; on the demand side, it would help to reduce prices. The results also showed that the BT is well oriented towards reaching its objectives and population target. According to the results, most of the households that would be positively impacted by the program are poor and in the lowest quintiles, while those who would present losses are net producers not benefited by the program and who are in the highest quintiles (e.g. large farmers).5

**Impacts on the Economy and Income Distribution** - To find out the possible economic impacts of the program on the national economy and on income distribution in Honduras, the project used the Social Accounting Matrix (SAM)6 multiplier model based on the Social Accounting Matrix developed for Honduras in 2004.7 The matrix presents the aggregate structure of the Honduran economy, showing the interaction between production, income, consumption and capital accumulation, which could allow for the identification of possible winners and losers of the program. The matrix distinguishes between rural and urban households.

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4 Escuela Agrícola Panamericana Zamorano and Unidad Regional de Asistencia Técnica (RUTA), 2009.
5 Bonilla and Sanders. 2009b.
6 According to Thorbecke (2000), “SAM is a comprehensive, disaggregated, consistent and complete data system that captures the interdependence that exists within a socioeconomic system”, and which can be used as a conceptual framework to explore the impact of exogenous changes in different variables or on the whole interdependent socioeconomic system.
7 This matrix was prepared by Morley et al. in 2009. It was developed by IFPRI with the support from USAID and FIDE. Based on this SAM, IFPRI developed a CGE with RUTA’s support.
This analysis tried to measure the impact on different groups of households caused by an increase in productivity due to the BT program. Assuming increases in aggregate production of 2.9 and 6.0 percent in maize and beans, respectively, the authors estimated an increase of 0.17 percent in the income of rural households with unskilled heads, while the increase for urban households with unskilled heads was 0.10 percent. The changes in income for households with skilled heads were estimated at 0.08 and 0.04 percent for rural and urban, respectively. As expected, rural households and households with unskilled heads would benefit more from the BT program. They benefit from a higher demand from workers and growth of rural salaries, assuming that the BT does not change factor intensities.

Challenges to the BT Program

The LSMS and SAM simulations yielded positive results in both macroeconomic and households levels. It is important to consider, however, that the methodological and data availability limitations have likely led to an overestimation of results. In addition, given the limitations and assumptions of the exercises, it was also necessary to test the program's effective feasibility in terms of its costs and benefits for small producers.

To investigate that, the PSIA analysis used the information gathered by the study “Diagnosis of the maize agroalimentary chain in Honduras”, conducted by Zamorano University in 2003-2004. It is important to note that this analysis did not include subsistence producers, most of who were supposed to be benefited by the program, so the information for small producers was used. The results showed that in order for a typical small producer receiving the BT to be able to repay the value of the voucher to the communal banks without losses, an increase of 45 percent in the yields would be needed. Hence, either the expectations of repay rates or the ones for adoption of the BT might be unrealistic.

Implementation Effectiveness and Stakeholders’ Perceptions - The qualitative analysis provided some key findings otherwise not evident through quantitative exercises. Political economy issues underlying the process of implementation were captured during the focus groups discussions and interviews with key informants. Some of the most important issues raised were those related to the selection of beneficiaries and the reasons preventing the correct functioning of the communal banks, critical for the long-term objectives of the program.

The qualitative assessment showed a general consensus among the different groups of stakeholders (beneficiaries, implementing agencies, and government officials) about the BT’s contribution to an increase in small farmers’ yields and on the national production of grains. The report also showed that the BT has had positive impacts in households mainly by securing family consumption of grains. On the other hand, the analysis also revealed that: (i) the BT not always

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8 The impact on aggregate GDP was estimated at 0.07 percent.
9 Bonilla and Sanders, 2009a.
10 Escuela Agrícola Panamericana Zamorano and Unidad Regional de Asistencia Técnica (RUTA), 2009.
delivered the adequate quantity, quality, and content of the seeds and fertilizer; (ii) the selection of beneficiaries not always followed the regulations and protocols, which led to the exclusion of some target beneficiaries and the inclusion of some that should not be receiving the benefit; (iii) the quality of seeds delivered and timing of their distribution (sometimes after the harvest) was questioned; (iv) very little progress was made regarding the strengthening of the communal banks; frequently it was not clear to beneficiaries whether the BT was a donation or an obligation they had to repay in full.

Conclusions

Despite limitations in some of the methodologies involved, the limited data availability, and the relatively short time available for the trainings, the products delivered by Zamorano were satisfactory and demonstrated a great level of appropriation of the methodologies by the local research team. The final report offers insightful information for the GOH to improve the design and implementation of the BT policy. The methodologies that were taught can also be used by the local team in the development and implementation of other agricultural policies.

Among the most important conclusions is that the policy has the potential to positively impact the well-being of the targeted population (mostly poor rural households, but also benefiting the urban poor), and that it can have positive impacts on the Honduran economy. On the other hand, the analyses also show that the program probably leads only to short-term positive impacts, and that its sustainability is unlikely in the long run. The repayment of the voucher and the follow-up of the technical recommendations provided through the technical assistance component did not seem to be operating well, and the costs for producers to adopt and maintain the technological improvements can be too high. The conclusions suggest that ad hoc short-term interventions to increase yields are not sustainable in the long term, although they may have beneficial immediate impacts in the context of a crisis.

Lessons Learned

The food crisis context led to the adoption of different and controversial ad-hoc measures in Central America. Due to the emergency, several of them demonstrated to be lacking appropriate preparation and reflection from policy makers. The PSIA exercise in Honduras described here showed that this problem can be at least partially avoided in the future through capacity building initiatives that help prepare governments and civil society to better evaluate the impacts of policies in one of the most important sectors for Central American economies. The partnership with RUTA, with its expertise in the area, its reputation as an honest broker and its good relations in the region, was crucial to open the possibility of mainstreaming the PSIA approach in the agriculture/rural sector in Honduras and in Central America.

The Honduran experience of learning by doing using accessible PSIA tools that can be easily assimilated has left several lessons that could be used in the preparation of similar PSIAs in Central America, as well as in other regions:

12 RUTA, 2008.
• The close engagement and dialogue between donors, the local research team, farmers associations, and the client is essential; in this case, it made this a knowledge exchanging experience for all.

• The constant follow-up by the Bank and RUTA’s team assured the quality of the material produced.

• The policy evaluation tools transferred need to be accessible, adequate and tailored to the audience.

• Finding a single qualified local institution to coordinate the work with other local participants is very helpful.

• Public sector involvement, through SAG, was very limited because they lacked time to dedicate to this study. Nevertheless, SAG’s team actively participated in the workshops and courses, and played an important role in the discussions about the studies’ achievements and progress. In this sense, we recommended that in a similar activity the specific role of the public sector be specified from the beginning.

• The exchange between the different universities was satisfactory. The students’ participation in the workshops and trainings was very successful and has contributed to the dissemination of the tools used in the PSIA.

• The combination of courses on the methodologies, monitoring workshops, stakeholder participation in all stages of the PSIA, and close follow-up between donor and executing institutions, were key factors determining the success of this PSIA initiative.

For more information about Poverty and Impact Social Analysis, and other related publications, please visit [www.worldbank.org/psia](http://www.worldbank.org/psia)

For more information about the Regional Unit for Technical Assistance (RUTA’s) work, please visit [www.ruta.org](http://www.ruta.org)
References


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