

## **EXECUTIVE SUMMARY**

**During the past decade Nicaragua has been consolidating a stable macroeconomic environment and has registered modest growth rates**

1. In recent years Nicaragua has experienced modest growth rates, averaging 3.8 percent between 1998 and 2005, and 1.7 percent per year between 2001 and 2005. The country has consolidated its structural adjustment programs and completed the requirements for benefiting from the HIPC initiative, freeing the country from a debt service burden that amounted to 250 percent of GDP in 2001. This growth has been closely tied to investment and exports.

2. Despite the consolidating macroeconomic environment, macroeconomic uncertainty and instability are still reported by firms as one of the main investment climate concerns; and lack of credit is a major constraint for private investment growth.

**Nicaragua is witnessing a change in its demographic structure which may provide a window of opportunity for poverty reduction**

3. During this period the country has also seen an increase in the working age population as a fraction of the total population, and a growth in employment at a rate of 3.9 percent per year. This decrease in the number of dependents per working age person, generated by the increasing labor force, presents an important opportunity for poverty reduction, as each working member now has a smaller number of dependents to support. Moreover, this new labor force has managed to find employment: the share of the working age population employed increased from 62 percent to 64 percent.

**Despite the increase in employment, the new employment opportunities were low paying, in particular for the poor**

4. However, despite the higher employment and the lower dependency rate, headcount poverty did not change. An important fraction of the employment generated appeared to be in “bad jobs.” Most of the employment seems to have been absorbed by the manufacturing and agricultural sectors.

5. Agriculture offers the lowest returns among economic activities and has historically concentrated the largest number of poor. Moreover, Value Added per worker in agriculture has decreased. These characteristics make employment growth in agriculture an unlikely driver of significant poverty reduction. However, it is still unclear as to what extent the employment growth in agriculture that has been captured through the household surveys adequately reflects the reality in this sector. It is possible that the 2001 household survey underestimates rural population, so that, when compared to the 2005 survey, it appears as if the rural population increased, which is at odds with the census trends. This dubious rise in rural population may be behind at least part of the agricultural employment growth.

6. The manufacturing sector contributed to a significant share of employment generation, but an important fraction of employment generated in this sector was not tied to better incomes. First, 45 percent of the employment generated in this sector was in family enterprises, which is, and has been, associated with low income generation. Second, a large share of the new jobs was concentrated in the food and beverage sector, which registered a decrease in wages. The clothing sector was the only sector that contributed to the generation of “good jobs.” This was probably maquila employment. However, the apparent requirement that those employed in maquilas have completed secondary education may have limited the poor from benefiting from growth in this sector.

7. In addition, wages in manufacturing seemed to have decreased. This might be a response to the rising labor force and the decrease in productivity in the sector.

**The very poor saw important increases in their labor income that were due to higher prices of goods produced by the agricultural poor; this growth, although important, was not enough to bring them out of poverty**

8. When decomposing growth in household per capita income into its components, we find that the poorest 20 percent benefited from an important increase in the share of working age persons within the household and in the participation rates. The rise in the share of working age population as a fraction of total members in the household explains 37 percent of per capita household income growth in the lowest quintile. On the other hand, income per self-employed in agriculture contributed with 44 percent of the change in household per capita labor income. This means that the poorest basically gained because of better earnings from self-employment in agriculture, as well as from an important demographic transition.

9. The rise in agricultural income from self-employment can be attributed to better producer prices of coffee, meat, maize and beans, which are all produced by small farmers. Both yield per hectare and cultivated area remained almost constant. Despite increases in the production of sensitive agricultural products (due mainly to an expansion of harvested areas), the output growth was not sufficient to compensate the inflow of labor into agriculture, so that Value Added per worker decreased. This decrease in (constant) Value Added per worker was offset by higher producer prices. Had it not been for price increases, rural poverty would have most likely increased. In addition, the relative productivity of Nicaragua with respect to other countries in the world, and in particular with respect to its main trading partners, remains astonishingly low, especially for rice and milk.

10. There is some evidence that agricultural wages increased as well, despite the decreases in (constant) Value Added per worker. Increases in the relative prices of export goods may be behind this behavior.

**Constraints to the generation of better jobs seem to lie outside the realm of labor market regulation, and there is some evidence of agricultural/non-agricultural sector segmentation**

11. Labor regulation does not seem to be a hindering factor for formal employment generation. The labor regulation does not appear particularly high, neither from the perspective of employers nor compared to other trading partners and neighbors.

12. Despite this, there is some evidence of segmentation between the agricultural and non agricultural sectors. There is an important earnings premium in non agricultural earnings. An important part of this premium is the results of a selection process where more educated

individuals opt out or can access non agricultural jobs. However, even after selection effects are taken into account, there is an earning premium for working outside of agriculture, with returns to education, location, and gender explaining most of the differential for otherwise equivalent workers. Qualitative results suggest some barriers to moving outside agriculture.

13. An important earning premium of being a wage worker outside of agriculture, when compared to self employment outside of agriculture was also found. Part is explained by selection of more educated and male workers into wage employment, and another part explained by differences in returns to education for otherwise equivalent workers. Thus the earning differential between self employment and wage employment in non agricultural jobs can be potentially explained by segmentation. Although among the self employed, who are mostly informal, the majority did not choose self-employment because of lack of wage employment but rather because of schedule flexibility, for an important fraction of the unskilled (26 percent) self-employment was a response to lack of wage employment. Qualitative results also support some segmentation between wage employment and self-employment.

### **Geographic barriers to mobility and low levels of education constrain the rural poor from moving to better jobs**

14. There is evidence of segmentation between agricultural and non-agricultural jobs. There is an important earnings premium outside of agriculture, which is mostly explainable by differences in returns to individual characteristics (controlling for selection). The most important factor determining whether workers have a non-agricultural job is having primary and secondary education and being older and more experienced. Being a male and living in the Pacific region makes it more likely for a worker to end up in agriculture.

### **Although education is an important determinant of being employed in a high earning sector or occupational category, there is no evidence of skill mismatch within occupational categories or sectors**

15. Low levels of education among the poor seem to be restricting their access to the most dynamic sector in the economy—the manufacturing maquila sector—as employment in firms in this sector requires a completed secondary education. In addition to being important to finding employment outside of agriculture, education brings significant returns even within occupational categories and within sectors.

16. Despite the fact that education does affect earning levels, there appears to be no evidence of skills mismatch. Firms do not report skills to be a constraint for business functioning or growth. In addition, the evidence suggests that, while the demand for skills may be rising, the supply of skills is rising more than proportionally. This rise in the availability of skills is likely to reduce wages unless there is a substantial boost in production and in the demand for labor.

### **Exploring policy options**

17. *If growth is to translate into poverty reduction, increasing the level of education of the labor force should be at the forefront of the policy agenda, in particular in the rural sector.* Despite the fact that this may exert an important downward pressure on wages, it increases the returns of the wage employment and employers in agriculture as well as the likelihood of being employed outside of agriculture. Both higher returns in agriculture and a moving out of agricultural employment are key elements for poverty reduction.

18. To prevent educational expansion from resulting in lower wages, the demand for skills must keep pace with the supply of skills. Labor regulation does not appear to pose a constraint to labor demand, and labor is cheap relative to capital. *Thus, increasing the demand for wage employment is likely to be achieved only if the most binding constraints to growth are addressed: namely, macroeconomic uncertainty and lack of credit. Fostering investment in unskilled intensive sectors, in areas outside of Managua (such as in the tourism sector) is a policy that merits careful consideration.* In addition, given the small domestic market in Nicaragua, promoting export in order to increase labor demand and reduce the downward pressure on wages will be imperative.

19. The very low levels of productivity found in the agricultural sector, together with some indirect evidence of low mobility between urban and rural areas, suggests that rising productivity in agriculture should also be at the forefront of policy initiatives. Observed income rises among the poor seem to be tied to rises in the prices of agricultural products and foreign remittances. This behavior increases the vulnerability to foreign shocks. Without *targeted investments in agricultural productivity and agricultural exports*, decreasing rural poverty in the short and medium runs seems implausible.

20. On the labor market front, the most promising route to fostering the creation of poverty reducing jobs is to identify and address the *barriers to moving out of agriculture*. Infrastructure and transport costs, land titling, information problems and education merit further study. Finally, it might be worth exploring whether *a simpler minimum wage structure* than the current multi-sector scheme might lead to fewer distortions in the labor market that may be particularly binding for the unskilled.