Ecuador
Poverty Report
(In Two Volumes) Volume I: Components of a Poverty Reduction Strategy

November 27, 1995

Latin American and the Caribbean Regional Office
Country Department III
Country Operations Division I

Document of the World Bank
Currency Equivalents
Currency Unit - Sucre (S/.)
US$1.00 = S./ 2739 (October 30, 1995)

Government Fiscal Year
January 1 to December 31

Acronyms and Abbreviations

BEV Banco Ecuatoriano de Vivienda (Ecuadoran Housing Bank)
BNF Banco Nacional de Fomento (National Bank for Development)
CONADE Consejo Nacional para el Desarrollo (National Planning Council)
EB/PRODEC Educación Básica - Proyecto de Educación (Basic Education Project)
FASBASE Proyecto de Fortalecimiento y Ampliación de Servicios Básicos de Salud en Ecuador (Basic Primary Health Project)
FISE Fondo de Inversión de Emergencia (Emergency Social Fund)
IDB Inter-American Development Bank
IESS Instituto Ecuatoriano de Seguridad Social (Ecuadoran Social Security Institute)
IMF International Monetary Fund
INDA Instituto Nacional de Desarrollo Agrícola (National Institute of Agricultural Development)
INEC Instituto Nacional de Estadística y Censo (National Institute for Statistics and Census)
INECEL Instituto Ecuatoriano de Electrificación (Ecuadoran Electricity Company)
INNFA Instituto Nacional de la Juventud y de la Familia (National Institute of Children and the Family)
JNV Junta Nacional de Vivienda (National Housing Board)
LSMS Living Standard Measurement Survey
NGOs Non-Governmental Organizations
ORI Operación de Rescate Infantil (Operation Child Rescue)
RQA Rural Qualitative Assessment
SECAP Servicio Ecuatoriano de Capacitación Profesional (Ecuadoran Training Council)
USAID U.S. Agency for International Development

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Ecuador Poverty Report

Part I: Components of Poverty Alleviation Strategy

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The Ecuador Poverty Report was prepared by a team led by Jesko Hentschel (Task Manager) and is based on two missions to Ecuador in May and October of 1994. The Poverty Report team comprised Alexandra Cox Edwards (labor market reform), Julie van Domelen (targeting), Peter Lanjouw (rural poverty, profile), Haeduck Lee (subsidies and expenditures), Donna MacIsaac (urban poverty developments; determinants of hourly earnings), Caroline Moser (adjustment of urban households) and Martin Rama (determinants of hourly earnings; impact of education, growth and deregulation). Robert Ackland contributed to the aggregation and valuation of consumption data, Armando Godinez to the targeting analysis of social programs, Surajit Goswami to the agricultural policy analysis, and Will Waters and Anna Webb to the Rural Qualitative Assessment. Norman Hicks (Lead Economist, LA3) participated in the two missions and led the policy dialogue with the Government on expenditures in the social sectors, the gas subsidy and the direct voucher schemes. Special thanks are due to Eduardo Somensatto — only his continued advice and support made this study possible.

Financial support from the Dutch Government for several background papers and the Rural Qualitative Assessment is gratefully acknowledged. UNICEF contributed six community case studies to the Rural Qualitative Assessment.

The director of LA3 is Paul Isenman, the lead economist Norman Hicks and the division chief (LA3C1) Dan Morrow.
### Ecuador: Basic Indicators

#### General

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#### Social Indicators

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1. from Living Standard Measurement Survey (SECAP 1994).
Introduction and Executive Summary

Ecuador is a poor country, measured by the number of people who cannot afford to purchase a basic basket of goods. Although the oil boom of the 1970s led to unprecedented growth, poverty remains pervasive. The distribution of wealth is highly skewed, and close to four million Ecuadorans, about thirty-five percent of the population, live in poverty. Another seventeen percent are vulnerable to poverty. One and a half million Ecuadorans live in extreme poverty and cannot meet their nutritional requirements even if they spend everything they have on food. Poverty is higher in rural areas, where two out of three poor people live.

The characteristics of rural and urban poverty are quite different. Rural poverty is associated with lack of education, little access to land, a low degree of market integration, and lack of employment in the vibrant off-farm rural sector. Further, poverty among the many indigenous people, who live predominantly in the rural Sierra and the Amazon region, is much higher than for the non-indigenous population. This population group also shows alarming levels of malnutrition and child mortality and has much less education than the non-indigenous population. Urban poverty, which affects one and a half million people, is linked to a somewhat different set of variables, which vary by region. For example, while basic service provision has reached the poor in the urban Sierra, many poor in the urban Costa are without a functioning water supply or sewage system. But the poor in various urban areas also have some characteristics in common. These are, again, low educational achievement, informal sector employment, rented — instead of owned — housing, and low rates of labor force participation by the spouse of the household head.

Because of the lack of progress in reducing both urban and rural poverty, it is clear that Ecuador must seriously rethink its approach to these problems. It is generally agreed that the multitude of existing social programs need to be better coordinated as many are overly centralized today and often duplicate rather than complement each other. The poor do not have access to social security, public primary health care is almost nonexistent, and nutritional programs reach only 6 percent of poor children below the age of five. The subsidies that do exist, even for education, cater mainly to the wealthy.

This Report aims to help the Government and others to identify key aspects of a new poverty reduction strategy and possible options or first-best alternatives for policy interventions. Actual blueprints for reforms, and programs, however, will need to be worked out with all concerned parties, including the poor as the target group.

Components of a Poverty Reduction Strategy

This Report argues that a successful poverty reduction strategy can be based on the following components: basic nutrition and health programs for the poor; an effort to strengthen the assets of the poor; and support for a strong and stable demand for labor. The first two components, in particular, will require public resources. Hence, resource mobilization is an essential part of Ecuador’s poverty reduction strategy.

Sustained labor-intensive macroeconomic growth is the single most important condition for poverty reduction because it creates employment opportunities and higher incomes for the poor while providing the public sector with much needed resources to support social programs and targeted interventions, without crowding out private initiative and investment. In addition, international experience has shown that it is much more difficult for the poor to protect their income and wealth in a low-growth environment. If the country were able to raise the per capita growth rate of around one percent to reach three percent for five years, poverty could be reduced from 35 to 26 percent. However, growth by itself is by no means sufficient for reducing poverty — especially for addressing the non-income aspects of poverty, particularly lack of access to basic social services. In addition, poverty reduction from faster growth could be partly or completely offset if inequality increases. If the share of the bottom 40 percent of the population in total consumption were to fall from the current 16 percent to 10 percent, poverty
would increase to 40 percent in five years despite a three percent per capita growth rate.

**Financing Social Programs and Targeted Interventions.** Financing of improved or expanded poverty programs, as suggested below, must take place within a sound, sustainable macroeconomic framework. This means that tough choices must be made in order to maintain fiscal discipline. Not all of the programs mentioned below can be implemented at the same pace. However, Ecuador could raise substantial resources by eliminating or reducing several subsidies, tax evasion, and tax exemptions, which would enable it to finance social programs and targeted interventions while maintaining fiscal balance. For example, achieving a cost recovery rate of one half for higher education could finance a 40 percent increase in expenditures on primary or a 35 percent increase of expenditures on secondary education, which would benefit the poor. Targeting the subsidy on electricity use through a lifeline rate to the light users (many of who are poor) could generate resources equivalent to the entire 1993 budget of the Ministry of Health.

**Basic Nutrition and Health Program.** Nutrition programs for malnourished children and a basic health program for the poor are preconditions for a successful strategy to help poor people out of poverty -- and for Ecuador to advance as a country. Any investments in education or infrastructure will bring a significant return only if people are healthy and well-nourished enough to be able to take advantage of these investments.

**Strengthening the Assets of the Poor.** The main assets of the poor in Ecuador are labor, land, and housing. The key to increasing the productivity and use of labor is to improve primary education, expand access to secondary education, and increase female participation in the labor force. Increasing poor farmers' access to land would not only decrease poverty but could also raise land productivity in large parts of the Ecuadorian agricultural sector. These efforts could be complemented by increasing poor farmers' access to rural markets through infrastructure and extension investments. Housing could be strengthened as a productive asset by creating an enabling environment to help the poor to upgrade their homes so they can be used for small business and other income-generating activities.

**A Strong and Stable Demand for Labor.** Macroeconomic growth and stability not only provide the Government with resources to support investments in health, education, and services, but also are necessary to create employment opportunities. The poor need employment opportunities to reap the benefits of their education. Labor market deregulation is key to reducing the bias against employment in the higher-paying modern sector.

**Financing Social Programs and Targeted Interventions**

**Reallocation of Subsidies Serving the Non-poor.** Subsidies for electricity and cooking gas (LPG) together account for about 2 percent of GDP; only 17 percent of the electricity subsidy and only 23 percent of the cooking gas subsidy reach the poor. A simple alternative to the electricity subsidy would be to create a lifeline tariff and charge heavy users the true economic cost of the resource. For cooking gas, there are several options, all of which have advantages and disadvantages. A direct income voucher system is a possibility but should not be based on the Basic Services Indicator used in Ecuador because leakage would be very large. Other options are to restrict the distribution of subsidized containers to low-income areas or to phase out the subsidy while channeling benefits to the poor through improved social programs.

**Increasing Tax Revenues.** Increasing non-oil tax revenues could also finance poverty reduction programs. Tax revenues could be increased by up to 3 percent of GDP by eliminating exemptions on the value added tax (in the order of 1.4 percent of GDP) and by reducing tax evasion (1.7 percent of GDP). To improve tax collection, the Government could effectively use the established Large Taxpayers Unit.

**Improving Education Finance.** Education finance has become dramatically imbalanced. Unit costs for higher education are about six times higher than for primary education and double the unit costs for secondary education. While the poor
benefit from primary education expenditures, most secondary and especially higher education expenditures directly go to the non-poor. Reallocating expenditures from higher to basic and secondary education not only would have a positive effect on equity, but it is essential for improving the quality of basic education and enable poor children to obtain a secondary school education.

**Targeting as a Means To Reduce the Costs of Social Programs.** Although targeting of social programs is a cost-effective means of reducing leakage, it is not widely used. Among twenty-five major social programs, only about a third operate with an explicit targeting mechanism; two-thirds are either universal programs intended to reach the entire population or operate without a specific mechanism to identify beneficiaries. In the country’s targeted social programs, targeting costs are within reasonable expectations, but the initial emphasis on setting up targeting mechanisms is usually not followed by consistent performance monitoring. Such monitoring is crucial for evaluating and subsequently improving targeting mechanisms.

In addition, not all of the programs need to be financed, let alone carried out, by the public sector. In many areas, for example in housing, stimulating the effective engagement of self-help groups, NGOs, and the private sector would be more cost-effective than large-scale public programs. The scope for an expanded role for NGOs and community organizations is especially large. These and other important “how to” questions of program design and implementation — including the central issue of decentralization of public service provision — are not covered in this report but must also be addressed in the near future.

**Basic Nutrition and Health Programs**

**Nutrition.** A coordinated effort to expand nutrition programs to reach the most vulnerable groups, young children and pregnant mothers, would bring high returns in the long run. Only well-nourished, healthy children can learn and acquire the skills they need to escape poverty during their lifetime. But, while chronic malnutrition of children under five years of age is with 45 percent at alarming levels, the many modest nutrition programs only reached a small fraction of the 600,000 poor young children below the age of five in 1994. A close examination of several of these programs reveals that they do attempt to target, and that targeting costs are well invested (i.e., leakage to the non-poor is relatively small). The real problem, however, within financing and implementation constraints, is to reduce the degree of undercoverage. Experience from neighboring Andean countries shows that nutrition programs that piggyback onto health care or day care networks can indeed reach the poor.

**Basic Health.** Reductions in real per capita expenditure over the last years for the main provider of health services in Ecuador, the Ministry of Health, have plunged the basic health system into a crisis. Many public health posts can no longer provide fundamental services, and the poor have come increasingly to rely on the private sector for health care, which then absorbs 12 to 17 percent of the household budget. But not all the poor can turn to the private sector. About half a million of them cannot afford such expenses and are left without help even when they critically need curative care. Others have turned to non-professional healers and pharmacists. Appropriate funding for basic health care is a necessary condition for helping many of the poor survive.

**Strengthening the Assets of the Poor**

**The Quality of Primary Education and the Importance of Secondary Education for Poor Children.** In our view, Ecuador’s education policy needs to emphasize two areas: improving the quality of primary school education and enabling poor children to go on the secondary school. While almost all youngsters attend primary school, the repetition and drop-out rates for poor children are quite high, and the quality of the education is not sufficient to help children escape poverty. Attendance in secondary school varies widely, but is clearly much lower for the poor than for the non-poor. Many poor parents do not send their children to secondary school because of the direct private costs of public education and the
opportunity costs of the children in school not being able to contribute to family income. However, secondary education can be a way out of poverty, since returns to secondary education are quite high. Financial assistance to the poor, either by reducing the direct costs or by introducing school vouchers, are options for increasing the poor’s access to secondary education.

**Rural Poverty and the Closeness to the Market.**

The more that farmers are integrated into the rural market, the less likely they are to be poor. Demand-driven infrastructure investments ranging from roads to irrigation and from electricity to household water supply can bring the rural poor closer to the market, thereby reducing their reliance on subsistence agriculture and increasing the demand for off-farm activities. A variety of demands exist at the rural community level that need to be taken into account to ensure community participation in development projects. Given the experience to date of World Bank-supported projects such as the Social Investment Fund (FISE) and the Rural Development Project, it is very important to assist isolated communities in expressing their demands for such projects.

**The Importance of the Rural Land Market.**

Rural poverty is also closely linked to land. In rural areas, the smaller farmers are very often the poorer farmers. But these farmers tend to use their land more intensively and tend to have higher yields for many products than larger farmers. Supporting the existing but informal land market to help increase poor farmers’ access to land can therefore increase equity without reducing efficiency. Titling of the many unregistered farms would be an important step toward formal land transactions. Innovative financial schemes such as land grant schemes or Agricultural Banking for the Poor could then be explored to help poor farmers overcome the lack of access to credit.

**Women’s Participation in the Labor Force.**

Participation in the workforce is significantly lower for poor women than for non-poor women. In urban areas, the participation of poor women is constrained by their household duties, especially childcare, and by limited mobility due to increasing violence. Restarting the daycare centers closed in 1993 could help many women to reenter the workforce, enable the Government to target nutrition programs to young children, and free teenage girls of their duty to attend siblings, allowing them to remain in secondary school. In rural areas, women are more active than their male counterparts in the vibrant off-farm sector. House-based textile production, small rural industries, sales, and services offer for many rural women the opportunity to earn an income. However, their ability to profit from these activities is linked to their closeness to the market; hence the small productive infrastructure projects mentioned above attain an even higher importance.

**Housing as a Process for the Urban Poor.**

The link between housing and poverty is complex. Housing is a dynamic process, since homes are an asset that can enable poor families to conduct informal sector activities such as repairs, production of textiles, or sale of food and beverage. Renting out a room can supplement family income. Further, in times of need, the house can be used to give shelter to relatives or close friends who would otherwise have to live on the street or in a shanty. Housing is used intensively as an asset in Ecuador, and its use increases with expenditure quintile. Hence, housing can be an important route out of poverty. Ecuador’s housing policy should turn away from constructing shelter or providing subsidies, since they never reached the poor. Instead, official recognition, ownership transfer, and titling are the first necessary steps to give inhabitants an incentive to start investing in their dwellings.

**A Stable and Strong Demand for Labor.**

Increasing the demand for labor is related to the elimination of entry barriers and to macroeconomic growth, particularly if growth finances investments in education to prepare workers for the modern workplace.

**Reducing Burdensome Regulation in the Labor Market.** Ecuador has cumbersome labor legislation. The Government interferes with wagesetting in the private sector through a variety of mechanisms, including different minimum wages by sector and region, side benefits, and
mandatory wage adjustments to compensate for increases in the cost of living. These regulations act as an entry barrier to employment in the modern sectors because they tax labor. Estimates show that these interventions are responsible for an eight percent wage differential between the regulated and the unregulated sectors. A fifty percent reduction in the segmentation across sectors and regions would move about 100,000 workers to the modern — and highest paying — sector of the economy, significantly improving their living conditions. Deregulation alone, however, cannot overcome poverty in Ecuador. Reform of the labor market must include not only harmonizing the multitude of minimum wages but also restructuring the social security system.

**Macroeconomic Growth and Stability.** As shown by a model simulating the relationship between investment levels and education, moderately increasing growth rates and investing part of the additional public funds in education could move more than a quarter million workers into the higher paying modern sector of the Ecuadoran economy. There are three reasons for Ecuador's dismal record of past growth: low domestic savings rates, caused largely by short-term macroeconomic instability; lack of technological innovation and low returns to investment, because of long-standing inward-looking economic policies; and vulnerability to external shocks. Continuing macroeconomic stability, increasing the savings rate, and stimulating the development of non-traditional exports would help restore growth to levels that would make possible a serious attack on poverty.

**The Poverty Report**

The present Poverty Report consists of two parts. Part One summarizes the main results of the analysis. It begins with a background section on the incidence and distribution of poverty and its main correlates, then turning to each of the main components of a poverty reduction strategy for Ecuador. Part Two consists of ten Working Papers, each is a self-contained, in-depth study that addresses a specific poverty issue. The studies range from the determinants of rural poverty to the incidence of fiscal expenditures, and from targeting social programs to the impact of labor market deregulation on employment.

Most of the data and estimates used in the Report stem from the Ecuador Living Standard Measurement Survey (LSMS) which the Ecuadoran Training Council SECAP fielded in the summer of 1994. Almost all of the calculations and policy evaluations refer to this time period. This quantitative survey is complemented with findings from two qualitative studies conducted for this Report to learn about the views and preferences of the poor themselves: The first study examines Cisne Dos, a low-income neighborhood in Guayaquil; the second covers seven poor rural communities in the Andean highland, the Costa, and the Amazon jungle.
Introducción y Resumen Ejecutivo

El Ecuador es un país pobre, habida cuenta del número de personas que no puede costearse una canasta básica. Aunque el auge del petróleo de los años setenta condujo a un crecimiento sin precedentes, sigue habiendo pobreza generalizada. La distribución de la riqueza es sumamente asimétrica, y cerca de cuatro millones de ecuatorianos -alrededor del 35% de la población- viven en pobreza. Además, otro 17% de la población corre el riesgo de caer en pobreza. Un millón y medio de habitantes viven en la extrema pobreza y aún gastando todo lo que tienen en la compra de alimentos no logran satisfacer sus necesidades nutricionales. La pobreza es mayor en las zonas rurales, donde viven dos de cada tres personas pobres.

La pobreza presenta características muy diferentes en los sectores rural y urbano. La pobreza rural está vinculada con la falta de educación, acceso a la tierra, la escasa integración en los mercados, y la escasez de empleo en las actividades no agrícolas, las cuales han mostrado ser bastante dinámicas. Además, en las zonas rurales de la Sierra y la Región del Amazonas, la pobreza de los grupos indígenas es mayor que la de la población no indígena. Dichos grupos presentan también niveles alarmantes de malnutrición y mortalidad infantil y sus niveles de educación son muy inferiores a los de la población no indígena. Por otra parte, la pobreza urbana, que afecta a un millón y medio de personas, está vinculada a un grupo de variables diferente a los de la pobreza rural y que además varía según la región. Por ejemplo, si bien en las zonas urbanas de la Sierra los pobres tienen acceso a los servicios básicos, muchos de los que viven en las zonas urbanas de la costa no cuentan con sistemas adecuados de suministro de agua o alcantarillado. No obstante, en varias zonas urbanas los pobres tienen características en común, que consisten en un bajo rendimiento escolar, empleo en el sector informal, vivienda alquilada en lugar de propia, y una tasa baja de participación de la cónyuge la fuerza laboral.

Dada la falta de progreso en la reducción de la pobreza urbana y rural, es evidente que el Ecuador debe reconsiderar cuidadosamente las políticas para abordar este problema. Es de aceptación general que existe la necesidad de una mejor coordinación entre los programas sociales existentes, ya que en muchos de ellos se observa centralización y duplicación de funciones en lugar de complementariedad. Los pobres no tienen acceso a la seguridad social, prácticamente no existe la atención primaria de salud pública y los programas de alimentación sólo abarcan al 6% de los niños pobres menores de cinco años. Las subvenciones que existen, aún en la esfera de la educación, benefician sobre todo a los ricos.

El objetivo de este informe es ayudar al Gobierno y a otros responsables a identificar los aspectos fundamentales de una nueva estrategia para la reducción de la pobreza y a plantear posibles opciones o alternativas de políticas. Más allá de lo que pueda aportar este informe, somos conscientes que en la formulación de los programas y proyectos básicos de reforma deberán participar todas las partes interesadas, especialmente los pobres, que son los últimos afectados.

Componentes de una Estrategia para la Reducción de la Pobreza

En este informe se sostiene que una estrategia eficaz para la reducción de la pobreza puede basarse en los siguientes temas: Programas básicos de nutrición y salud para los pobres; medidas encaminadas a incrementar los activos de los pobres, y, fomento de una demanda firme y estable de mano de obra. En los dos primeros casos, sobre todo, deberán utilizarse recursos públicos. Por lo tanto, la movilización de recursos es un componente esencial de cualquier estrategia para la reducción de la pobreza en el Ecuador.

El crecimiento macroeconómico intensivo en trabajo es la condición más importante para la disminución de la pobreza, pues crea oportunidades de trabajo y más altos salarios para los pobres y además proporciona al sector público los recursos para ampliar programas sociales e intervenciones selectivas, sin desplazar a la iniciativa e inversión privadas. Además, la
experiencia de varios países ha demostrado que para los pobres es mucho más difícil proteger su ingreso y patrimonio en condiciones de escaso crecimiento económico. Si el país lograría elevar la actual tasa de crecimiento per cápita, que es de alrededor del 1%, al 3% durante cinco años, podría reducirse la pobreza del 35% al 26%. Sin embargo, el crecimiento por sí mismo no es suficiente para reducir la pobreza -- especialmente en relación a los aspectos de la pobreza no directamente ligados con el ingreso, particularmente la falta de acceso a los servicios sociales básicos. Además, la reducción de la pobreza para un crecimiento mas acelerado podría verse parcial o totalmente contrarrestada si viniera acompañada por un aumento de la inequidad. Si la participación del 40% más pobre de la población en el consumo total disminuyera del nivel actual de 16% al 10%, la pobreza aumentaría al 40% en cinco años, a pesar de una tasa de crecimiento del 3% per cápita.

Financiamiento de programas sociales e intervenciones dirigidas. El financiamiento de programas de pobreza extensivos y mejorados, como se sugiere más adelante, debe llevarse a cabo dentro de un marco macroeconómico sostenible y sólido. Es decir que aún cuando se tiene que tomar decisiones para mantener la disciplina fiscal, no todos los programas descritos pueden ser implementados con la misma velocidad. El Ecuador podría movilizar un considerable volumen de recursos mediante la eliminación o reducción de varios subsidios y exenciones de impuestos y la evasión fiscal, lo que permitiría financiar programas sociales e intervenciones dirigidas manteniendo, al mismo tiempo, el equilibrio del presupuesto. Por ejemplo, una tasa de recuperación de costos del 50% en la educación superior serviría para financiar un incremento del 40% del gasto en educación básica o del 35% en educación secundaria, lo cual beneficiaría a los sectores pobres. Focalizar el subsidio solamente a los hogares que consumen electricidad en menor cantidad (muchos de los cuales son pobres), podría generar recursos equivalentes al total del presupuesto del Ministerio de Salud en 1993.

Además, no todos los programas necesitan ser financiados o llevados a cabo por el sector público. En muchas áreas, por ejemplo el sector de la vivienda, la estimulación de la contratación efectiva de grupos de ayuda-propia, ONGs y el sector privado, podría ser más eficaz que grandes programas públicos. El alcance de un rol más amplio de los ONGs y organizaciones comunitarias es especialmente alto. Estas y otras importantes aspectos en el diseño de programas y su implementación -- incluyendo el problema crítico de la descentralización de la provisión de servicios públicos -- no están cubiertas por este informe pero deben ser también enfocadas en el futuro.

Programas básicos de nutrición y salud. Los programas de nutrición para los niños malnutridos y los programas de atención básica de salud para los pobres son condiciones previas para el éxito de cualquier estrategia para la eliminación de la pobreza y el progreso del Ecuador. La inversión en educación o infraestructura sólo generará beneficios importantes si las personas están en buenas condiciones de salud y bien alimentadas para aprovechar esta inversión.

Incrementar los activos de los pobres. Los activos más importantes de los pobres del Ecuador son la mano de obra, la tierra y la vivienda. Para aumentar la productividad y el uso de la mano de obra, es fundamental mejorar la educación primaria y el acceso a la educación secundaria e incrementar la participación de la mujer en la fuerza laboral. Un mayor acceso de los pobres a la tierra no sólo disminuiría la pobreza sino que aumentaría la productividad de la tierra en una gran parte del sector agrícola ecuatoriano. Estas medidas podrían complementarse aumentando el acceso de los agricultores pobres a los mercados rurales a través de la infraestructura y la ampliación de las inversiones. La vivienda podría convertirse en un activo productivo si se creara un medio propicio para ayudar a los pobres a mejorar sus viviendas a fin de que puedan utilizarlas en pequeñas empresas y otras actividades generadoras de ingresos.

Demanda firme y estable de mano de obra. El crecimiento y la estabilidad macro-económicos no sólo proporcionan al Gobierno recursos para inversiones en salud, educación y servicios, sino que también son necesarios para crear
oportunidades de empleo. Para aprovechar los beneficios de la educación, los pobres deben contar con oportunidades de empleo. Para reducir el sesgo contra el empleo en los sectores modernos de la economía, donde los sueldos son más altos, es importante desregular el mercado laboral.

**Financiamiento de Programas Sociales e Intervenciones Focalizadas a los Pobres**

Reasignación de los subsidios que benefician a los que no son pobres. Los subsidios al consumo de electricidad y gas para cocinar representan el 2% del PIB; sólo el 17% y el 23% de los subsidios al consumo de electricidad y gas de cocina, respectivamente, benefician a los pobres. Una alternativa sencilla para la subvención al consumo de electricidad sería establecer una tarifa baja y cobrar el costo económico real del recurso a los consumidores más intensivos. En el caso del gas hay varias alternativas, todas las cuales tienen ventajas y desventajas. Una posibilidad es utilizar un sistema de cupones de ingresos directos, el cual no debería basarse en el Indicador de Servicios Básicos usado en el Ecuador, debido a que gran parte de los beneficios caerían en manos de gente no pobre. Otras opciones serían restringir la distribución de envases de gas subvencionados a las zonas de bajos ingresos, distribuyendo otros beneficios a los pobres mediante la aplicación de mejores programas sociales.

**Aumento de ingresos por impuestos.** Con un aumento de los ingresos tributarios no procedentes del petróleo también se podrían financiar programas de reducción de la pobreza. Los ingresos tributarios podrían incrementarse hasta en un 3% del PIB mediante la eliminación de las exenciones del impuesto al valor agregado (que actualmente ascienden a un total del 1,4% del PIB) y la reducción de la evasión tributaria (1,7% del PIB). A fin de aumentar la recaudación impositiva, el Gobierno podría utilizar la oficina ya establecida dirigida a los contribuyentes más importantes.

**Aumento del financiamiento de la educación.** El financiamiento de la educación se ha desequilibrado notablemente. Los costos unitarios de la educación superior son alrededor de seis veces más altos que los de la educación primaria y el doble de los de la secundaria. Si bien el gasto en educación primaria y secundaria beneficia más a los pobres, la mayor parte del gasto en educación superior beneficia directamente a los que no son pobres. La reasignación del gasto en educación superior a la educación básica y secundaria no sólo tendría un efecto positivo en la equidad, sino que es fundamental para mejorar la calidad de la educación básica y permitir que los niños pobres tengan acceso a la educación secundaria.

**Focalización como método para reducir el costo de los programas sociales.** Si bien la focalización de los programas sociales hacia beneficiarios específicos es un método eficaz en función de los costos, su uso no se ha generalizado. De los actuales 25 programas sociales importantes, en sólo aproximadamente un tercio de ellos se contempla expresamente un mecanismo de focalización específica; el resto son programas universales destinados a beneficiar a toda la población o funcionan sin un mecanismo específico para identificar a los beneficiarios. En los programas sociales de enfoque selectivo del país, los costos que ese enfoque entraña son razonables, pero el énfasis inicial puesto en el establecimiento de mecanismos de orientación específica normalmente no se complementa con el seguimiento de los resultados. Esta labor es fundamental para evaluar y mejorar los mecanismos de focalización.

**Programas Básicos de Nutrición y Salud**

**Nutrición.** Una labor coordinada para ampliar los programas de nutrición con destino a los grupos más vulnerables, los niños menores de cinco años y las madres embarazadas, rendirá grandes beneficios a largo plazo. Sólo si están bien alimentados y en buenas condiciones de salud, los niños pueden aprender y adquirir los conocimientos prácticos necesarios para salir de la pobreza. Mientras que las tasas de malnutrición crónica alcanzan un nivel alarmante de 45%, en 1994 los programas de nutrición solamente abarcaron a una pequeña parte de los 600.000 niños pobres de menores de cinco años. Al analizar
detenidamente varios de estos programas es posible comprobar que se está haciendo un esfuerzo por orientarlos a beneficiarios específicos y que los costos de dicho enfoque selectivo se están invirtiendo adecuadamente (es decir, no hay mucha filtración de los beneficios a personas que no son pobres). No obstante, el verdadero problema es como, dentro de barreras de financiamiento e implementación, se puede reducir el elevado porcentaje de niños que no está comprendido en estos programas. La experiencia de los países andinos vecinos indica que, de hecho, los programas de nutrición vinculados a la atención de salud o las guarderías pueden beneficiar a los pobres.

**Atención básica de salud.** La reducción en los últimos años del gasto real per cápita del Ministerio de Salud, el principal encargado de la prestación de servicios de atención de salud en el Ecuador, ha provocado una crisis del sistema de atención básica de salud. Muchos puestos de salud pública no están en condiciones de suministrar servicios básicos, por lo que los pobres han debido recurrir cada vez más a los servicios privados de atención de salud, lo cual absorbe entre el 12% y el 17% del presupuesto de los hogares. Sin embargo, no todos los pobres tienen acceso a servicios de salud privados. Alrededor de medio millón de personas no pueden cubrir ni estos servicios básicos ni medicamentos. Otros han comenzado a recurrir a curadores no profesionales y farmacéuticos. El financiamiento adecuado de la atención básica de salud es una condición necesaria para ayudar a sobrevivir a muchos pobres.

**Incremento de los Activos de los Pobres**

**Calidad de la educación primaria e importancia de la educación secundaria para los niños pobres.** Consideramos que la política de educación del Ecuador debe hacer hincapié en dos aspectos: mejorar la calidad de la enseñanza primaria y permitir que los niños pobres asistan a la escuela secundaria. Si bien la mayoría de los niños asiste a la escuela primaria, las tasas de repetición y deserción entre los niños pobres son sumamente altas, y la calidad de la enseñanza no es adecuada para ayudarlos a salir de la pobreza. Los índices de asistencia a la escuela secundaria varían mucho, pero es indudable que los correspondientes a los pobres son inferiores a aquellos de quienes no lo son. Muchos padres pobres no envían a sus hijos a la escuela secundaria en gran medida debido al costó directo que significa para ellos la educación pública y los costos de oportunidad, ya que los niños que asisten a la escuela no contribuyen al ingreso familiar. No obstante, la educación secundaria puede ser una forma de salir de la pobreza, pues las tasas de retorno de esta educación son bastante altas. Una forma de mejorar el acceso de los pobres a la educación secundaria es prestandoles asistencia financiera, ya sea mediante una reducción de los costos directos o el uso de cupones para la educación escolar.

**Pobreza rural y cercanía a los mercados.** Cuanto más integrados están los agricultores en los mercados rurales, tanto más posibilidades tienen de no ser pobres. Las inversiones en infraestructura basadas en la demanda -desde caminos hasta sistemas de riego y desde electricidad hasta el suministro de agua a los hogares- pueden traducirse en una mayor integración de los pobres del sector rural en los mercados, reduciendo así su dependencia de la agricultura de subsistencia y aumentando la demanda de actividades no agrícolas del sector. A fin de lograr la participación de la comunidad en los proyectos de desarrollo, es necesario tomar en cuenta las diversas necesidades de las comunidades rurales. Habida cuenta de los resultados obtenidos hasta ahora a través de algunos proyectos respaldados por el Banco, como el Fondo de Inversión Social de Emergencia (FISE) y el Proyecto de Desarrollo Rural, es muy importante ayudar a las comunidades aisladas a expresar la necesidad que tienen de los proyectos.

**Importancia del mercado de tierras del sector rural.** La pobreza rural está también estrechamente vinculada a la tierra. En las zonas rurales, los pequeños agricultores suelen ser los más pobres. Sin embargo, estos agricultores tienden a hacer un uso más intensivo de la tierra y, generalmente, obtienen un rendimiento mayor por hectárea que los grandes agricultores. Por consiguiente, el respaldo al actual mercado informal de la tierra para ayudar a mejorar el acceso de los agricultores pobres a este recurso puede aumentar la equidad sin reducir la eficiencia.
El otorgamiento de títulos de propiedad respecto de muchas de las granjas no registradas constituiría un paso importante en la creación de un sistema oficial de transacciones inmobiliarias. A continuación podrían examinarse planes novedosos de financiamiento, tales como donación de dinero para que los pobres puedan comprar tierra, o ayudar a los agricultores pobres a superar el problema de la falta de acceso al crédito.

**Participación de la mujer en la fuerza laboral.** El nivel de participación de las mujeres pobres en la fuerza laboral es inferior al de aquéllas que no lo son. En las zonas urbanas, la participación de las mujeres pobres se ve limitada por sus quehaceres domésticos, especialmente el cuidado de los niños, y por la dificultad de movilizarse debido a la creciente violencia. La reapertura de las guarderías infantiles cerradas en 1993 podría ayudar a muchas mujeres a reintegrarse a la fuerza laboral, posibilitarla al Estado orientar los programas de nutrición específicamente a los niños de corta edad, y liberar a las adolescentes de la obligación de cuidar a sus hermanos menores, permitiéndoles asistir a la escuela secundaria. Las mujeres realizan una labor más activa que los hombres en las dinámicas actividades no agrícolas del sector rural. La producción de textiles en el hogar, las pequeñas industrias rurales, las ventas y los servicios ofrecen a muchas mujeres del sector rural la oportunidad de obtener un ingreso. Sin embargo, su capacidad de obtener beneficios de estas actividades depende de su cercanía a los mercados; por lo tanto, los pequeños proyectos mencionados de infraestructura productiva adquieren mayor importancia.

**La vivienda como forma de mejorar la situación de los pobres en las zonas urbanas.** El vínculo entre la vivienda y la pobreza es complejo. La vivienda es un factor esencial en permitir que trabajadores en los sectores modernos de la economía, donde los salarios son más altos, mejorar considerablemente sus condiciones de vida. Sin embargo, por sí sola la desregulación no bastará para superar la pobreza en el Ecuador. La reforma del mercado laboral debe comprender no sólo la armonización de los diversos salarios mínimos, sino también la reforma del sistema de seguridad social.

**Demanda Estable y Firme de Mano de Obra**

Para aumentar la demanda de mano de obra es necesario eliminar los obstáculos al acceso al mercado de trabajo y lograr consolidar crecimiento macroeconómico, especialmente si dicho crecimiento se utiliza para financiar la inversión en educación.

**Eliminación de reglamentaciones gravosas del mercado laboral.** La legislación laboral ecuatoriana es complicada. El Gobierno interviene en la fijación de salarios del sector privado a través de numerosos mecanismos, incluidos distintos salarios mínimos por sectores y regiones, beneficios adicionales y reajustes salariales obligatorios por variación del costo de vida. Estas normas son un obstáculo para el empleo en los sectores modernos de la economía porque aumentan el costo de la mano de obra. Según las estimaciones, estas intervenciones se traducen en una diferencia salarial del 8% entre los sectores reglamentado y no reglamentado. Una reducción de la segmentación, que reduzca la diferencia salarial a 4%, integraría a unos 100.000 trabajadores en los sectores modernos de la economía, donde los salarios son más altos, mejorando considerablemente sus condiciones de vida. Sin embargo, por sí sola la desregulación no bastará para superar la pobreza en el Ecuador. La reforma del mercado laboral debe comprender no sólo la armonización de los diversos salarios mínimos, sino también la reforma del sistema de seguridad social.
Crecimiento macroeconómico y estabilidad. Se demostró, mediante un modelo que simulaba la relación entre los niveles de inversión y la educación, que un incremento moderado de las tasas de crecimiento económico y la inversión de parte de los fondos públicos adicionales en educación podrían permitir la integración de más de un cuarto de millón de trabajadores en los sectores modernos de la economía, donde los salarios son más altos. Los pésimos resultados obtenidos en materia de crecimiento económico en el pasado se deben a tres causas: bajas tasas de ahorro interno —que en gran parte se deben a la inestabilidad macroeconómica a corto plazo--; la falta de innovación tecnológica y tasas bajas de retorno de inversión —debido a la aplicación persistente de políticas económicas aislacionistas--; y la vulnerabilidad a las conexiones externas. La estabilidad macroeconómica sostenida, un mayor nivel de ahorro y la promoción de las exportaciones de productos no tradicionales contribuirían a restablecer niveles de crecimiento económico que permitirían aplicar medidas eficaces de lucha contra la pobreza.

El Informe sobre la Pobreza

Este Informe sobre la Pobreza consta de dos partes. En la primera se resumen los principales resultados de nuestro análisis. En primer lugar se ofrecen antecedentes sobre la incidencia y distribución de la pobreza y los principales factores vinculados con ésta. A continuación se mencionan los principales componentes de una estrategia para la reducción de la pobreza en el Ecuador. La segunda parte del informe consta de 10 estudios individuales e independientes de varios temas de la pobreza. Los estudios cubren una gran variedad de temas desde los determinantes de la pobreza rural hasta la incidencia de gastos fiscales y también desde el objetivo de programas sociales hasta el desempleo con relación al impacto del mercado laboral no reglamentado.

La gran mayoría de nuestros datos y estimaciones provienen de la reciente Encuesta sobre Condiciones de Vida para Ecuador que el Servicio Ecuatoriano de Capacitación Profesional (SECAP) condujo en 1994. Casi todas de las calculos y evaluaciones de políticas se refieren a este período de tiempo. Este análisis cuantitativo se complementa con las conclusiones de dos estudios cualitativos realizados para este informe, a fin de conocer los puntos de vista y preferencias de los pobres mismos. El primer estudio se realizó en Cisne Dos, un barrio urbano de bajos ingresos de Guayaquil; el segundo abarca a siete comunidades rurales pobres del altiplano andino, la costa y la selva amazónica.
1. Poverty Estimates and Correlates

This section provides an overview of poverty conditions in Ecuador in 1994, and contains three key messages. First, Ecuador is an extremely poor country, measured by the number of people who cannot afford to purchase a basic basket of goods. Thirty-five percent of its population, close to four million people, lived in poverty in 1994 and an additional seventeen percent were highly vulnerable to poverty. Second, rural poverty is undoubtedly more severe than urban poverty, in terms of either percentages or absolute numbers. Although more people now live in urban than in rural areas, the outcome of a long process of intersectoral transition, sixty percent of the total poor still reside in rural areas. This picture might change in the coming years if the rapid urban population growth continues. Third, people who are poor are by no means alike; the relationship between poverty, household characteristics, and social indicators varies considerably across — and even within — regions and areas. Nevertheless, a certain set of common characteristics also apply and an understanding of these is important for designing appropriate strategies to help the poor grow out of poverty.

1.1. Poverty and Inequality in Ecuador, 1994

Poverty Measurement. This study measures the well-being of individuals by total consumption expenditures, not by total income. This is for a number of reasons, the most important of which being that consumption tends to fluctuate much less during the course of a month or a year than income. Experience has also shown that people tend to provide more accurate information about their consumption behavior than about their income sources. Moreover, if expenditure data can be used for welfare analysis, this has the compelling advantage that the poverty lines can be derived from the data itself and need not be adopted from other surveys. The analyses in this Report are based almost exclusively on the recently completed Living Standard Measurement Survey (LSMS),1 which is the first nationally representative survey of its kind in Ecuador.

A number of steps were required to arrive at usable consumption figures for households in Ecuador. First, we converted information on household purchases of food items into a monetary aggregate based on households’ reported quantities and prices paid. Second, we calculated the calorie equivalent of the observed food consumption per household. Third, we evaluated and priced non-food expenditures, paying particular attention to the valuation of water and the ‘consumption’ of durable goods such as refrigerators, houses, or cars. Finally, we adjusted nominal expenditures of all households for the variation in prices among different areas and regions.2

We use three consumption-based poverty lines. The extreme poverty line only values a basket of food items which meets the minimum necessary calorie requirements per person. The full poverty line includes the same basket of food items but also non-food items. The non-food expenditure component is calculated by looking at those people whose total expenditures are just enough to reach the extreme poverty line and the average fraction of the budget that these households devote to non-food items is used to scale up the extreme poverty line to yield the full poverty line. The philosophy behind this estimate is that the non-food items purchased by this population group are absolutely essential since a direct trade-off between food and non-food items occurs. The vulnerability line uses a different reference group to compute the share of non-food items in total expenditures. It chooses the population whose food expenditures exactly finance the minimum basket of goods and records their

1 SECAP (1994).
2 See Working Paper 1, Annex 1, for details.
share of non-food expenditures in total expenditures. The basket of these non-food items is also essential, but somewhat less essential than the one used for the calculation of the full poverty line because no trade-off between food and non-food expenditures is necessary.\textsuperscript{3} We can describe the population between the poverty and vulnerability line as being vulnerable to poverty.\textsuperscript{4}

**Poverty Rates.** Table 1 provides estimates of poverty based on two measures. The *incidence* gives the percentage of the population with consumption levels below the vulnerability, full poverty and extreme poverty lines. The *severity* is sensitive to the distribution of the population with per capita expenditures below the lines, attaching greatest weight the further the distance below the applicable poverty line.

In 1994, thirty-five percent of the Ecuadoran population lived in poverty and an additional seventeen percent were vulnerable to poverty. The incidence of poverty varied considerably between urban and rural areas but less between regions. In Table 1, poverty is much higher in rural than in urban areas.\textsuperscript{5} Almost every second person lived in poverty in rural Ecuador, while every fourth person was poor in the urban areas (according to the *full poverty line* which we will use as a benchmark in most cases). The predominantly rural bias of poverty is replicated for each of the three distinct regions. The rural Oriente, the scarcely populated jungle area of Ecuador suffers clearly the highest levels of poverty with sixty-seven percent. The most endangered population group in Ecuador is the fifteen percent, or 1.7 million people, unable to finance a basic nutritional basket even if they spend everything they have on food. These are the extremely poor.

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\textsuperscript{1} Poverty incidence is measured by the headcount ratio; poverty severity is measured by the \(\text{FGT}_2\) (see Ravallion 1994).

\textit{Source:} LSMS, 1994

\textsuperscript{3} Compare Ravallion (1994).

\textsuperscript{4} In this Report, unless otherwise states, all references to a poverty line will correspond to the *full poverty line* described above, and all poverty calculations will be with reference to that poverty line.

\textsuperscript{5} The LSMS defines an urban area as a town and city with more than 5,000 inhabitants.
Geographical Distribution. The geographical distribution of the poor (i.e., the population below the full poverty line) varies widely. As depicted in Graph 1, the rural Sierra, rural Costa, and urban Costa each account for about one million poor. While the incidence of poverty is highest in the rural Oriente, only about 5 percent of the total poor live there. And although 55 percent of the total population, according to the LSMS, lived in urban areas in 1994, we still find sixty percent of the poor, or 2.3 million people, in rural Ecuador.

Ranking. Rural poverty is higher than urban poverty. Graph 2 shows the distribution of expenditures for urban and rural Ecuador: the horizontal axis represents expenditures per capita and the vertical axis shows the percentage of the population with such expenditures or less. No matter which cut-off point, or poverty line, one chooses, it is always true that a much higher proportion of the rural population lives in poverty.

In terms of regional distribution, both the urban and rural Costa have a higher incidence of poverty than the corresponding Sierra areas. The severity of poverty, however, is greater in urban and rural Sierra.

Consumption Patterns. What does the diet of a ‘typical’ poor person in Ecuador look like? Per day, the major items in such a diet include about two cups of boiled rice, one potato, half a glass of milk, a slice of bread with a thin spread of margarine or other fat, a small amount of cassava, half an onion, sixty grams of green vegetables, some salt, one banana, and a cup or two of coffee with two spoons of sugar. Eggs, fish, beef and chicken are usually not part of the daily diet and weekly consumption of a poor would not exceed one egg, a piece of chicken and a small portion of meat. Typically, a poor person spends about 55 percent of total expenditures on these (and other minor) food items.

Outlays for health, housing and education are the major non-food budget items for the poor and the non-poor alike. Jointly, they claim about a quarter of all expenditures. Education expenditures have a higher weight in the budget of the non-poor than the poor, largely due to a much higher share of non-poor children attending private instead of public schools. Matriculation fees in private schools are many times the ones in public schools. The share of health expenditures is very high for the poor, which, as we will show later on, can be explained by the very high reliance of the poor on the private health sector.
for medical treatment. Some of the average budget shares shown in the table mask important variations within the group of poor people. For example, the extremely poor users of LPG as a cooking fuel have a budget share of roughly 2.5 percent on this item at the currently highly subsidized prices. This report will largely deal with the major budget items of the poor -- such as health, education, and housing -- but it will also cover several other items. For example, although electricity is a relatively minor budget item for both the poor and the non-poor, about 83 percent of the electricity subsidy is directed to the non-poor, today. Targeting the subsidy to poor consumers only would free scarce financial resources which could help to improve basic social programs and education.

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**Graph 3: Distribution of Consumption, 1994**

![Graph 3: Distribution of Consumption, 1994](image)

**Graph 4: Inequality in Consumption, 1994**

![Graph 4: Inequality in Consumption, 1994](image)

*Source:* LSMS, 1994. Inequality is measured by the Atkinson Inequality Measure \((E=2)\).

**Inequality.** While the LSMS shows that rural Ecuador is poorer than urban Ecuador by the two poverty indicators, consumption is more equally distributed in the rural areas. Graph 3 depicts the familiar Lorenz curves of consumption distribution in rural and urban Ecuador and Graph 4, based on the Atkinson parameter \((E=2)\), shows inequality measures by area and region. Graph 4 shows that consumption in the rural Sierra and Costa is more evenly distributed than in the urban Sierra and Costa, but that both Sierra regions have a higher inequality in consumption than the Oriente and the Costa. On a national basis, the bottom half of the rural population accounted for only slightly more than 25 percent of total rural consumption in 1994, while the top decile realized more than 30 percent. For the urban areas, the share of the bottom half of the population is even smaller, at 22 percent, while the top ten percent accounted for 33 percent.

1.2. **Living Conditions and Characteristics of the Poor**

Although the poor live in marginal circumstances with regard to housing and basic services, living conditions vary strongly across different parts of the country in other respects. These commonalities and differences below present some characteristics of poverty. All distinctions we make here between the ‘poor’ and the ‘non’-poor are based on whether people have per capita expenditures below or above the **full poverty line**.

**Household Characteristics.** Clear differences between poor and non-poor households emerge with respect to the composition of the household. Poverty is a function of the degree to which the household is extended, that is, how many relatives, such as the elderly or daughters with their own children, are part of the household. About 60 percent of Ecuador’s population lives in nuclear households. Extending the households to accommodate one or two more people does not raise the likelihood of the household being poor, but once three or more people are taken in, poverty increases...
rapidly in households with only one wage earner. Overall, about fifteen percent of the population live in such strongly extended households, of which half are poor, while only about one third of the nuclear and mildly extended households are poor. In the Cisne Dos sample survey on urban poverty in Guayaquil, such expansion of households emerged as one of the main methods of shielding elderly or young relatives with children from falling into extreme poverty.

More of the young and old are poor than the middle-aged. Because poor households tend to contain a higher number of children and tend to provide shelter for extended family members, such as the elderly, the age-poverty profile falls with age and then rises again (Graph 5). While more than forty percent of the population below fourteen live in poverty, less than thirty percent of the population at age thirty to fifty are poor. For the elderly, this ratio again rises above forty percent.

Households headed by certain types of people also have a high risk of poverty. These are not, as one might have expected, females. The LSMS and the survey in Cisne Dos both show that female-headed households do not have a higher poverty incidence than male-headed households. Rather, households headed by middle-aged males living in an ‘union libre’ with their partner and widow-headed households are both significantly more likely to be poorer than all other types of households. This applies to urban and rural areas alike. It appears that widowhood is a key determinant of poverty for many of the rural poor: In the Rural Qualitative Assessment conducted for this Poverty Report, rural people named widows as a particularly poor group because many of them cannot work in the fields and are dependent on outside help.

Housing Materials. Types and quality of housing differ between the poor and non-poor but also between rural and urban areas. Congestion within houses is highest among the poor in urban areas, but the rural poor are considerably more likely to be living in houses with mud or wooden walls and dirt floors. Stone is clearly the preferred housing material in all regions and areas, but few of the poor have access to this material. Further, more poor people rent their houses than the non-poor in urban areas, a fact that we found of high importance in the case study of Cisne Dos. One of the major strategies for households to shield themselves from poverty is to use their house as a shelter or nest for impoverished relatives and for informal sector activities. Often, such use goes hand in hand with small investments made in the house (e.g., addition of another room as a garage or work space), which can only be done to a much lesser extent in rented structures.

Basic Services. The link between poverty and basic services is not uniform but depends on area, region, and type of service. The rural non-poor are worse off than the urban poor in relation to water supply, hygiene facilities, garbage disposal, and electricity connection as depicted in Table 3. However, services can have a different function in urban and rural areas, e.g., the threat from lack of

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6 This finding can be explained partly by the tendency of very poor female-headed households to move in with their relatives since they simply cannot afford to live alone.

7 Male-headed union libre households have a poverty rate of 46 percent; of the total poor, almost one third live in such households. If the heads of households are widows, the poverty rate is 60 percent. However, only about 5 percent of the total poor live in widow-headed households.
hygiene facilities in rural areas is much lower than in the overcrowded urban centers, especially in the Costa, where the climate helps to breed diseases.

Access to basic services also varies by region. The Sierra is better off in almost all services than the Costa and the Oriente, and this distinction is especially pronounced among the urban poor in these areas. About half the poor in the urban Costa and Oriente dump their trash on the street or burn it, while only one quarter of the poor in the urban Sierra do so; the trash in the Sierra is collected for

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three quarters of the poor population. Similarly, about half the urban poor in the Costa need to meet their water supply from water trucks, wells, or other private sources because they are not connected to the public water network, implying high prices for water. In Cisne Dos, the low-income community in Guayaquil that we studied in depth, half of all households are solely dependent on water truck vendors. In the Sierra, on the other hand, four out of five poor people obtain their water from the public network and have a flush toilet.

Not all services render themselves useful to distinguish the living conditions of the poor from the non-poor. Electricity in urban Ecuador now reaches nearly every household, independent of its status. In rural areas, however, there is a strong relationship between electricity connection and poverty -- most markedly in the Sierra and the Oriente. Similarly, telephone service is not a distinguishing factor for the rural population but it is for the urban population.

Education. As shown in Table 3, the education level of the head of household is very strongly associated with the level of poverty. The average poor household head in both urban and rural Ecuador has not completed primary school, which lasts 6 years. In rural Ecuador, many of the poor household heads barely complete the basic cycle of primary school (3 years). Not surprisingly, while literacy at the national level now stands at about 90 percent, more than one third of the extremely poor in the rural Sierra cannot read or write. In contrast, the average schooling of the urban non-poor household head is well into secondary school, and even beyond the basic secondary school cycle (9 years) in the Sierra. In the rural areas, even the non-poor heads usually stop schooling before completing primary school, which points to a serious educational deficit in rural Ecuador.

Health. Apart from the fact that the rural population must travel about twice as far as the urban population to reach treatment facilities, the type of treatment varies with a family’s material standing. If treatment is necessary, more of the poor than the non-poor treat their ill members with home remedies or seek advice from a pharmacist. As discussed in more detail below, twelve percent of the poor, or about half a million people, cannot obtain curative care in emergencies because they do not have access to public health facilities and cannot afford private services.

Employment. A broad sectoral breakdown of the labor force reveals that informal activities play a different role for the urban and rural poor. The breakdown distinguishes between the informal, modern, public, and a narrowly defined farm sector. As expected, employment shares in the farm sector are negatively correlated, and in the public and modern sectors positively correlated with per capita expenditures, but the more interesting finding relates to the role of the informal sector (Table 3).

In the urban areas, the informal sector absorbs a higher share of the poor than the non-poor labor force, especially women. About 65 percent of the occupied poor women work in the informal sector, which is their predominant source of entry into the labor market. In the rural sector, the opposite is the case -- informal sector activity is higher for the non-poor than for the poor.

Rural off-farm employment plays an important role in supplementing agricultural income, and for the poor it has a high potential to become a road out of poverty. Using a broad definition of off-farm employment that includes both primary and secondary occupations, it appears that as many as one in two of the non-poor of working age have some employment in the off-farm sector. In the Rural Qualitative Assessment, many families responded that they have earned income from non-agricultural sources, e.g., as day laborers in nearby townships, through home-based textile production in the Sierra, or with small-scale businesses in the Costa.

The survey also shows a link between household poverty and participation in the labor force of the spouse of the head of household. Poverty in households in which the partner or spouse (mainly
women) of the household head does not work is calculated at 32 percent. This is high compared to the 22 percent poverty rate for households in which the spouse or partner of the household head does contribute to income.

The regulation of employment also affects poverty. Regulations that affect workers' benefits, mandatory payroll taxes for social security, and training council contributions drive a wedge between the poor and non-poor as does unionism to a lesser degree. Overall, 21 percent of the Ecuadoran labor force is employed in the regulated sector, largely in urban areas. The share of the urban poor employed in regulated firms is significantly lower (13 percent) than the share of the non-poor in this sector (33 percent). The poor are hurt to the extent that regulations create barriers to entry to better-paying jobs. Unionism, on the other hand, has less effect on the distribution of the poor and non-poor in the urban labor market.

**Ethnicity.** The 'definition' of the indigenous people is a difficult undertaking because there are no objective characteristics to apply. Indigenous languages (e.g., Quechua, Shuar), traditional clothing, heritage, and observed traditions and beliefs can, but need not be, part of the life of the indigenous people. Ultimately, the classification of who is indigenous depends on self-identification. All statistical estimates of the exact number of indigenous people based on a uni-dimensional indicator are therefore bound to be imprecise and, at best, indicative. Nevertheless, for purposes of this study, language is used as a variable because it is highly correlated with ethnicity and therefore can provide some insight into the living conditions of the indigenous people in Ecuador.

Poverty, living conditions, and language are closely related. The indigenous population, as defined by language, is concentrated in the rural Sierra and the rural Oriente; almost none live in the Costa. Households in which an indigenous language is spoken are more likely to be poor than are Spanish-speaking households.

If we use the census from 1990 and distinguish cantons according to a 'strong', 'moderate', or 'low' percentage of the population speaking an indigenous language, the strongly indigenous cantons are worse off with respect to a wide variety of social and service variables, such as education level, illiteracy rate, malnutrition rate, and electricity and water connection. The differences in the education and health indicators are alarming: While the national illiteracy rate was only 9 percent in 1990, more than 40 percent of the population in the strongly indigenous cantons were illiterate (in any language) in 1990, with female illiteracy even higher, impairing the integration of the indigenous female population into national society. A third of the population in these cantons was without any educational instruction. Similarly, in the strongly indigenous cantons, child malnutrition, at 64 percent, was clearly above the national average of 45 percent, and so was infant mortality. Further, in the labor market, workers who speak or even know an indigenous language suffer discrimination. If we control for a wide range of other variables such as experience and education, indigenous language speaking workers earn on average 33 percent less in the agricultural sector than those who do not speak an indigenous language.

### 1.3. The Correlates of Poverty

This section examines the correlates of poverty for each of the variables described above, controlling for the influence of other variables. Estimating a number of different probability
functions, in which a household's poverty status is described as a function of many 'exogenous' variables allows us to determine what variables have an association with poverty that is independent of the association between poverty and the other variables in the equation. Such relationships should be interpreted as correlates and not as determinants since causality can run both ways.

**Impact of Heterogeneity.** Most of the variables that describe the living conditions of the poor, such as housing or access to basic services, are not significantly linked to poverty on a cross-regional basis because many of the living conditions vary from place to place. As noted above, the living conditions of the poor vary significantly across regions and areas, with the poor in the urban Sierra often having better access to basic services than the non-poor in other regions and areas. A certain subset of basic service and housing variables is significantly linked to poverty on a regional and area basis, but these variables become insignificant when we try to find cross-regional associations of poverty.

Other factors such as climatic conditions add to this observed heterogeneity between and within regions. In the agricultural sector, we find that different crops are linked to poverty. In the Costa and the Oriente, maize cultivators are less exposed to poverty while maize cultivators in the Sierra are more likely to be poor. The heterogeneity of living conditions and the resource base in rural areas is also one of the key findings from the Rural Qualitative Assessment. Apart from the obvious inter-regional differences, intra-regional and even intra-community heterogeneity can be very great. This pertains to the degree that families have become active in the off-farm sector, to their access to agricultural extension services, and the quality of cultivated land. Even within seemingly homogenous poor communities, stratification based on family conditions and land access is significant.

**Common Urban Factors.** But there are also a number of common factors or common themes closely linked to poverty that cut across the diversity of regions in Ecuador. The following four factors all raise the probability of a household being poor: (a) low educational achievement of the household heads, (b) the household living in a rented rather than owned home or apartment, (c) the spouse or partner of the household head not being active in the labor force, and (d) the household head being employed in the informal and not the regulated sector of the economy.

**Common Rural Factors.** In the rural areas, we can also identify a set of common factors closely linked to poverty, although the correlates of rural poverty are even more diverse than in urban areas. Indigenous language households are more likely to be poor than non-indigenous language households. In addition, four other factors increase the probability of the household living in poverty: (a) low educational achievement of the household head, (b) low per capita land holdings, (c) household members not being engaged in regular off-farm income earning activities, and (d) little access to the market. The latter requires some explanation since it is not as easily measurable as the other three factors, although it is a phenomenon observed in all three regions. In the Costa, if a household is engaged mainly in subsistence agriculture (i.e., selling less than 30 percent of output on the market), it is significantly more likely to be poor. While this relationship also

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<th>Common factors raising the likelihood of an urban household being poor:</th>
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<td>• house or apartment rented and not owned;</td>
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<tr>
<td>• spouse not working;</td>
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<td>• household head employed in the informal and not the regulated sector.</td>
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<th>Common factors that increase the likelihood of a rural household being poor</th>
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<td>• household speaking an indigenous language;</td>
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<td>• low educational achievement of the household head;</td>
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<td>• low per capita land holding;</td>
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<tr>
<td>• no employment in the informal, off-farm rural sector;</td>
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<td>• little access to the market</td>
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holds in the Sierra, it is not as strong, and only becomes significant at the 80 percent level. But another variable attains importance in the Sierra: households having benefited from technical assistance in agriculture (from Ministry of Agriculture extension, NGOs or private sources) show significantly lower poverty levels than rural households that did not receive such assistance. Further, in all areas, access to infrastructure such as electricity, telephones, or gas appear to be important correlates, although to varying degrees in different parts of the country.

1.4. The Results in the Context of the Ecuadoran Debate on Poverty

There is intense debate about poverty now going on in Ecuador among NGOs, universities, and many government officials. This debate is largely focused on which regions are poorest and on whether public funds are being targeted correctly (i.e., in accordance with the geographic distribution of the poor).

Two remarks are in order. The first concerns the regional aspect of the debate. Regionalism clouds the much more important distinction between urban and rural poverty, particularly since a regional ranking of poverty very much depends on the poverty measure chosen and the exact location of the poverty line. For example, while the incidence of poverty in the rural Costa was higher than the incidence of poverty in the rural Sierra, the rankings reversed when we compared its severity. In any case, poverty in the rural areas is higher than in urban areas independent of the poverty measures chosen, and the determinants of rural poverty are quite distinct from those of urban poverty.11

The second remark concerns the link between basic services and poverty. Several institutions in Ecuador have advocated the use of a Basic Services Indicator (BSI) to identify the poor and to develop poverty maps. But access to basic services such as sewerage, water, and garbage disposal varies considerably across regions and between urban and rural areas. While it is difficult to judge how good the poverty maps based on such a Basic Service Indicator (with fixed weights given to the supply of different services) are, the indicator is definitely not suited to identify individual poor households. On a household basis, we have compared the Basic Service Indicator with a poverty measure based on expenditures and found that, if applied, the Basic Service Indicator would lead to significant undercoverage and leakage -- almost half of the poor would not be identified and targeted resources would reach the non-poor.

It remains clear, nevertheless, that the link between infrastructure services and poverty is very strong. Several basic services are a prerequisite for a family to be able to earn income to pay for basic life necessities. Decent hygiene facilities, potable water, and garbage collection are necessary in crowded cities to avoid diseases. And if people are ill they cannot learn or work to their full potential,

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11 In this context, it is important to distinguish between a fair geographical distribution of budget resources and effective targeting. It is entirely possible that resources that are ‘optimally’ allocated between provinces according, for example, to the amount of poor people, do not reach the poor within the provinces and are thus distributed fairly among regions but targeted badly. Similarly, a program that exhibits no leakage to the non-poor, and as such is targeted optimally, can exhibit a strong regional bias.

12 While the provision of basic services to the poor is one of the central roles of government, it is not clear that rural and urban areas should obtain similar levels of services, as is sometimes advocated in Ecuador. In urban areas, greater population densities pose greater health risks if sewage, electricity, or organized garbage disposal are not available. Also, the unit cost of networked services will be considerably higher in rural than in urban areas. In deciding whether the current distribution of services is acceptable, it is necessary also to ask what alternative arrangements exist (i.e., whether the fact that a rural household has no access to piped water means that it has no access to any potable water).
hence reducing their ability to earn income. Similarly, the many inhabitants of rural Ecuador with no electricity cannot earn non-agricultural incomes through, for example, home-based textile production. Although the lack of basic services at one point in time might not necessarily determine a family as poor or non-poor, it could mean that the family is constrained from growing out of poverty, which access to basic services might enable them to do.

2. The Financing of Social Programs and Targeted Interventions

Before describing areas where the expansion or introduction of social programs would be beneficial to the poor, it is important to look at the financing possibilities for such programs. Although the national budget was under pressure in early 1995, Ecuador has made major progress over the past couple of years in improving the fiscal position of the public sector: While the consolidated budget deficit averaged 5 percent of GDP in the second half of the 1980s, it has since been reduced sharply and actually recorded a small surplus in 1994. Ecuador must maintain this fiscal balance in order to create an environment conducive to growth. Efforts can be made to alleviate poverty without jeopardizing the fiscal balance.

Ecuador can raise substantial resources by improving policies related to subsidies, higher education finance, tax evasion, and tax exemptions. Reducing subsidies on electricity and cooking gas (LPG) alone -- which now benefit mostly the non-poor -- could yield up to 2 percent of GDP. Reducing income tax evasion and eliminating value added tax exemptions could provide as much as 3 percent of GDP in additional revenues. Partial cost recovery for higher education could raise an additional 0.6 percent of GDP. In addition, effective targeting can reduce the costs of poverty alleviation programs.

Financing of social programs and targeted interventions is compatible with maintaining fiscal balance. Even if all of the resources available from subsidy reductions, tax revenue increases, and higher education tuition are not fully realized, Ecuador can still seriously attack poverty. Some simple illustrations reinforce this finding. Achieving a cost recovery rate of one half for higher education finance would finance a 40 percent increase in expenditures on primary or a 35 percent increase on secondary education. Targeting the subsidy on electricity use through a lifeline rate to the light (and often poor) consumers could generate resources equivalent to the entire budget in 1993 of the Ministry of Health. And reducing income tax evasion by 25 percent could triple the budget of all nutritional programs together.

2.1 Reallocating Subsidies Serving the Non-poor

Over the past several years, the Government of Ecuador has eliminated major direct and indirect subsidies that catered to the rich, including petroleum product subsidies, but several important subsidies remain in place, including those for electricity, cooking gas, water, urban transport, and housing.

From an efficiency and equity perspective, subsidies have to fulfill two conditions to justify their existence. From an efficiency perspective, subsidies should induce only minimal shifts in the society’s consumption of goods and resources (unless they are introduced in order to reflect the existence of positive externalities associated with the consumption of the subsidized good). Hence, subsidized goods should display very low substitution and income elasticities. Second, from an equity perspective, the poor should be the main beneficiaries of subsidies, and leakage to higher income groups should be small. Inferior goods will fulfill such a condition.
None of the four subsidies we examined -- electricity, cooking gas, water, and transport -- fulfills such a 'classifying' criteria: none caters to the poor and the two largest subsidies, namely electricity and cooking gas, are from an efficiency perspective highly distortive. Studies from other countries have shown that both price and income elasticities for these energy sources can be quite substantial, especially if leakage from residential to commercial users is possible. Since these two subsidies are far larger than the subsidies for water and urban transport and together account for about 2 percent of GDP, they have to be the priority targets for reform.

The Electricity Subsidy. INECEL, the Ecuadoran electricity company, adopted a complicated tariff scheme in June 1993 that subsidizes the residential sector but roughly covers long-run marginal costs in the commercial sector. For residential users, INECEL applies a graduated tariff structure, with most unit prices significantly lower than the long-run marginal cost, which INECEL estimates to be 189 sucres per kWh. Average consumption of a typical household in the richest quintile of the population is 226 kWh and even these consumers are subsidized, although at a lower per-kWh rate than the lower consuming households.

The large electricity subsidy does not reach the poor. We estimate the monthly residential electricity subsidy at around US$14 million (US$170 million yearly for 1994), only 17 percent of which went to the poor. The unfavorable distribution is due to two factors: First, far fewer poor than rich families -- especially in the rural areas -- are connected to electricity, which restricts their access to the subsidy. Second, while the rich get a lower subsidy rate per hour of electricity use, they consume so much that the total subsidy amount is much higher for them than for the poor.

An Option: Restructuring the Tariff While Protecting the Poor. Restructuring the tariff system to introduce a simple two or three stage tariff schedule protecting low-volume consumers can considerably improve both efficiency and equity while reducing the total subsidy to about US$35 million. Electricity is an income-elastic good which a very large percentage of the non-poor consume beyond a certain level. While we find today that even a fair amount of the poor consume above these levels due to a very low price of electricity, their demand behavior would likely change if a simple lifeline tariff scheme were introduced. Such a tariff scheme would consist of (a) a low fixed-cost rate for consumers of electricity up to about 80 or 90 kWh; (b) a different charge rate once consumers go beyond the lifeline quantity, also retroactively billing the initial 80 or 90 kWh at the charge rate. If desired, this charge rate could be broken up into several

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13 See Hope and Singh (1995) for references.
14 Our estimate of the electricity subsidy, which we derived from individual household expenditure data, is higher than INECEL's official estimate of US$9 million per month. The discrepancy might be due to an overreporting of expenditures of households that are illegally connected, a seasonal bias, or an actually higher energy consumption in the residential sector than was estimated by INECEL.
15 The total subsidy and its distribution depends on the price elasticity for electricity for the different consumer groups. If all households in the two lowest expenditure quintiles would consume 80 kWh in order to be eligible for the lifeline rate, the total subsidy would be around US$35 million (without any charge for the lifeline rate).
16 Such a tariff scheme introduces a steep kink in the expenditure curve of electricity since for the consumer, the marginal cost of the 81st unit is not only the new charge rate but also the cost of the first eighty kWh times
progressive rate increases. Such a schedule would be economically efficient since it would signal to the heavy consumers the true economic cost of electricity consumption. While part of the subsidy would continue to flow to the non-poor -- because electricity consumption is only imperfectly correlated with household expenditures -- the poor's share in the total subsidy would significantly increase. With a total subsidy amount of around US$35 million, such a scheme would free considerable resources to finance poverty alleviation programs.

**Cooking Gas Subsidy.** Cooking gas is heavily subsidized. In 1994, consumers paid only about 25 percent of the import price of cooking gas, which had a strong fiscal impact because most of Ecuador's gas comes from foreign sources. The Government planned several times to remove the subsidy and substitute it with targeted income support, but these plans never materialized.

The largest part of the subsidy benefits the residential sector, since only gas in small bottles is subsidized. The Government estimates the total subsidy to have reached US$120 million in 1994, a figure that is almost exactly reproduced when we use the LSMS and derive subsidies per household as three times the household expenditures. However, the past years have shown that gas consumption grows very quickly at the current low price because gas is used not only for cooking but also for heating and car fuel.

Once again, the rich in Ecuador benefit the most from the subsidy, only 23 percent of which goes to the poor. Average household consumption actually varies very little with expenditure class, although per capita consumption increases due to the smaller household size of richer families. Use is another determining factor of the subsidy distribution. While a simple gas stove does not represent extraordinarily high fixed-costs as an investment, the remoteness of many rural areas combined with the bulkiness of the gas bottles limits access for many of the rural poor.

**Options.** Complete removal of the gas subsidy, without accompanying compensation measures, would inflict sizable welfare losses on the very poor gas users. The extremely poor households that use gas (85 percent in urban and 50 percent in rural areas) spend on average of about 2.5 percent\(^{17}\) of their total budget on gas purchase. Assuming a relatively modest price elasticity for gas (-0.2), a quadrupling of the gas price -- which would be necessary to eliminate the subsidy -- would lead to a welfare loss of 5.3 percent\(^{18}\) for the very poor. A complete removal without compensating measures would also worsen expenditure distribution in Ecuador, since the poor spend a much higher proportion of their budget on cooking gas than the rich.

Several alternative options can be studied. A phasing out of the gas subsidy while introducing targeted benefits might be the best, and politically most viable, option. Such phasing out could follow predetermined and preannounced steps. The benefits could take the form of the general expansion of programs for nutrition and basic health, or of direct income transfers as previously planned (see Box 1). Another alternative would be an attempt to target the subsidy by only selling the subsidized gas (in special containers) in low-income neighborhoods. Leakage of such a scheme would depend on the degree this self-targeting mechanism works and the non-poor avoid either the transaction costs or the

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\(^{17}\) This estimate is somewhat lower than in ESMAP (1994), which estimated the budget share of all households in the lowest expenditure quintile to be 3.9 percent. The difference in the measurement of total expenditures is likely responsible for this discrepancy since we have included rent, consumer durables, and other items.

\(^{18}\) This calculation measures the welfare loss as the reduction in the consumer surplus, assuming linearity of the Marshallian demand curve in the respective range. See Hope and Singh (1995), p. 29.
'social blame' of using marked containers for low-income areas. This self-targeting scheme could be combined with a mechanical device that hooks up the subsidized gas bottles only to certain very simple one- or two-flame stoves, which most of the non-poor will avoid. Finally, and economically most efficient, the subsidy could be redirected entirely from the variable input to the fixed input, the stove. However, with 90 percent of the urban poor and almost 50 percent of the rural poor owning gas stoves today, the extent of shielding the poor from the price increase would be minimal.

Box 1: Direct Income Support to Mitigate the Gas Price Increase

<table>
<thead>
<tr>
<th>Household quintile</th>
<th>% of beneficiary households</th>
</tr>
</thead>
<tbody>
<tr>
<td>poorest 20%</td>
<td>31.0</td>
</tr>
<tr>
<td>20-40%</td>
<td>27.4</td>
</tr>
<tr>
<td>40-60%</td>
<td>23.3</td>
</tr>
<tr>
<td>60-80%</td>
<td>13.9</td>
</tr>
<tr>
<td>richest 20%</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Efforts to compensate poor households for an increase in the gas price through an already developed income targeting scheme based on a Basic Services Indicator would have extremely high leakage. In conjunction with previous plans to eliminate the gas subsidy, various Government institutions had developed a direct income support scheme based on a Basic Needs Indicator using census data from 1990. The scheme assigned points to each household based on the type of services, e.g., water, sewerage, or electricity, and was supposed to cover 420,000 households of which 60 percent were to be in urban and 40 percent in rural areas. Drawing on the Living Standard Measurement Survey, we can calculate how efficient the scheme would have been in reaching the poorest 20 percent of all households, as it was designed to do. The result is stunning -- 70 percent of resources would not have reached the target group. The reasons are simple: First, and as observed above, the access to services is not a good indicator to determine the welfare level of households, especially if employed in a rigid way which pre-assigns weights to all services. Second, the political decision to choose 60 percent of benefiting households in the urban areas has to lead to mistargeting, since 62 percent of the poorest household in the first quintile are located in rural areas.

If the Government decides to introduce a direct income support scheme, a regional pre-identification of target areas would have to be complemented with individual assessment mechanisms which identify individual households. A new geographic poverty map could be developed by applying LSMS results to the census. A model could be derived from the LSMS in which expenditures are 'explained' by a large number of exogenous variables which are all included in the census data as well. This model could then be applied to the census in order to predict total expenditures and the poverty level of households. There are, however, several caveats associated with a direct income targeting scheme. Such a scheme has to be consistently monitored by municipalities or other local institutions, and it would be difficult to prevent its continuous expansion. Self-targeting public works programs are an alternative to provide income support to the very poor. With a wage rate set below the market rate, such programs in fact provide a safety net in times of bad recession. Construction of projects under the Social Emergency Fund in part act as such a public works program today.

2.2. Improving Education Finance

Changes in both absolute and relative expenditures for the different education levels have brought imbalances in education finance to dramatic levels. According to Ministry of Finance data, per capita real education expenditures stagnated over the past years.

Today, unit costs for higher education, at US$518, are about six times higher than for basic education, at US$82, and twice as high as for secondary education, at

<table>
<thead>
<tr>
<th>Education Level</th>
<th>US$ per Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>81.9</td>
</tr>
<tr>
<td>Secondary</td>
<td>256.7</td>
</tr>
<tr>
<td>Higher</td>
<td>518.3</td>
</tr>
</tbody>
</table>

US$256. Relative preference in education finance over the past years was given to higher education - in 1990, unit costs for higher education were 'only' 4.5 times the unit costs of primary education. Today, more than a quarter of the budget of the Education Ministry goes to higher education, financing a mere 7 percent of total enrolled students at all educational levels. Only slightly more than one third of total education expenditures is directed to the two million pupils or 68 percent of enrolled students in public primary schools.

Education finance benefits those who are already well-off in Ecuador. Using access to schooling to compute the incidence of public education expenditures in 1994, we discover that the poor benefit mainly from primary school expenditures but much less so from secondary and especially higher education financing. The education expenditure concentration curves in Graph 7 show the benefits that the five population quintiles obtain from the expenditures. For primary education expenditures, the poorest population quintile obtains 27.2 percent of total expenditures, which can be explained by the very high attendance level in primary school, with richer families sending many of their children to private schools. But the picture changes quickly for the distribution of secondary expenditures: benefits are realized by the upper expenditure classes because secondary school attendance of children in richer households far exceeds that in poorer households. The most unjust distribution is associated with higher education expenditures. The poorest 40 percent of the population only obtain 12 percent of these expenditures.

Reallocating expenditures from higher to primary and secondary education would have a positive effect on equity. Requiring the mostly non-poor students at universities to cover half of their costs would raise revenues of about 0.6 percent of GDP, which, if redirected, would enable the Ministry of Education to increase funding for primary education by 40 percent or for secondary education by 35 percent. Such increases are needed to improve the quality of primary education and enable poor children to obtain a secondary school education.

2.3. Increasing Tax Revenues

The Government also needs to expand its non-oil tax revenues to finance poverty alleviation programs. Over the past decades, the Government's non-oil tax effort decreased substantially. While non-oil revenues represented 11.4 percent of GDP in 1971-1973, they only reached 8.7 percent of GDP in 1993. Today, public sector revenues from oil production are almost as important as non-oil taxes but they fluctuate widely with production output and the international price of petroleum. Over the past four years, oil revenues of the public sector decreased from 11.6 percent of GDP in 1990 to 7.2 percent of GDP in 1994. An increase of non-oil tax revenues would not only provide additional resources needed for poverty alleviation but also ease the planning and budgeting of Government programs in general.

Tax revenues could be increased by around 3 percent of GDP by eliminating exemptions to the value added tax and by reducing income tax evasion. Preliminary World Bank calculations show that discontinuing selected *de facto* value added tax exemptions (a tax of 0 percent is applied) could raise 1.4 percent of GDP. A 50 percent reduction of income tax evasion could add another 1.7 percent of GDP to revenues. To improve tax collection, the Government should make more effective use of the established Large Taxpayers Unit.

2.4. Targeting as a Means to Reduce the Costs of Social Programs

Targeting of social programs is not widely applied in Ecuador. Of the twenty-five major social programs, only about a third operate with an explicit targeting mechanism; two thirds either are universal programs intended to reach the entire population or operate without a specific mechanism for identifying beneficiaries. Examining seven of such programs, we find that targeting costs are within reasonable expectations but that the initial emphasis on setting up targeting mechanisms is usually not followed by consistent monitoring of performance (Box 2). Such monitoring is crucial to evaluate and subsequently improve the targeting mechanisms. Further, several programs contain obvious flaws in the targeting methodology and almost all of the examined programs use their own targeting map. A new, generalized map should be developed from information in the LSMS and the census.

3. Basic Nutrition and Health Programs for the Poor

Many of the poor in Ecuador do not have access to basic preventive health care services, and almost half a million are not served by public health care and cannot afford curative care even in cases of emergency. Almost every second child under the age of five is malnourished, but the many small health and nutrition programs reach only about six percent of poor children. The importance of nutrition programs for malnourished children and of a basic health program for the poor go beyond short-term poverty alleviation objectives; they are a precondition for a successful strategy to help poor people grow out of poverty. Any investments in people in the form of education or infrastructure provision will carry a significant return only if people are able to take advantage of these investments. To do so, they need to be healthy.

3.1. Nutrition

Malnutrition of infants and young children carries serious long-term implications. As a consequence of chronically inadequate food consumption or repeated episodes of illness, many children die in infancy. Those who survive are often malnourished, underweight, undersized, suffer more frequent and more severe illness, cannot learn, and end up being less productive as adults. Many who suffer from protein/calorie malnutrition also lack essential micronutrients such as iron, iodine, and vitamin A, the lack of which can cause irreversible mental retardation.

Poverty and malnutrition are closely linked. The link can be as direct as a family not having enough money or the knowledge to purchase a basic and balanced basket of food. It can also be indirect through illnesses. Child malnutrition rates in Ecuador are strongly associated with socio-economic variables, primarily with education of the mother and with household living conditions.

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21 See Freire and Waters (1994).
Box 2: Targeting Social Programs to the Poor in Ecuador

We examined seven targeted programs, among them three child support and nutrition programs (Operation Child Rescue (ORI), School Lunch Program, Child Development Program (INNFA)), the Basic Primary Health Project (FASBASE) which also contains a nutrition component, the Emergency Fund (FISE), and the basic education projects (EB/PRODEC and PROMECEB). All seven rely on geographical targeting based on their own poverty map, and some of the programs also use individual screening methodologies. Several lessons emerge from our analysis:

The costs of running these programs and identifying potential beneficiaries are within reasonable expectations. These costs are more a function of program design and managerial efficiency than of efforts to reach poor beneficiaries. Strategies such as increasing the scale of pilot programs, controlling unit costs, and improving managerial efficiency could further reduce the overhead spent on delivering program benefits.

Scale of targeting matters tremendously. To reduce leakage and other forms of mis-targeting, the scale of the geographical unit selected should be aligned as closely as possible to the scale of potential benefits. For instance, using the canton level for large urban areas is ineffective in allocating resources to poor urban areas due to the heterogeneity of socio-economic conditions within the canton. Employing indicators at the lowest administrative level (parroquias) improves the chances of identifying poor areas, although flexibility should be allowed for programs to reach the poor within better-off parroquias, which are very large. Clearly, no reliable targeting can be done on a provincial or regional level.

Program design affects outcome independent of targeting mechanism. Focusing exclusively on methodologies for selecting beneficiaries misses important issues in overall program design, which in the end might have more relevance for reaching the poor. Each program should be analyzed to identify elements in design and procedures that would either promote or reduce participation by the poor. For instance, ORI's and INNFA's reliance on existing infrastructure limits flexibility in assigning resources to priority areas. Criteria used by EB/PRODEC and PROMECEB in defining school networks, including the requirement that the hub be a complete school with a minimum number of students, are correct given the overall objectives of these programs. However, they tend to be biased against the poorest, most remote dispersed populations.

The initial emphasis on setting up targeting mechanisms is usually not followed by consistent monitoring of performance. Despite efforts to establish targeting mechanisms, in the end most programs are not able to say to what extent they are reaching the poor. We found a general lack of monitoring of targeting performance by both the individual program administrations and by the central Government. While programs usually keep information on where they reach, who they reach is not monitored, as could be done through beneficiary assessments. In addition, rarely are adjustments made to methodology or new data incorporated in the targeting effort as they become available.

Geographical targeting appears deceptively simple, but in fact can be methodologically quite complex. Selecting criteria and building operational targeting mechanisms can be difficult. In several instances, the relative weights of criteria and the screening processes were not transparent. In other cases there were flaws in methodology. Further, the types of indicators used to develop a geographical map depend on the objective of the program, and objectives are not clearly stated in many instances. For example, a malnutrition program has to clearly define whether it intends to reach malnourished children, poor children, or poor children who are malnourished. In the first instance, a geographical map based on malnutrition rates alone would be appropriate; in the latter case a generalized poverty map has to identify the poorest areas in the country, which are then crossed with a malnutrition map to identify priority areas.

Although geographical targeting is accepted as a guideline for allocating resources, a new poverty map has to be developed. Each program uses a different set of indicators to define priority areas. The majority have used CONADE's Poverty Map, which is not sufficiently disaggregated in urban areas. Also, the validity of the map itself is questionable, since it is built from several different indicators that vary widely in the degree of coverage, reliability, and timeliness of the statistics used. A generalized map, which could be developed by applying the determinants of poverty derived from the LSMS to the census, is a needed tool on which individual programs can build (see Working Paper 1, Annex 2). Nevertheless, individuals programs would have to supplement the map with additional indicators and targeting tools to meet their individual objectives. A new map would also reduce the current bias of most programs to spend most of their resources in the Sierra.

In general, coordination among programs should be increased, particularly at the operational level. Most programs operate in the same locations, with limited interaction. Coordination would avoid duplication and help maximize synergies among programs. Some examples include: (a) FISE financing of daycare centers to address the targeting constraint faced by ORI in terms of lack of resources for new infrastructure; (b) nutrition screening of children entering daycare assisted by health programs operating in the area to reduce program costs; and (c) EB/PRODEC and PROMECEB financing main infrastructure and FISE small satellite schools under the network umbrella. Such coordination needs to be carried out effectively at the local level.
Malnutrition Rates of Minors. Malnutrition rates for children below the age of five are extremely high in Ecuador. While the Government has made progress over the last decade in reducing malnutrition, the absolute rates of both chronic and global malnutrition in 1990 were still at alarming levels. Forty-five percent of children below the age of five were chronically malnourished (i.e. their height was low for their age), and 33.9 percent were globally malnourished (i.e., they displayed low weight for their age). This implies that close to 800,000 children below the age of five were malnourished in Ecuador in 1990. The rates increase with age but even in the first five months, when babies are nourished from their mother’s milk, fifteen percent of the babies show signs of chronic malnutrition. According to the 1986 national nutrition survey and subsequent sample surveys, about 80 percent of child malnutrition occurs among children under age two. Furthermore, 70 percent of children between ages 1 and 2 have iron deficiency anemia.²²

There is a pronounced variation in malnutrition rates among regions and areas, with the rural Sierra holding the saddest record: almost seven out of ten children were malnourished in 1990. The Rural Qualitative Assessment (RQA), which examined five indigenous communities in the Sierra, shows that cutting food purchases is often the only possibility for rural families to reduce expenditures in hard times. Additionally, many indigenous families consume a poor and repetitive diet, consisting mainly of barley flour, cinnamon, potatoes, and water.

Malnutrition Among Women of Reproductive Age. Ecuador is a country with a serious micronutrient problem affecting low-income pregnant and lactating women. About 60 percent of the latter suffer from some degree of anemia due to deficiency of iron -- a life-sustaining nutrient needed only in small quantities and found in red meat and breastmilk as well as in grains, legumes and vegetables. Children born of anemic mothers are often stunted and sickly, and iron deficiency in the preschool years reduces their manual dexterity, limits their attention span, and lowers their ability to retain information. In the 1980s, a national nutrition survey found that 69 percent of infants and 46 percent of children 1 to 2 years old suffered from anemia. Deficiency in iron among adults also reduces energy and therefore the capacity to work. Since iron deficiency is prevalent among poor Ecuadoran women and children, anemia control should receive high visibility in maternal and child health programs. Additionally, as shown by the experience of the United States and Sweden, long-term iron fortification of selected and widely consumed foods, such as refined flour used in the production of bread and pasta, can dramatically reduce anemia.

Nutrition Programs and Coverage. Ecuador has a number of nutritional programs, administered by different ministries and agencies, that try to reach preschool children. The programs include the Programa de Complementacion Alimentaria Materno-Infantil directed at pregnant and breastfeeding mothers and their infants (6-23 months), operated by the Ministry of Health through health centers; the nutritional component of the Operation Rescue the Children (ORI), which offers nutritional supplements in its daycare centers; the feeding component of the National Institute of Children and the Family (INNFA), the nutrition component of the FASBASE primary health project;
and the small CARITAS-supported Mothers Club program. In-depth analyses of many of these programs have concluded that they (a) do not supply children or lactating mothers with nutritional aid over a continuous period of time, which undermines their nutritional impact; (b) are often tiny in scope; and (c) generally operate independently of each other so whatever impact that could be achieved is jeopardized.23

The targeting efficiency of the nutrition programs is generally unknown. Examining two nutrition programs, INNFA and ORI, we found that both have developed targeting frameworks based on a combination of geographical targeting and self-selection mechanisms; additionally, INNFA assesses the nutrition status of individual children who enter the program. The potential for geographical targeting is limited, however, since both programs depend on existing daycare center infrastructure and can only target priority areas at the margin. Further, INNFA and ORI, like the other targeted social program we studied, need to improve their monitoring and evaluation method in order to assess how many of the poor and malnourished children they reach.

An evaluation of all nutritional programs directed at infants and children below the age of five, including the ones offered by NGOs, shows that they achieve a low coverage rate. While the programs leak somewhat to non-poor children, the errors of excluding poor malnourished children are clearly higher and weigh much more than the errors of including well-nourished children. Of the one and a half million Ecuadoran children below the age of five, about 600,000 lived in poor households in 1994 and 5.5 percent of these were reached by the various nutrition programs, according to the LSMS. Total coverage of the under-five population stood at 4.3 percent, a clear decrease from the 10.8 percent coverage achieved in 1990. This decrease was largely due to the discontinuation of the Red Comunitaria, a community-based childcare network supported by the Ministry of Social Welfare, in 1993. The Red Comunitaria was replaced by Operation Child Rescue (ORI), which is achieving lower than programmed coverage rates due to financial restraints. According to information from the Ministry of Social Welfare, coverage rates have improved in 1995 and about 130,000 children below the age of six are being reached by the two largest programs, INNFA and ORI.24

Coverage in Neighboring Countries. Compared to other Andean countries, the coverage rate of Ecuador's nutrition programs is extremely low. Its Andean neighbors reach many more infants and the very young, even though the types of programs in these countries do not differ from

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24 According to the information supplied by the Minister of Social Welfare, the joint coverage of INNFA and ORI amounted to about 75,000 children below the age of six during the period of June to September, 1994. This coverage number is close to the figure we compute from the LSMS for the same months (65,000 for children below the age of five).
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Ecuadoran programs. On the contrary: of the nineteen programs run by its Andean neighbors, eight operated through the public health system and six were linked to childcare centers. Several programs were community-supported soup kitchens -- a type of program that does not exist in Ecuador today.

Options for Ecuador. Perhaps the most important, least-cost, and realizable nutrition program over the short-term would concentrate on fortifying staple foods with micronutrients, as currently contemplated under the basic health program, FASBASE. International experience shows that salt or sugar fortification can be achieved at costs ranging from 2 and 12 cents per person per year. The entire Ecuadoran population could be covered by such a fortification program for a total cost of US$ 1 or 2 million.

Nevertheless, concentrating on supplying micronutrients will not solve the widespread caloric/protein malnutrition. Going beyond the fortification of staple foods requires the Government's willingness to commit resources to two networks on which the existing nutrition programs can piggyback: daycare (which is important in helping women to enter the labor force, as we will discuss later) and health centers in both rural and urban areas. Both geographical and self-targeting mechanisms will limit the leakage of these programs. It is important to fund these networks of daycare centers and public health posts adequately so that they can provide a base on which nutrition programs can piggyback. Making the networks functional, while ensuring community involvement, is a precondition for the successful implementation of nutrition programs.

3.2. Basic Health Care

Importance. The World Development Report 1993 spelled out the important role of public basic health care: providing cost-effective health services to the poor is an effective and socially acceptable way to reduce poverty; many health-related services provide information that helps control contagious diseases; and Government intervention helps to compensate for problems of economic uncertainty and insurance market failure. The WDR also stresses the link between basic health care and malnutrition.

Health Statistics. Ecuador's health statistics compare quite unfavorably with those of most other middle-income Latin countries. A 1992 infant mortality rate of 45 per one thousand births is high compared to, e.g., Colombia (21), El Salvador (40), Costa Rica (14), Panama (21), and Chile (17), and the same holds for the under-five mortality rate of 64 per one thousand births in 1992. Lack of safe water and sanitation, the prevalence of infectious and communicable diseases, and malnutrition are the most common causes of child death in Ecuador. With a maternal mortality rate of 170 per one hundred thousand births (1992), Ecuador lies slightly behind El Salvador (148 in 1988) but is clearly worse off than Costa Rica (18 in 1988), Panama (60 in 1988) and Chile (40 in 1988). The vaccination of minors against tuberculosis, measles, polio, and dyptheria have, on the other hand, been largely successful: the LSMS records coverage rates above 90 percent for all types of vaccinations, independent of area, region, and poverty class.

26 The physical distribution of food through these centers could be limited by using the centers only as distribution points for food stamps targeted to children or pregnant/lactating mothers. The food stamps would need to be tailored to specific foods that will really be consumed by those most in danger.
27 World Bank (1993a).
Sector Institutions. Several institutions comprise Ecuador's public health system. The largest provider is the Provincial Health Directorates of the Ministry of Health which treats 27 percent of the people seeking professional curative care (38 percent of the poor, 23 percent of the non-poor). The second largest provider is the Ecuadoran Social Security Institute (IESS), which has its own network including hospitals and pharmacies. The IESS also provides two formal insurance schemes -- the General Social Security System which covers only the affiliated individuals themselves, and the Peasant Insurance Scheme which also covers the dependents. The IESS is the only provider of formal health insurance, and both of its schemes together serve about 11 percent of all people seeking professional curative care (12 percent of the poor, 10 percent of the non-poor). The Ministry of Defense administers hospitals and other facilities for military personnel and their dependents which provide about 1 percent of curative treatments. Finally, the Charity Board of Guayaquil and several small programs under the responsibility of other small agencies and NGOs (6.6 percent of the population) complete the complex public involvement in the health sector.

Real public expenditures of the largest public health entity, the Ministry of Health, decreased continuously over the past years. Between 1990 and 1993 alone, the budget allocated to the health sector as a share of the total central Government budget decreased from 8.2 percent to 5.4 percent, and real per capita spending declined by 37 percent. In terms of 'use', the public expenditures of the Ministry of Health tend to benefit the poor most: about forty percent of the Ministry of Health resources benefit the thirty-five percent of the population that is poor. Conversely, the wealthiest quintile of the Ecuadoran population obtains only about eleven percent of expenditures. Taking into account quality considerations, these rather favorable figures might well change as health posts in remote rural areas (where most of the poor live) are often poorly equipped and staffed. The overall constraint on resources has meant diminishing funds for all types of expenditures. As a result, salaries are low and there are little or no funds for medicines, supplies, and equipment repairs. Even so, there is a substantial bias in expenditures toward the larger, curative care hospitals in the urban centers. About 45 percent of total Ministry of Health resources support 32 large urban hospitals, while only 35 percent is allocated for primary care facilities.

The public health system in Ecuador is problem ridden. As amply demonstrated in a large number of investigations, the main problems are: (a) large gaps in service provision of a basic health care package, especially in rural areas; (b) insufficient quality of health services due to maldistribution of resources and underfunding; (c) duplication of health services supplied by the major public sector agencies due; (d) staffing imbalances heavily favoring urban areas, and (e) emphasis on curative instead of preventive care and health education. For example, about a quarter of demand for family planning education is not met by either private or public facilities.

Type of Health Care. The Living Standard Measurement Survey reports that the type of health treatment varies considerably with the material standing of a family. If medical treatment is necessary, many poor families, especially in the rural areas, choose either to treat their ill members with home remedies or to seek advice from a pharmacist. This pattern is more pronounced in rural than in urban

30 Enriquez (1994).
32 As an outcome of this biased provision of basic health care, the health status of the population varies widely. For example, the infant mortality rate ranges between 20 per 1000 in certain urban areas to 150 per 1000 in remote rural ones.
33 ILDIS (1994).
areas. Nationally, almost two-thirds of the non-poor population seek professional treatment if they are sick from either a nurse or a doctor while only about half of the poor do so; the other half either turns to a pharmacist or to self-curing or is condemned to do nothing. Twice as many poor (12 percent) than non-poor state that they were not able to afford necessary treatment or medicine. Even 6 percent of the non-poor are caught in this trap (Table 8).

In the seven villages participating in the Rural Qualitative Assessment, poor families said they would spend less on health care (including transport to clinics) if money is short for food. Many households have opted to limit visits to clinics and hospitals to the strictly unavoidable, and instead visit traditional curers and midwives. Similarly, they often use locally available herbs and other remedies instead of antibiotics or other prescription medication.

Public vs. Private Curative Care. The private sector performs a large part of professional curative medical services even for the poorest groups in Ecuador, signaling that basic public health services are in scarce supply. While the non-poor are more likely to turn to the private sector for professional health services, 42.5 percent of the poor also seek private services when they need to see a nurse or a doctor (Table 9). Further, 37 percent of the extremely poor, who are not even able to afford a basic nutritional basket of goods, also turn to the more costly private sector rather than use the free or very low-cost public health service. As the trade-off between health care and food for these families is so extreme, it is likely that this group does not have access to a functioning public health center; the actual rate is probably much higher.

The situation in Cisne Dos, the poor urban neighborhood in Guayaquil, illustrates the role of the private health sector in urban areas. Analysis of health facilities usage shows that the private sector, providing almost half the health care in that area, is as important as public facilities, which are used more for serious medical problems. Preference for private sector health care relates directly to perceived differences in quality of service (multiple specialties, a medical lab, and minor surgery is available), but also to the availability of credit for their services, short waiting times, and flexible hours. While public hospitals in the area are free, they are characterized by declining resources and infrastructure, long waiting times, and limited night access.

The Poor’s Expenditures on Health. Health care is a very big budget item for the poor who turn to the private sector. Poor households seeking curative care predominantly from the private sector spend on average 12 percent of their total budget in urban and 17 percent in rural areas. For the non-poor, curative care averages less than 10 percent of expenditures in both areas. On the other hand, poor families that obtain curative care mainly from public sector health posts or hospitals spend on average 6 percent of the budgets, and the non-poor spend 3 percent.

Results. The poor suffer more than other groups from the weak basic public health network. While other public or semi-public institutions, namely IESS, the military, and the Charity Board are

<table>
<thead>
<tr>
<th>Table 8: Health: How are the Sick Treated?</th>
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<tbody>
<tr>
<td>Poor</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>by doctor/nurse</td>
</tr>
<tr>
<td>by pharmacist</td>
</tr>
<tr>
<td>by home remedy</td>
</tr>
<tr>
<td>no remedy (not nec.)</td>
</tr>
<tr>
<td>no remedy (no money or far away)</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Table 9: Professional Health Services: (Of those seeing a doctor or nurse)</th>
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<td></td>
</tr>
<tr>
<td>Public</td>
</tr>
<tr>
<td>- hospital</td>
</tr>
<tr>
<td>- health center</td>
</tr>
<tr>
<td>Private</td>
</tr>
<tr>
<td>Charity Board, NGOs</td>
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also part of the health system, about 85 percent of the poor do not have access to these institutions and so rely on the network run by the Ministry of Health. While the LSMS shows only the distribution and access to curative care, we have found that many of the poor -- and even the poorest of the poor -- turn to the private sector for emergency help. Such service is very expensive, requiring between 12 percent and 17 percent of their total budget per month per incident. Close to half a million poor people without access to public health centers cannot afford private service or the purchase of essential medicine.

While the LSMS says little about a basic package of preventive health care, it is clear from available statistics that the system does not function properly. In 1992, more than 70 percent of births in rural areas (and 20 percent in urban areas) took place without professional help. Professional health consultations during pregnancies reach only half of the determined target rates. The ongoing treatment that are part of a basic health program include prenatal care, child delivery, postnatal controls, basic care for adults, immunizations, health education, nutrition education, surveillance, food supplements, and family planning services.

Options. Detailed reform proposals for the sector have been made by many donor agencies and external consultants. Most of these call for a fundamental, integrative reform to bring the many disparate actors and institutions together while strengthening the role of local and provincial health agencies in providing services. Obviously, this is a long-term aim and must go hand in hand with a restructuring of the Social Security Institute.

But many of the poor cannot wait for the long-term overhaul of the health system. While most are able to bear the costs of basic health care for a period of time by using informal credit arrangements or sacrificing other goods -- often food -- the current situation is unsustainable. About half a million people cannot even afford medicine in cases of severe sickness; this number will increase rapidly if resources of the Ministry of Health are cut in 1996. Further, it is important to note that these cuts also impact on existing infrastructure: many small health posts already have been abandoned because staff could not be paid and there were no basic supplies.

A study of health provision arrangements in other Latin American countries might be useful to help Ecuador identify complementary or supplementary arrangements to reach its poor population. In Costa Rica, for example, free affiliation to a national health insurance program is granted to the medically indigent based on evaluation by a social worker. The program, which covers 12 percent of the population, is designed to reach those who cannot afford the insurance. Other countries increasingly seek cooperation with private non-profit organizations to deliver basic health services in low-income neighborhoods. In Bolivia, for example, private non-profit providers own a quarter of all the health facilities in the three largest cities. The largest provider, ProSalud, is assigned catchment zones in both urban and rural areas. Unit cost estimates show that ProSalud is providing efficient, low-cost preventive and curative medical service.

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34 INEC (1992).
35 See, for example, IDB (1993) and World Bank (1990).
36 The provision of a basic health care package to the poor need not necessarily imply that only primary health posts are supported or financed. As shown above, many of the peri-urban and rural poor also receive medical care at provincial hospitals.
4. Strengthening the Assets of the Poor

This section is concerned with the main assets of the poor -- labor, land, and housing -- and reports on key survey findings about how the poor are able to use these assets compared to the non-poor. These findings concern: (a) the quality of primary education and access to secondary education, (b) the importance of the rural land market, (c) the positive effect of rural market integration, (d) female labor participation, and (e) the role of housing as an asset for the urban poor. The focus of this discussion is on enhancing the assets of the poor in both qualitative and quantitative terms. All of these points are supported by the earlier discussion of common factors linking urban and rural poverty across regions.

4.1. Quality of Primary Education and the Importance of Secondary Education for Poor Children

The World Development Report 1990 showed that education and poverty reduction are closely linked. Education increases the productivity of labor, the principal asset of the poor. At the individual level, increased productivity leads to higher incomes; at the macroeconomic level, it leads to higher growth rates, which in turn create employment and lead to higher wages. And this virtuous circle can be observed not only in modern economic sectors but also in the rural and informal sectors.

While current poverty is strongly influenced by what Ecuadoran fathers and mothers learned in their youth, the poverty of the next generation will depend on what the children of the poor learn today. Attendance levels in primary and secondary schools, repetition and failure rates, the degree to which children miss classes due to health problems or work loads, and the quality of education all determine the potential for poor children to escape poverty in the course of their lives.

In our view, Ecuador's education policy needs to emphasize two areas: improving the quality of primary school education and enabling poor children to go on to secondary school. As we will describe in this section, almost all youngsters now attend primary school, although the repetition and drop-out rates for poor children are high. Attendance levels in secondary schools, however, are clearly much lower for the poor than the non-poor. Secondary education needs to be made available to poor children because it can be a way out of poverty; the private returns from secondary education are high.

Education Expenditures and Quality. While real education expenditures declined in the 1980s, enrollment increased which led to a severe decline in the quality of education. Total primary school enrollment increased by 27 percent from 1980 to 1991, while secondary school enrollment jumped by 51 percent. Enrollment in higher education doubled. At the same time, per pupil primary expenditures declined strongly. The result was a severe deterioration in the quality of education. Half of the most wealthy urban families in Ecuador send their children to private schools, which also indicates a gap between the quality of public and private education.

| Table 10: Repetition and Drop-Out Rates in Primary School, 1994 |
| --- | --- | --- |
| Poor | Non-Poor |
| Repetition |
| - first grade | 18.4 | 13.5 |
| - second grade | 8.5 | 5.9 |
| Drop-out primary | 13.3 | 5.0 |


Calculations based on data from EB/PRODEC.
quite favorably to other Latin American countries, a closer examination shows that the first grader repetition rate is 18.5 percent for poor children and 13.5 percent for non-poor ones (Table 10). While repetition rates in higher grades decline (partly because the repeaters drop-out of school), the clear link between poverty and repetition remains. The same picture emerges when we look at drop-out rates for primary school: of the 13- to 15-year old children (who had all started primary school but are no longer enrolled), we find that 13.3 percent of poor children and only 5 percent of non-poor children leave school before completing the six-year cycle.

Graph 8: Secondary School Attendance, urban, 1994

Graph 9: Secondary School Attendance, rural, 1994


Secondary School: Attendance, Repetition, and Drop-out Rates. There is a major distinction between poor and non-poor attendance in secondary schools. Graphs 8 and 9 illustrate the attendance rate in secondary schools of children by age. Up to 90 percent of children from families in the highest expenditure quintile attend secondary schools in both urban and rural areas (although the peak is much shorter in rural areas) but only 30 percent of the poor in the urban area and almost none in the rural area attend secondary school. The difference in the attendance record does not stem from the distance to the nearest secondary school, which is only slightly lower for the non-poor children (33 vs. 37 minutes in rural areas and 25 vs. 28 minutes in urban areas).

Repetition and drop-out rates during secondary school again illustrate the difference between the poor and non-poor. Repetition rates in the beginning years of secondary schools are consistently higher for the poor children, at 16 percent in the first year of secondary school and at 14 percent for the second year. Even more pronounced, the drop-out rate during the basic cycle of secondary school is 22.9 percent and during the advanced three-year cycle another 16.3 percent for poor children (Table 11). Of the few poor children who actually start school, two-fifths drop out before completing the secondary degree.  

| Table 11: Repetition and Drop-out Rates in Secondary School, 1994 |
|----------------|----------------|
| Repetition     | Poor | Non-Poor |
| - first grade  | 16.1 | 9.0     |
| - second grade | 14.0 | 9.6     |
| Drop-out       |      |         |
| - basic cycle  | 22.9 | 8.3     |
| - advanced cycle | 16.3 | 12.1    |


40 The drop-out rate for the basic secondary cycle is calculated for the fifteen to seventeen year old population and the drop-out rate for the advanced cycle is calculated for the twenty to twenty-two year old population.
**Private Returns:** Private returns to education are significant, as illustrated by the earnings equation which includes a large number of exogenous variables, with dummy variables specified for different levels of schooling. We find that the earnings differential between base and end primary school years is modest, which points to the poor quality of primary education. But private returns increase significantly for secondary education, reaching about 9 percent for women and 11 and 13 percent for men (Graph 10). The earnings differential due to college education is extremely high for women, even surpassing that for secondary education, but it declines somewhat for men.

The **Private Costs of Public Education.** While education definitely pays off in the long run, the private costs of education are high even in public schools. Although families pay only a low registration fee in public schools, there are other significant costs for books, writing materials, uniforms, and transport. For poor families, sending a child to public primary school costs about 2 percent of their budget (1.8 percent for the non-poor), and sending a child on to public secondary education absorbs 4 percent of their budget (2.9 percent for the non-poor). Asked why their children (aged 14 and 15) do not attend secondary school, half of poor parents surveyed mentioned these direct costs as the primary reason, while only twenty percent of non-poor parents viewed these costs as a major obstacle.

Two aspects of these costs of education require attention. First, the private costs of public education are not fixed. They are discretionary with respect to the type of uniform, number and quality of books, and type of transport the child takes to school. In absolute terms, non-poor families spend 80 percent more on educating their child in a public primary school and 60 percent more on the education in a public secondary school. Second, if poorer households have to finance the education of several children, education can quickly absorb ten or fifteen percent of total household expenditures.

In addition to the private direct costs of public education, the opportunity costs of keeping children in school for a longer time are very high, especially for poor households. While field interviews in Guayaquil and seven rural communities indicate that poor parents make a serious effort to keep their children in primary school, they also highlight the costs of keeping children in primary and secondary school. In rural Ecuador, child labor is particularly important in times of scarce household income, and three out of the seven communities view female and child labor as the most or second most important source of scarce income. In Cisne Dos, 12- to 14-year old boys and girls spend an average of fifteen hours per week assisting in household enterprises. For girls, there are also additional household tasks, especially caring for younger siblings.

**Options for Helping the Poor.** Raising the quality of primary education and designing targeted programs to financially enable poor families to send their children on to secondary school would most benefit poor families. The quality of primary education depends on proper teacher training and

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motivation; an appropriate and modern curriculum, and a basic schooling infrastructure including supplies. This would enable poor children to compete much more effectively on the formal labor market. Large primary education projects of the Inter-American Development Bank and the World Bank address primary education quality today but the Ecuadoran Government needs to fund an equal effort.

Targeted programs to encourage poor parents to enroll their children in secondary schools can take various forms, which must be analyzed in detail. There are several ways to lower the direct private and opportunity costs of education for poor children: loosening uniform requirements, supplying basic textbooks through the school, or waiving the matriculation fee. Also, introducing a secondary school voucher system for poor families could reduce or even eliminate the opportunity cost of the child not working and supporting the family while attending classes. In urban areas, the provision of child care alone could have a substantial effect on freeing secondary school-age girls from guarding their younger siblings. These and other options should be evaluated in depth to see which ones might address the most pressing problems in particular communities.

4.2. Importance of the Rural Land Market

Poverty in rural Ecuador is closely linked to land. While the rural sector should not be equated with agriculture per se because there is also a large, vibrant non-farm sector, agricultural activities nevertheless employ the greatest number of persons and provide the largest proportion of household incomes in rural areas. There is a strong inverse relationship between per capita land holdings and poverty so that the smaller farmers are generally the poorer farmers. But smaller farmers use their land more intensively and have higher yields for many products than do the larger farmers. Reducing agricultural subsidies to the rich and enabling smaller farmers to use the newly created land market would be important steps toward improving both equity and efficiency in rural Ecuador.

Land and Poverty. Ecuador’s several land reforms have not altered the unequal distribution of land over the past four decades. In 1994, 1.6 percent of farms in the Sierra occupied 42.9 percent of the land; in the Costa, 3.9 percent of farms command 55.1 percent of the land. The unequal distribution cannot be ascribed simply to the subdivision of land into small plots, since the total number of farms increased much more slowly between 1974 and 1994 than the total amount of land under cultivation. Calculating the Gini coefficient of distribution of operated land (for 1994), we find it to be very high at 0.80. The distribution of land is similarly unequal in the Costa and Sierra but more equal in the Oriente. Average land holdings (in terms of land cultivated or owned) are the lowest in the Sierra.

Regardless of which measure of poverty we use, there is a clear relationship between the degree or extent of poverty and the household’s per capita land holdings. This pattern becomes particularly strong if we use distribution-sensitive measures of poverty. Supporting the prominent role land plays in the definition of poverty, the rural population of six of the seven communities participating in the Rural Qualitative Assessment view limited access to land as the most important component of poverty and as the yardstick by which they compare their community to neighboring ones.
Yields, Returns, and Farm Size. One of the most important findings we derive from the LSMS is that yields tend to decline with increasing farm size. This can be observed not only at the level of individual crops such as rice, maize, or fruits -- where one can assume a more homogenous land quality among farms -- but also at an aggregate level looking at the value of total output per hectare. On average, among all cultivators, increasing farm size by 10 percent will lead to an increase in gross output value of only 5.5 percent. This does not change with alternative sub-groupings of crops. Small farmers universally achieve higher yields than large farmers, quite in line with findings from many other countries.

While we can make a statement about yield differences among farms, we are not able to calculate the net financial returns per hectare, although it is likely that our observation result will remain valid. Farming decisions are ultimately guided by net financial returns (or profits) per hectare and not by yields. No information on several inputs, especially the amount of labor used in the production process and the services derived from capital, is recorded in the LSMS. Small farmers generally apply much more of their own and household labor to the land than larger farmers since their production technology is less capital-intensive and the opportunity cost of labor in poor rural areas is often quite low. However, subtracting expenditures on pesticides, fertilizers, and seed from total output does not change the result that small farmers tend to have higher returns. And if the opportunity cost of labor is indeed quite low in many areas in Ecuador, computations of net financial returns will show the same.

Subsidies in the agricultural sector support the larger and richer farmers, thereby artificially increasing their net financial returns per hectare and hindering land transfers to the smaller and poorer farmers. Public irrigation water is almost free of charge, benefiting the larger farmers. With a cost recovery ratio of 4 percent, subsidies in the sector are very high. Total public irrigation outlays for investments, maintenance, salaries and overhead were around US$200 million in 1993. These expenditures largely benefited larger farmers because the expenditures were directly linked to the size of the landholding. Further, public credit from the Banco Nacional de Fomento (BNF) is limited (covering farmers that own about 12 percent of total land), and -- although designed to do so -- reaches few small farmers. BNF subsidies through the directed credit scheme, estimated at around $80 million in the 1988 to 1991 period, were the result of a low recovery rate and subsidized interest rates on previously made loans. Lastly, the little extension service that exists reaches mainly non-

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42 In support of the estimations based on the Living Standard Measurement Study, we derive the same negative relationship between farm size and productivity from a different datasource, the rural module of the 1990 Household Survey by the National Employment Institute (INEM 1990).

43 See Binswanger, Deininger, and Feder (1993).

44 Whitaker (1990, p. 243) estimates that the smallest 60 percent of farms internalized only 13 percent of the implicit irrigation subsidy in 1988.


46 The interest rate subsidy is now eliminated but still applies to loans made while the subsidy was in place. While the LSMS records credit obtained from BNF, only about 3 percent (or 29) of all farmers recorded such credits. We feel uncomfortable basing an estimate of the poor/non-poor distinction on so few observations.
poor farmers -- 4 percent of the non-poor and 1 percent of the poor farmers report having received technical assistance from public or private sources in the LSMS.

The Importance of the Land Market. The land market plays a crucial role in both alleviating poverty and in increasing the efficiency of the agricultural sector. Since smaller and poorer farmers achieve higher returns per hectare than larger farmers, increasing the land under cultivation by the former through sale, lease, or rent would benefit both. These transactions would be eased by the existence of a formal land market with clearly defined transactions. Security of tenure through titling and registration hence becomes a crucial variable for increasing land transactions while at the same time fostering sustainable agriculture practices, providing incentives for land conservation, and increasing the supply of credit, since land can be used as collateral. If large farmers fear that by leasing out their land they will lose title, then they will generally be reluctant to engage in such land transactions.

Currently, the rural land market in Ecuador is informal but significant. About 6 percent of landless households are able to lease land and therefore remain engaged in cultivation, and nearly 47 percent of all rural households report some land leased-in. Share-tenancy is slightly more common among poor households, while cash-renting is slightly more common among the non-poor. These transactions are largely informal because about half of small and medium-sized farms (about 50 percent) are not titled (Table 13). What is more, only a fraction of the titled land is properly registered with the Land Registry, and only proper registration gives the owner the right to rent, lease, or sell land. However, since land is registered in Ecuador by name and not geographic area, conflicts can easily arise even if the land is registered. These impediments make short-term transactions without ownership transfers much more likely than longer contracts.

The Option for Helping the Poor: Making the Land Market Work. An effort to properly register land, in combination with a reduction of agricultural subsidies favoring larger farmers, would make the land market more beneficial for the poor. The recently passed Agricultural Law (1994) defines the framework necessary for the land market to function properly. It also increases the flexibility of land sales, defines associated water rights, and limits the expropriation of private land. Over the past thirty years, since the Agricultural Reform of 1963, expropriation has been unsuccessful in achieving a more equitable land distribution, since the political power of the landowners was stronger than the expropriation law. To take advantage of the new Agricultural Law, the newly created National Institute of Agricultural Development (INDA) will have to work closely with the Land Valuation and Cadastre Directorate to foster land delineation, titling, and registry. This procedure must be affordable for poor farmers, especially considering the potential benefits in terms of poverty alleviation and productivity improvements in the sector. Further, removing of subsidies for irrigation and the credit markets will make the difference in returns per hectare even more apparent and provide an additional incentive for larger farmers to sell or lease their land.

Once formal land registration procedures are established, targeting financial help to the poor might be necessary to enable them to purchase land, particularly since they often cannot use their small, poor quality plots as collateral with commercial agricultural banks. As in many other countries,
formal credit has not reached the rural poor. A matching grant scheme that forces participants to use some of their own resources, such as labor, to gain access to land could be a viable alternative.  

4.3. *Rural Poverty and Access to the Market*

Rural poverty is intimately linked to market access: The less rural households are able to benefit from market transactions, the less they can protect themselves from poverty, for several reasons. First, farmers benefit from exchanging produce with each other. Second, the market is the most important medium of information exchange; in rural areas farmers with market exposure learn from each other about best agricultural techniques, inputs and prices. They can also seek technical assistance from either public or private organizations more easily. Third, the rural market is much more than an exchange place of agricultural produce or labor. It is closely connected to a host of off-farm activities, including services, in-house production of textiles, and other small-scale rural industry.

**Market Exchange.** Isolated farming households that cannot exchange produce or animals in the local market, tend to be poorer than more integrated farming households. The costs of bringing products to the market are still very high in remote rural areas, where it can take a day or more by foot or mule to reach the nearest local market. While we do not have data to measure the degree of isolation by infrastructure variables such as feeder roads or transport, we can compare the degree to which farmers use the market to sell and buy. The share of output sold on the market tends to be higher for the non-poor than for the poor (Table 14).

**Agricultural Information.** Closeness to the rural market also implies access to information, which helps farmers to use their assets, both land and labor, more productively. Information includes both informal exchanges with other farmers and access to the formal technical assistance services provided by private, non-profit, or public agencies. Of all poor farming households that responded to the LSMS, only one in one hundred reported having received any form of technical assistance (4 in one hundred for the non-poor). While access to technical assistance is a measure of closeness to the market, it is also true that technical assistance is an important instrument for familiarizing the poor with the market. For example, small farmer extension services can provide important inputs and information on the diversification of agricultural production, which can increase a farmer's marketable surplus.

**Off-farm Employment.** While agriculture remains the most important economic activity in rural Ecuador, employing the greatest number of persons and providing the largest proportion of household incomes, the large and vibrant off-farm rural sector offers regular and often quite sizable income. The relationship between the off-farm sector and agriculture is also quite close. Off-farm activities can contribute to improved agricultural productivity through, for example, the manufacture of agricultural inputs, and at the same time, rising agricultural incomes can stimulate the expansion of off-farm activities, particularly services and manufacture of basic consumer goods. The off-farm sector in countries such as China and other East Asian economies has been key to determining the pace and

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47 On rural credit markets and the poor, see Binswanger (1995). On the matching grant scheme, see World Bank (1993d).
direction of change in rural living standards, e.g., nearly one-third of China's GDP is calculated to come from township enterprises, which employ about 100 million people. Ecuador also has rural township enterprises, albeit on a more modest scale.

The rural off-farm market is a possible route out of poverty. The percentage of poor involved in off-farm employment is lower than of the non-poor in all regions of Ecuador, suggesting that it is indeed an important source of income for those able to obtain such employment. In rural Ecuador as a whole, 31 percent of the non-poor and 19 percent of the poor working population are primarily occupied in the off-farm sector, with off-farm activities assuming particularly importance in the Sierra and Oriente. In the Sierra, the most important non-farm activities for both the poor and non-poor are sales, manufacturing, and textiles. However, these occupations are more common among the non-poor than the poor. In the Costa, the most important occupations outside of agriculture are sales (for both poor and non-poor), transportation (for non-poor), and 'other' (which includes a variety of service occupations). In the Oriente, off-farm employment occurs in virtually all categories, with sales being the most important.

**Agricultural Policy.** The rural poor's ability to benefit from market exchange is also closely linked to the degree farm prices are at competitive levels. Recent estimates show that the producer prices of export products are suppressed, which worsens the agricultural terms of trade and diminishes income for poor farmers producing these exportable products (especially in the Costa). In 1993, effective protection rates were negative for the main export commodities such as bananas (-42 percent), cocoa (-32 percent) and coffee (-50 percent). Non-competitive market structures for bananas, cocoa, and coffee, and an unfavorable export price setting scheme, in which exporters have to liquidate export proceeds at certain reference points, account for this suppression of farm prices. Fostering competition among exporters would raise farm prices for agricultural produce to competitive levels and increase agricultural farm income.

**An Option: Increasing the Market Access of the Poor through Community Participation.** Ecuador's rural economy is very diverse, which necessitates that communities play a key role in fostering their own market integration, particularly since apparently similar neighboring communities can have distinct income structures and poverty issues, depending on the quality of and access to land and on off-farm employment possibilities. Communities therefore will have varying needs for raising the productivity of their land and labor. The seven communities included in the Rural Qualitative Assessment, for example, overwhelmingly named small infrastructure projects (48 percent of all suggestions), credit, and training as most needed interventions. Infrastructure projects ranged from small roads, a bridge, irrigation, and a meeting hall to an electricity connection. Similarly, communities asked for training classes ranging from agriculture to land conservation to forestry, and to weaving in the off-farm sector.

4.4. **Women's Labor Force Participation**

As noted in Section One, a household is significantly more likely to be poor if the spouse or partner of the head of household does not work. With more than 80 percent of households in Ecuador being headed by males, this points to the importance of women's participation in the labor force. There is a major difference between poor and non-poor households relating to women's participation in the labor force. Apart from educational differences, obstacles to labor force participation by the poor women in urban areas are primarily household and childcare duties and street violence. In rural areas,

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remoteness and lack of market integration preclude many women from entering the non-farm rural economy.

**Female Labor Force Participation.**
Participation in the labor force is considerably lower for poor than for non-poor women. This difference becomes very pronounced if we add an age dimension (Graph 13). Only at the very end of the working life cycle (age 60-64) do participation rates for the three female groups become similar.

**Female Labor Force Participation as a Household Adjustment Strategy.** Despite these differences, female labor force participation is one of the most important possibilities for the poor. When incomes decline and household become poorer, the most important response, mainly by women spouses, is to try to involve themselves in income-generating activities, either in the market or in their homes. Labor market participation in urban Cisne Dos has expanded, with the number of working women increasing from 32 percent in 1978 to 46 percent in 1992.49 Similarly, the RQA records that in the seven rural communities, female (and child) work is the most important strategy for households to earn additional income.

**Obstacles.** But poor women face key obstacles to working, which (besides their education level and demand side constraints for their labor) are quite different in urban and rural areas. In urban areas, household and childcare duties are the major reason why women do not participate in the workforce, and these are more pressing the poorer they are. Thirty-eight percent of all poor urban women aged 21 to 64 do not participate in the labor force because of their household and childcare duties. The figure for non-poor women is considerably lower at 27.4 percent, but within that group we observe a very strong variation by total household expenditures (Table 15). Many of the worse-off among the non-poor women cannot afford domestic servants or private kindergartens which would enable them to go work.

The importance of childcare centers for women's ability to work is exemplified by the effect of the closure of the Red Comunitaria, a community-based childcare program, in 1993. Although initially expected to reopen under the newly created Operation Child Rescue, many of the childcare centers have not reopened. In Cisne Dos, for example, the childcare center has remained closed. A small survey of thirty women who had been sending their children to the local Hogar Comunitaria revealed that fifteen had to give up their jobs because they did not have a place to leave their children. Others changed jobs to work nearer to home, or at home, or if they were domestic servants in two houses, gave up one of their jobs.

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Another issue that is becoming increasingly important in Ecuador’s poor urban neighborhoods today is violence, which limits women’s physical mobility to work far from or even outside the home. While national data on the extent of street violence is not available, indications from Cisne Dos mark this as a particular problem: over a six-month period (February-July 1992), 50 percent of respondents witnessed a bus robbery, one-third were victims of street and household theft, and more than half of all family members were robbed. About half of the respondents identified the pantillas (gangs of young unemployed males) as a major cause of crime. This has resulted in a drop in the use of public transport, particularly at night, and an increase in the use of small trucks by people working late shifts, especially women.

**Options.** Helping today’s poor women and tomorrow’s mothers enter the workforce is key to enabling them to overcome poverty. With secondary education carrying a high private return and raising the probability of participation in the labor market, it is crucial that teenage girls are able to continue school. Similarly, reopening the childcare network in urban areas would enable many women to work and teenage daughters to remain in school (in addition to reaching malnourished poor children, as discussed above). Measures to increase the physical safety of women in certain neighborhoods would increase their ability to work away from home. Functioning street lightening and guarded public buses in the evening could be simple but effective measures. In rural areas, many of the small investment and training proposals suggested by the communities entail possibilities for women to enter the informal off-farm sector.

**4.5. Housing as a Process for the Urban Poor**

As discussed above, urban families that rent their house, apartment, or shanty are more likely to be poor than those that own their dwelling. Field analysis suggests that ownership is closely linked to families using their house as an asset. One of the major variables we analyze below, therefore, relates to the degree to which urban families use their house as their workplace.

**The Importance of Housing as an Asset.** In urban Ecuador, housing variables and poverty are closely linked. Many of the urban poor live in smaller, more crowded dwellings with less access to basic services than the non-poor, and their houses are built with inferior materials such as bamboo in the Costa or clay in the Sierra.

However, the link between housing and urban poverty is more complex than that the non-poor are able to afford superior housing materials and more spacious dwellings and live in areas with better basic services. Housing is a dynamic process; it is an asset that can help the poor to grow out of poverty or shield them against slipping deeper into poverty. Housing often enables families to start informal sector activities, such as repairs, production of textiles or food and beverage sales. Renting out a room can supplement family income. Further, in times of need, the house can give shelter to relatives or close friends who would otherwise have to live on the street or in a shanty.

The importance of housing as ‘dynamic’ is exemplified by Cisne Dos, the low-income neighborhood in Guayaquil. In 1992, one in three households earned additional income from home-based enterprises, while about 20 percent received cash income from remittances, rent, or other non-wage sources. It is homeowners with electricity connections who are more likely to run enterprises dependent on electricity such as stores with refrigerators and textile making sewing machines. The main types of enterprises run out of homes are retail operations (57 percent), followed by workshops and small industries (35 percent), and some personal services (8 percent). They are run largely by women, and cushion households against extreme poverty.
At the national level, the relationship between urban poverty and the productive use of the dwelling supports the characterization of housing as an asset (Graph 14). Distinguishing between population quintiles (rather than between the poor and non-poor) to present a more differentiated picture, we find that only 8.3 percent of the poorest working population use their dwellings for home-based enterprises. This ratio climbs steadily until it declines slightly for the richest population quintile. Hence, the use of housing as a productive asset can be an important route out of poverty for the urban poor.

**Housing as a Process.** In accordance with this view, housing is a process of developing and then consolidating the housing unit to become and asset for its inhabitants. A key to supporting this process becomes the appropriate institutional and legal framework. A very important step is to make it possible for families to obtain title to the house, which is generally a precondition to get water connections and other services from the municipality.

Research has shown that the security of ownership through registered titles gives inhabitants an incentive to invest in their dwellings. Once they obtain title, they begin the process of incremental upgrading and consolidation. The combination of lack of title and the widespread perception, both within and outside the neighborhood, that one's settlement is not officially recognized (illegal, pirated, invaded) contributes to residents spending their income on consumer durables rather than investing in the house. Once ownership is secured, however, residents place high priority on water, electricity, transport, schools, health centers, sewerage, and solid waste disposal. Finally, once service delivery is secured, many residents tend to seek credit to upgrade their dwelling.

Such a consolidation process was observed in Cisne Dos, which is a typical squatter settlement. The settlement process, which started in the early 1970s, involved the creation of solid land (through infilling) and the construction of squatter housing. During the 1970s, Cisne Dos was characterized by low population density, little access to services, and small, incrementally built bamboo and timber houses standing on poles over polluted water. A complex system of interconnected catwalks linked the houses within this area, as well as with the nearest solid land. Over the next decade, upgraded brick and cement housing replaced less durable houses, population densities increased, and services were provided. Most importantly, home ownership was legalized with the rate of households holding title to their land increasing from 8.8 percent in 1978 to 24 percent in 1988 and to 52 percent in 1992. Without the threat of eviction, home ownership in Cisne Dos has provided a strong incentive for families to mobilize economic resources to improve their housing, as shown by the significant improvements in the quality and size of the housing stock since 1978.

**An Option: A New Direction for Ecuador’s Housing Policy.** Ecuador’s housing policy has traditionally, and unsuccessfully, focused on providing housing structures for the poor rather than enabling them to build and upgrade their own dwellings. Ecuador’s housing policy, especially through the Banco Ecuatoriana de Vivienda (BEV), has emphasized closing the housing gap, estimated at 1.3 million dwellings which are either needed to shelter the homeless (317,000 houses in 1991) or exist but are qualitatively insufficient (900,000 houses in 1991). BEV provides housing financing but physical

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output is very low. Furthermore, BEV does not reach the poor with their operation. BEV’s long-standing policy has been to require a minimum household income as a precondition for loan approval, with the loan being a function of the salario mínimo and the loan size. The lowest monthly income to qualify a family for a loan is estimated at US$335 per month. A comparison of average monthly household expenditures for the households in the lowest quintile (US$121) or the second quintile (US$185) reveals that few poor families in Ecuador have qualified for such BEV loans and have hence also not been the beneficiaries of the subsidies.

An important priority for Ecuadoran housing policy is to legalize the many dwellings now without proper title and to record them in a modern cadastre (compare Table 16). With home investment so crucially dependent on secure tenureship, the legalization of these dwelling is the first and most important step to helping the poor. Service provision, most importantly water and sewerage connection in the urban Costa, would then further enable the poor to use their homes as productive investments. In terms of direct intervention, the housing policy should limit itself to providing direct grants to those extremely poor (the old, widows, the ill) who are not able to upgrade their own homes.

### Table 16: Unauthorized Housing in Latin American Countries (percent), 1990

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>27%</td>
</tr>
<tr>
<td>Chile</td>
<td>20%</td>
</tr>
<tr>
<td>Colombia</td>
<td>8%</td>
</tr>
<tr>
<td>Ecuador</td>
<td>54%</td>
</tr>
<tr>
<td>Mexico</td>
<td>16%</td>
</tr>
<tr>
<td>Venezuela</td>
<td>54%</td>
</tr>
</tbody>
</table>

Source: Persaud (1992)

5. A Stable and Growing Demand for Labor

Finally, we turn away from asset-supply considerations to focus on the demand for labor. The efficient allocation of workers in the Ecuadoran economy is hampered by regulations and lack of technological innovation in the formal sector. Consequently, the rapid increase in labor supply stemming from both demographic and behavioral changes over the past years has not been matched by an equal increase in the demand for labor in the formal sector. This has resulted in an increase in the informal sector and a decline in average productivity of labor for the economy as a whole. Ensuring a stable and growing demand for labor will involve two sets of actions: first, reducing the direct and indirect tax on labor related to existing regulations; and second, pursuing economic policies conducive to long-term economic growth.

#### 5.1. Reducing Burdensome Regulation in the Labor Market

**Labor Market Regulation and Inequality.** Ecuador has cumbersome labor legislation. The Government interferes with wage setting in the private sector through specific mechanisms, including nationwide minimum wages, specific minimum wages by sector and occupation, minimum mandatory wage adjustments, and an array of mandated benefits, each determined according to a specific rule and paid at a different point in time. Some of these benefits are proportional to the base wage of the worker, while others are set as a lump sum; some are paid monthly, while others are due once or several times a year. Both the employee and the employer have to make contributions to the social security system, which represents a tax on labor rather than a delayed payment, because benefits are

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51 Persaud (1992, p. 23).
52 Compare Working Paper 6. The implicit housing subsidy incorporated in the operation of BEV stems from a longtime subsidy of mortgage interest rates and a low collection effort. In a cross-country study, Persaud (1992, p. 49) finds that only 6 percent of housing subsidies in Ecuador reached the population below the median income.
not linked to payments. Finally, firms willing to downsize or restructure might end up paying a severance equal to many years’ salary to the displaced workers. In addition to these observable costs of labor market legislation, employers also incur transaction and management costs that we cannot directly observe.

In addition to causing efficiency problems, labor market segmentation has a direct link to equality and poverty. In terms of efficiency, by precluding labor from being allocated optimally across different sectors of the economy, segmentation undermines international competitiveness. But such regulation can be a source of increasing inequality in society as well. Regulations create benefits that protect only a few while putting a heavy toll on informal sector workers: not only is their wage rate artificially reduced, but they are hindered from entering the regulated sector making it much more difficult for the poor to grow out of poverty by using their own labor.

**Degree of Labor Market Segmentation.** We employ data on individual earnings from the LSMS to estimate the effect of labor market regulations, controlling for the characteristics of the workers. If the labor market were efficient, individuals with the same characteristics (such as schooling and experience) would earn similar wages across different sectors and activities. If, on the other hand, excessive regulation created labor market segmentation, then the earnings in a particular sector would differ depending on whether or not the employer abides by the law.

We estimate that labor market regulations raise labor costs. Using the LSMS, we find that individuals who earn the benefits mandated by law enjoy higher take-home pay than their identical counterparts. Total labor costs, including social security contributions and payroll taxes, are about 8 percent higher for an employer who complies with labor regulations. As mentioned above, however, this calculation of the degree of labor market segmentation is based on the direct cost impact of the regulation. Additional factors such as administrative or transaction costs might add to labor costs and thereby to segmentation.

**Quantifying the Impact of Deregulation.** Would reducing regulations have a significant impact on labor demand and thereby benefit the poor? To answer this question, we use a simple General Equilibrium Model to simulate the effects of reducing labor market regulation. The model starts from a detailed description of the labor market, distinguishing among a modern (regulated) urban sector, an informal urban sector, a commercial agricultural sector, and a subsistence agricultural sector. Labor is a production factor in all four sectors and capital is a production factor only in commercial agriculture and the modern sector. The educational level of workers employed in the informal sector, commercial agriculture, and the modern sector is a crucial variable determining the equilibrium wage rates between the different sectors. In fact, wage differentials among sectors are due to either the difference in educational levels or to the segmentation of labor markets. For our purpose of identifying the importance of labor market deregulation, we can identify the modern sector as a non-poor sector because the average worker earns about 50 percent more than in the informal and commercial agricultural sectors and about 100 percent more than in the subsistence agriculture sector. Workers moving into the modern sector hence significantly improve their welfare position.

The General Equilibrium Model shows that reduction in labor market segmentation through deregulation from eight to four percent would lead to a shift of about 100,000 workers from the (poor) informal and agricultural sectors to the (non-poor) modern sector. These workers would realize a real income gain of 37 percent. However, the increase in the modern sector labor force would reduce the

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real wage in this sector slightly, by about 6.5 percent, contributing to an improved distribution of labor income. The labor reallocation would increase the modern sector work force from 22.8 percent to 26.2 percent of the total working population in Ecuador. Hence, we determine that deregulation would indeed have a desired impact on the labor force distribution. But while it can be an important component of a pro-poor policy because it raises labor demand in the modern sector and increases overall efficiency in the economy, thereby contributing to higher growth, it emerges that labor market deregulation alone cannot be relied on to improve the living conditions of the poor.

**Important Steps Towards Labor Market Deregulation.** There are three priority areas for reform to reduce the observed segmentation of the labor market and lower the additional transaction and information costs that reduce labor demand. First, a rationalization of the basic wage policy is very important. The degree of intervention can be reduced by (a) unifying the various components of the minimum wage, and (b) adjusting the minimum wage to one level for the entire country. CONADES, the Wage Setting Council, can begin to adjust sectoral wages in inverse proportion to a newly defined ‘general minimum wage’. After some time, all basic salaries would converge to a single minimum wage.

Second, the Ecuadoran labor law needs to unambiguously determine the obligations of employees and employers towards the Social Security Institute IESS. Currently, the system is unsustainable because contributions (20.5 percent of the basic salary) come from a tax that is not correlated to future benefits. The contribution makes affiliates eligible for public sector health care benefits, a pension and worker’s compensation in case of accidents on the job. The accident insurance is structured in a way that cross-subsidizes unsafe jobs. In the case of pensions, an actuarial balance between required contributions and guaranteed benefits needs to be established. Since pensions are paid in the future, for an unknown period of time, an actuarial balance can be attained by combining a life insurance policy and a savings account. In its current form, the poor in Ecuador benefit very little from the social security system because their coverage is low and the benefits reaching them -- mainly in the form of health care -- are minimal.\(^{34}\)

Third, a reform of Article 189 of the labor law, regulating dismissals and voluntary separations, is essential to encourage the establishment of a better working environment within firms. The current law leaves much to be desired in terms of acceptance or enforceability. It creates an environment that makes employers reluctant to hire new workers. The severance payment also creates perverse incentives for both employers and employees. Returning to the maximum of 12 months, employment before workers are eligible for severance, as had been the law until 1991, can be a start. A more substantive reform, however, might be a more effective approach, i.e. introducing some notion of ‘economic cause’ for separation and transforming the severance formula into a contribution-defined benefit.

**5.2. Macroeconomic Growth and Stability**

**Importance of Growth for Poverty Reduction.** The *World Development Report 1990* established the importance of sustained growth for reducing poverty. While, theoretically, poverty can also be alleviated in a low growth environment through improved targeting of Government expenditures and improved distribution of available resources, it is without doubt much easier to alleviate poverty in a growing economy. One reason is that a growing economy increases the demand for labor. The translation of growth into higher labor demand will be more pronounced the less capital

\(^{34}\) Compare detailed discussion in Working Paper 1.
is explicitly or implicitly subsidized. A second reason is that the public sector is more able to raise resources needed for poverty alleviation without crowding out private initiative and investment. Third, international experience has shown that it is much more difficult for the poor to protect their income and assets in a low-growth economy.\footnote{World Bank (1993b).}

Growth, Inequality, and Poverty in Urban Ecuador 1989-1993. We can see the link between poverty and growth between 1989 and 1993 by the fact that during this period, urban poverty increased in a low growth environment. GNP per capita grew only by 1 percent on average, with urban growth even lower since agriculture in the Costa was the source of most growth during those years. Between 1990 and 1993, the share of the urban informal sector in total employment increased from 45 to 48 percent. With poverty closely linked to informal sector employment and with wage rates in the informal sector significantly lower than in the formal sector -- at the end of 1993 the difference between average wages in these sectors was about 50 percent -- the income distribution worsened (Graph 15) and poverty increased at the national urban level and in the urban Costa and Sierra.\footnote{See Working Paper 2.}

Growth and Poverty Reduction. A per capita growth rate of three percent over a five year period could reduce poverty from 35 to 26 percent, provided it were not offset by a deterioration in income distribution. In fact, the impact on poverty reduction could be completely offset if inequality increases: If the share of the bottom 40 percent of the population in total consumption were to fall from the current 16 to 10 percent, poverty would increase to 40 percent despite high growth (Table 17). Conversely, inequality could be reduced by increasing the share of the bottom two quintiles to 20 percent, poverty could be reduced to 16 percent. A growth rate of three percent per capita is not without reach. In 1994, the economy rebounded strongly, real growth was four percent, and per capita increase of GDP almost two percent.

Improving Ecuador’s Growth Record. What are the underlying causes of Ecuador’s poor growth record, not only over the past five but over the last fifteen years? The discovery of oil at the beginning of the 1970s created a boom period during which per capita growth averaged 6.4 percent between 1972 and 1981. But then per capita growth slowed considerably between 1982 and 1992 and was only tenths of a point above zero. Three major reasons underlay this malaise: (a) low and
stagnant domestic savings were insufficient to finance a net resource transfer abroad to repay debt without affecting investment; (b) low growth in productivity meant that technological change could not be relied on to supplement reduced investment; and (c) a reduced availability of foreign exchange signified the economy’s vulnerability to imported goods and capital used intensively in production.

The primary reason for the slowdown since the early 1980s has been the decline in investment, stemming from low savings (Table 18). Investment rates declined sharply from 25 percent of GDP in the 1974-78 period to 20 percent of GDP since. Close to half of the decline in the rate of investments was due to reduced domestic savings, while the rest was due to an increase of net factor payments which domestic savings had to finance. Net foreign savings, on the other hand, did not decline as much due to the accumulation of arrears. It followed that the decline in the investment rates during the 1980s lowered the rate of growth of the capital stock and thereby the productive capacity of the economy.

The second major factor responsible for the disappointing growth in Ecuador has been an extremely slow growth in productivity due to the lack of technological change. While badly needed during times of declining investments, technological progress was extremely low during the 1980s, estimated at 0.2 percent and 1.5 percent; much lower than the comparable rate for the developing countries as a whole. The poor technological performance was largely due to an inward-looking development strategy during the 1970s, which fostered investments in capital-intensive, import-substituting and non-tradable industries.

The third reason for the slowdown is that Ecuador was vulnerable to external shocks at the beginning of the 1980s. Its exports were highly undiversified and the country was dependent on imports of capital and intermediate goods, which were used intensively in domestic production. Evidence suggests that substitution elasticities between imported and domestic factors of production were limited, due at least in part to the capital-intensive production technology fostered by the industrialization strategy. Although the economy is still vulnerable to imports, it is less so than ten years ago, mainly because significant trade and exchange rate liberalization, and a redesign of industrial policy has taken place. Since 1990, non-traditional exports grew on average by 35 percent per annum, now accounting for almost 20 percent of total export receipts. A continuation of this trend towards export diversification would make the country even less vulnerable to swings in the international price of petroleum.

**Increasing the Savings Rate.** Several conditions would promote higher savings, including most importantly continued progress toward macroeconomic stability. A more stable environment would reduce uncertainty and the threat of unexpected policy changes, both of which discourage saving and investment. Greater stability will increase the confidence of the private sector that future governments will not rely on periodic ad-hoc stabilization policies. Further, while the current Government has taken important steps to reform financial and capital markets, the necessary reform of the social security

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58 Renelt (1991)
59 World Bank (1996)
system has not been tackled. This would allow for the creation of a parallel private sector pension system, thereby deepening the financial markets.

**Promoting Technical Innovation.** New theories of growth stress the importance of technological progress for economic development. In Ecuador, the reduction of trade barriers has already discouraged investments in uncompetitive domestic industries and stimulated the development of non-traditional exports, which are an important transmitter of technological innovation and thus have positive externalities. Creating a framework, e.g., a trade information center cofinanced with the private sector, to help entrepreneurs explore non-traditional export markets might help this process along. Foreign direct investments can be not only a major source of technology and know-how transfer, but also of special importance in opening marketing channels. Foreign investors look for a regulatory framework that is not biased against foreign investments, and for macroeconomic stability and reform.

**Reducing Vulnerability to External Shocks by Diversifying Exports.** While the trade liberalization of 1991-1992 and the recent reversal of the real exchange rate appreciation of the 1980s have greatly helped non-oil export development, several barriers still exist. The export regulatory and institutional framework is highly fragmented. The depth of the financial market in Ecuador is still too shallow to cater to exporters' needs, and no reliable export guarantee or insurance scheme exists. Also, non-traditional export development rests with small- to medium-sized enterprises and it is difficult for these firms to internalize the substantial investments into information about the export process and foreign markets.

**Growth cum Education: The High Payoff.**
The importance of growth for reducing poverty in Ecuador can be seen by a simulation exercise using the Computable General Equilibrium model. The simulation consists a strong increase in investment of 2.5 percent of GDP per year over a five-year period.

We choose such an increase in investment because it corresponds to the observed drop in the domestic savings rate (between 1982 and 1992), and hence would be compatible with restoring the savings rate to levels observed before the debt crisis. In order to show that the effects of growth will not only translate directly into higher labor demand but also enable the public sector to raise a higher (absolute) amount of resources, we combine the physical investment scenario with human capital investment. Specifically, we assume that the mean educational level of workers is increased by half a year.

This growth-cum-education scenario, shows the strong effects of reallocating labor in favor of the modern, non-poor sector of the economy. A strong growth performance is the result of both higher physical and higher human capital stocks. Further, more than a quarter million workers would be drawn into the modern, non-poor economic sector, improving their real income by 40 percent (compare Graph 16). As already observed in the case of deregulation, this movement of workers will cause the real wage in the modern sector to decline by 4 percent which shows an important trade-off of which policymakers should be aware: while a growth and education strategy promises to help create better lives for the poor over the medium to long term, the movement of labor between sectors can impact on the real wages of the non-poor today. The stronger the growth environment, however, the smaller this adjustment will be.
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