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Investing in people to fight poverty in Haiti

Reflections for evidence-based policy making

MPCE

REPUBLIQUE D'HAITI
ONPES
Observatoire National de la Pauvreté et de l'Exclusion Sociale

WORLD BANK GROUP

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Foreword

The following is a new study on how poverty and vulnerability manifest themselves in Haiti. Some may question the value and relevance of such an undertaking and wonder if it was really necessary to engage in a new study of these phenomena, already so scrutinized and publicized in Haiti and around the world. What is actually new about poverty and vulnerability to justify this study? What have we truly learned about poverty and vulnerability that can help us reduce their adverse effects and promote Haiti's development? There are a multitude of reports, academic papers and documentaries on the reality of poverty in the country, covering nearly every aspect in detail.

In recent years, the fight against poverty has been an important part of government action. Thus, starting in 2004, the government developed the interim framework for poverty reduction, which became the National Strategy Document for Growth and Poverty Reduction (DSNCRP) in 2007, and the Action Plan for National Recovery and Development of Haiti (PARDH) in 2010 after the earthquake, and finally the Strategic Plan of Development of Haiti (PSDH) in 2012, accompanied by the first Triennial Investment Program (PTI) 2014-2016. In each case, the government has sought to link economic growth with the struggle for poverty reduction.

Contrary to what has been produced in the past, this report provides an updated picture of poverty, taking into account the living conditions of the people after the 2010 earthquake. It also includes the new national poverty lines derived from the post-earthquake living conditions survey, *Enquête sur les Conditions de Vie des Ménages Après le Séisme* (ECVMAS), from which an analysis of the causes and effects of the endemic poverty in the country were produced.

This report does not simply address poverty and vulnerability in and of themselves. On the contrary, it helps better identify challenges and opportunities, while also proposing ways to improve the current situation.

Michel Présumé
Secretary of State for Planning
Ministry of Planning and External Cooperation of the Republic of Haiti

Foreword

Despite numerous challenges, Haiti has made marked progress over the last decade. The percentage of its people living in extreme poverty has fallen from 31 to 24 percent between 2000 and 2012. Living conditions have broadly improved. There is better access to education, health, and housing services than a decade ago. All of this is welcome news.

When we started this report, we knew that the people of Haiti faced multifaceted difficulties across sectors. What we did not know was their magnitude, their geographic distribution, or their effects on different groups of the population. Thanks to the joint efforts of the government of Haiti and its partners, including the World Bank, to collect the *Enquête Sur les Conditions de Vie des Ménages Après le Séisme* (ECVMAS), develop the new national official poverty line, and produce this study, we now have a much clearer picture of the obstacles facing the country, and a precise diagnostic on which we can base policy priorities going forward.

We now know that poverty is particularly high and persistent in rural areas, with nearly 75 percent of the rural population remaining poor. We also know that the fight against income inequality has not advanced, and this high inequality has actually increased in rural areas. This study is able to document constraints and opportunities to set the country on a sustainable path of poverty and inequality reduction. Alongside sustained economic growth, and strengthening of governance and institutions, we have identified three priority areas for action. First, invest in people by improving access to education, health and basic services. Second, boost income generation prospects, especially in agriculture and among the urban self-employed. Third, in the face of high vulnerability to shocks and natural disasters in particular, shield the less well-off from losing their gains through better social protection and risk management.

While there is no silver bullet or perfect recipe to guarantee an end to poverty in Haiti, this study can serve as an indispensable tool for policy discussions based on solid evidence, and for program design guided by robust information. We hope it can be used as a building block to construct a better future for Haiti.

Mary Barton-Dock
World Bank Special Envoy for Haiti

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The team at the World Bank was led by Federica Marzo (Economist) and Facundo Cuevas (Senior Economist) and comprised Natalia Garbiras Diaz and Thiago Scot, under the overall supervision of Louise Cord (Practice Manager), Mary Barton-Dock (Haiti Country Director), and Raju Jan Singh (Haiti Program Leader,). The cross-sectorial Poverty Assessment team that authored the background papers included Aude-Sophie Rodella; Bernard Atuesta Montes; Alan Fuchs and Prospère Backiny-Yetna; Gbemisola Oseni; Tanya Savrimootoo, Eli Weiss, and Barbara Coello; Javier Sanchez Reaza and Michel Matera; Carine Clert (Focal point for the social sectors); Lucy Bassett, Victoria Strokova, Anna Ocampo and Frieda Vandeninden; Andrew Sunil Rajkumar, Eleonora Cavagnero, Mirja Sjoblom, and Marion Cross; and Melissa Adelman, Tillmann Heydelk, Patrick Ramanantoanina, Axelle Latortue, and Marie Monique Manigat. The themes covered by the background papers produced by the World Bank include: the poverty profiles and evolution and poverty measurement, rural development, urban labor markets, the education sector, the health sector, shocks and vulnerability, social protection.

The team at ONPES was led by Shirley Augustin (Coordinator) and comprised Pierre Jorès Mérat (Assistant Coordinator), Jean Malherbe Fritz Berg Jeannot, Ilionor Louis, Lewis Ampidu Clormeus, Josué Muscadin, Schmied St Fleur, Guy Alex Andre, Frantz Lamour, Hérard Jadotte, Dagobert Elisee, Lanier Sagesse, Emmanuel Michel David, Leonne Fatima Prophete (DPES/MPCE).

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Abbreviations

ARI	acute respiratory infection
CAED	*Cadre de coordination de l'Aide Externe au Développement*
CIN	*Carte d'identification nationale* (national identity card)
CNSA	*Coordination nationale de la sécurité alimentaire* (National Food Security Coordination Unit)
DHS	demographic and health surveys
DPES	*Direction de Programmation économique et sociale* (Direction of Economic and Social Planning)
EBCM	*Enquête Budget et Consommation des Ménages 1999/2000* (household income and expenditure survey)
ECVH	*Enquête des Conditions de Vie en Haiti 2001* (survey on living conditions in Haïti)
ECVMAS	*Enquête sur les Conditions de Vie des Ménages après le Séisme 2012* (postearthquake household living conditions Survey)
FAES	*Fonds d'assistance économique et sociale* (Fund for Economic and Social Assistance)
Fafo	Fafo Institute for Applied International Studies (Norway)
GDP	gross domestic product
IHSI	*Institut haïtien de statistique et d'informatique* (Haïtien Institute of Statistics and Informatics)
IR	inverse relationship
MMR	maternal mortality ratio
MPCE	*Ministère de la Planification et de la coopération externe* (Ministry of Planning and External Cooperation)
NDRMS	*Système National de Gestion des Risques et des Désastres* (National Disaster Risk Management System)
ONPES	*Observatoire national de la pauvreté et de l'exclusion sociale* (National Observatory for Poverty and Social Exclusion)
PAARP	*Plan d'Action pour l'Accélération de la Réduction de la Pauvreté* (Action Plan to Accelarate Poverty Reduction)
PPP	purchasing power parity
PSUGO	*Programme de Scolarisation Universelle Gratuite et Obligatoire* (free and compulsory universal education program)

Note: All dollar amounts are U.S. dollars ($) unless otherwise indicated.

Overview

Despite a decline in both monetary and multidimensional poverty rates since 2000, Haiti remains among the poorest and most unequal countries in Latin America. Two years after the 2010 earthquake, poverty was still high, particularly in rural areas. This report establishes that in 2012 more than one in two Haitians was poor, living on less than $ 2.41 a day, and one person in four was living below the national extreme poverty line of $1.23 a day.

Progress is evident, but much remains to be done. Extreme poverty declined from 31 to 24 percent between 2000 and 2012, and there have been some gains in access to education and sanitation, although access to basic services is generally low and is characterized by important inequalities. Urban areas have relatively fared better than rural areas, reflecting more nonagricultural employment opportunities, larger private transfers, more access to critical goods and services and narrowing inequality compared to rural areas.

Continued advances in reducing both extreme and moderate poverty will require greater, more broad-based growth, but also a concerted focus on increasing the capacity of the poor and vulnerable to accumulate assets, generate income, and better protect their livelihoods from shocks. Special attention should be given to vulnerable groups such as women and children and to rural areas, which are home to over half of the population and where extreme poverty persists, and income inequality is increasing.

1. Introduction

Haiti is a country of contrasts, where the challenges are matched by the opportunities. With a population of 10.4 million people living in an area of 27,750 km2, Haiti is one of the most densely populated countries in Latin America.[1] While 22 percent of the total population lives in the Metropolitan area of Port-au-Prince, the capital, slightly over half (52 percent) lives in rural areas; the rest reside in other urban areas outside the capital.[2] Haiti's strategic position in the middle of the Caribbean Sea, its potential as a tourist destination, its young labor force, and its rich cultural heritage offer a wide range of economic and geopolitical opportunities. Despite this, the wealth generated in the country is largely inadequate to meet the needs of the people: today, Haiti's per capita gross domestic product (GDP) and human development are among the lowest in Latin America and in the world (figure O.1).[3]

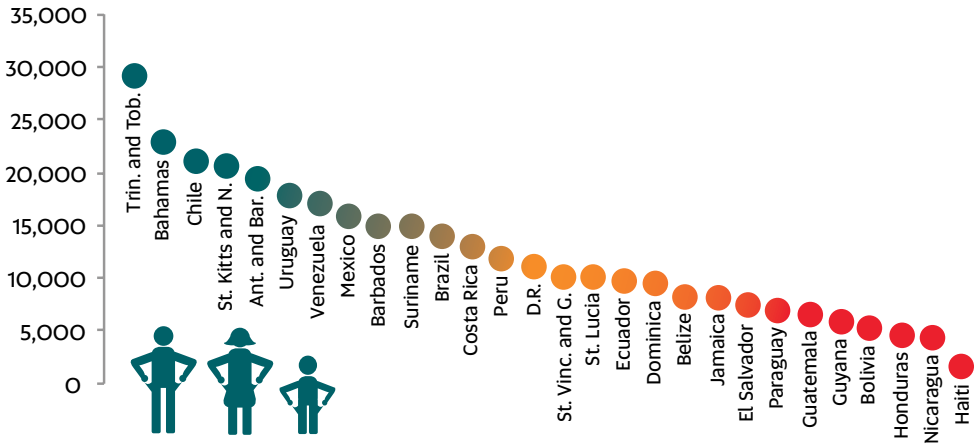
1 Based on available population projections of the Haitian Institute of Statistics and Informatics (IHSI 2012) and World Bank World Development Indicators (WDI).

2 All data in this briefing note are from the Enquête sur les Conditions de Vie des Ménages après le Séisme (postearthquake household living conditions survey, ECVMAS 2012), unless otherwise indicated.

3 Per capita GDP was $1,575 (purchasing power parity [PPP] U.S. dollars) in 2013. Haiti ranks 161 among 186 countries in the Human Development Index of the United Nations Development Programme. "Human Development Index (HDI) Value," United Nations Development Programme, New York, https://data.undp.org/dataset/Human-Development-Index-HDI-value/8ruz-shxu.

Figure O.1. GDP per capita in Haiti and in Latin America

per capita GDP (2011 PPP U.S. dollars), 2012



Sources: WEO (World Economic Outlook Database), International Monetary Fund, Washington, DC, October 2013, http://www.imf.org/external/pubs/ft/weo/2013/02/weodata/index.aspx; WDI (World Development Indicators) (database), World Bank, Washington, DC, http://data.worldbank.org/data-catalog/world-development-indicators.

2. Haiti in 2012: Monetary and multidimensional poverty

Poverty is widespread in Haiti; in 2012, the overall poverty headcount was 58.5 percent, and the extreme poverty rate was 23.8 percent. The new poverty measurement methodology developed by the technical agencies of the Haitian government reveals that almost 6.3 million Haitians cannot meet their basic needs, and, among these people, 2.5 million are living below the extreme poverty line, meaning that they cannot even cover their food needs (box O.1).[4] The incidence of poverty is considerably greater in rural areas and in the North, in particular.[5] More than 80 percent of the extreme poor live in rural areas, where 38 percent of the total population is not able to satisfy its nutritional needs, compared with 12 percent in urban areas and 5 percent in the Metropolitan Area (figure O.2). The poor are also geographically concentrated in the North, where the Nord-Est and Nord-Ouest Departments have an extreme poverty rate exceeding 40.0 percent (representing 20.0 percent of the overall extreme poor), compared with 4.6 percent in metropolitan Port-au-Prince (representing only 5.0 percent of the extreme poor). The incidence of poverty among both man- and woman-headed households is about 59 percent[6]; 43 percent of the population lives in woman-headed households.[7]

4 These rates are based on per capita consumption and were calculated using the 2012 official moderate and extreme poverty lines of G 81.7 per capita per day ($2.41 PPP of 2005) and G 41.6 per capita per day ($1.23 PPP of 2005), respectively.

5 For the purpose of this study, Haiti is geographically divided into five regions: the North, the South, the Transversal (the Center), the Metropolitan Area, and the West.

6 Based on a linear regression on poverty correlates, the sex of household heads is not correlated with poverty in any location of residence.

7 This share is high for international standards, but is in line with other countries in the Caribbean region: Antigua, Barbados, Dominica, Grenada, Saint Kitts and Nevis, and Saint Lucia present a share of woman-headed households above 40.0 percent (Ellis, 2003).

Box O.1. A new national poverty line for Haiti

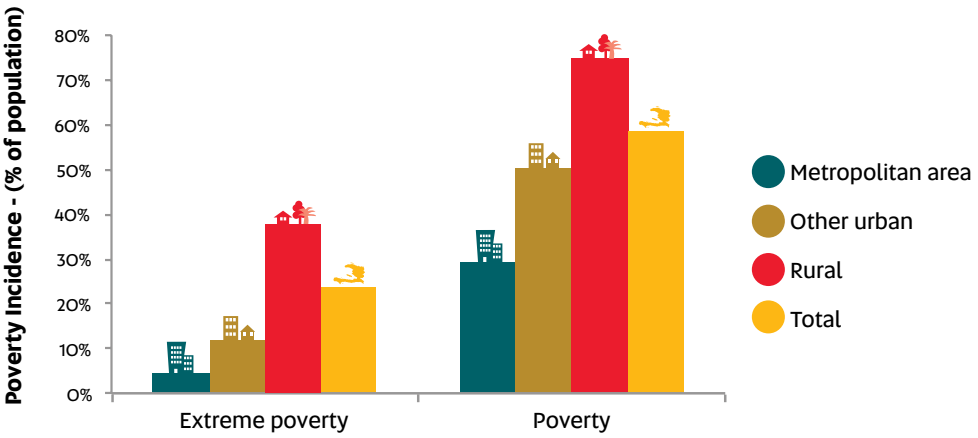
Using the new 2012 consumption data, for the first time the government of Haiti has produced a national poverty line, which thus becomes the new reference for the measurement, monitoring, and analysis of poverty in the country.

Between October 2013 and February 2014 an interinstitutional technical committee led by the National Observatory of Poverty and Social Exclusion(ONPES) and including the Haitian Institute of Statistics and Informatics (IHSI), the Fund for Economic and Social Assistance (FAES), the National Food Security Coordination Unit (CNSA), and the Direction of Economic and Social Planning (DPES) of the Ministry of Planning and External Cooperation (MPCE) developed and certified the first official national poverty line for Haiti, with technical assistance from the World Bank,. The poverty line is inspired by the cost-of-basic-needs approach and has values of G 81.7 ($2.41 PPP of 2005) for the moderate poverty line and G 41.6 ($1.23 PPP of 2005) for the extreme poverty line. The data used to produce the line are derived from the Enquête des Conditions de Vie des Ménages Après le Séisme (post-earthquake household living conditions survey, ECVMAS 2012), the first living conditions survey conducted in Haiti since 2001. The poverty rates for 2012 and the associated profiles are therefore based on the new official national poverty lines.

The new methodology developed by the technical agencies of the Haitian government reflects international best practice. Consumption is considered a better measure of well-being because it captures living standards more accurately, unlike income, which generally underestimates well-being and overestimates poverty[8].

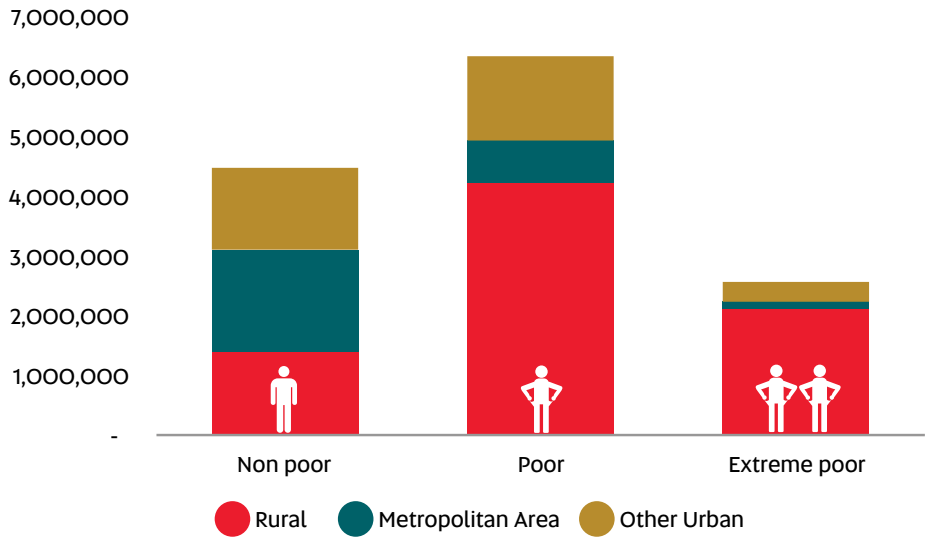
Figure O.2. Incidence of poverty and number of poor in urban and rural areas

a. Poverty incidence



8 The poverty rates produced in 2001 by IHSI and FAFO (76% and 56%) were based on the international thresholds of 1 and 2 dollars a day (PPP) and on households income data.

b. Number of poor in rural and urban areas



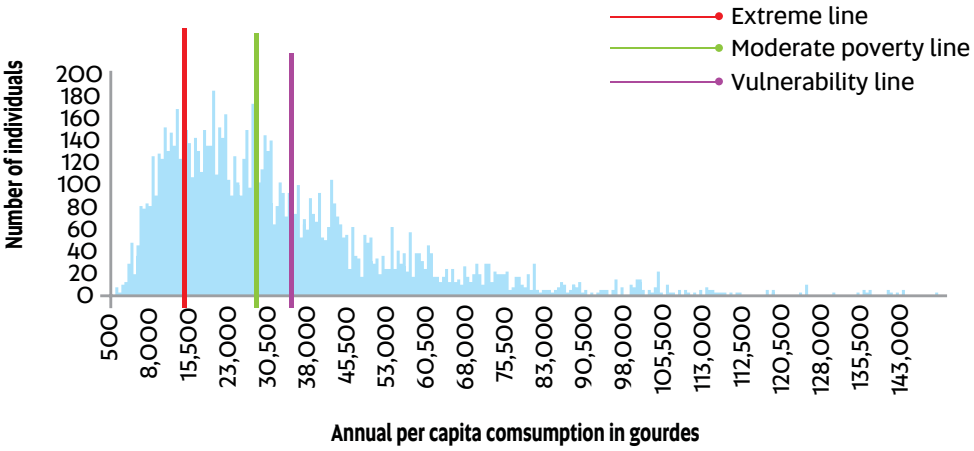
Source: Official poverty rates, based on ECVMAS 2012; World Bank and ONPES calculations.

Vulnerability is extensive in Haiti. One million people live slightly above the poverty line and could be pushed below the line by a shock; almost 70 percent of the population is either poor or vulnerable to falling into poverty (figure 0.4).[9] Only 2 percent of the population consumes the equivalent of $10 or more a day, which is the region's income threshold for joining the middle class. A typical Haitian household faces multiple shocks annually, and nearly 75 percent of households were economically impacted by at least one shock in 2012. The extreme poor are more vulnerable to shocks and the consequences of shocks: 95 percent experienced at least one economically damaging shock in 2012. Natural disasters, in particular, have a great disruptive potential partly because they so heavily affect agriculture, which is the main source of livelihood for a large share of the population, especially in rural areas. Indeed, the evidence shows that the most common covariate shocks are weather or climate related, while the most important idiosyncratic shocks are health related.[10]

9 In the absence of panel or synthetic panel data, the vulnerable are defined as individuals living on a budget representing 120 percent of the poverty line: in other words, 20 percent higher than the poverty line. An alternative definition of vulnerability used by the World Bank for Latin America is tied to economic stability and a low probability of falling into poverty. The threshold corresponding to this probability is $10 PPP a day, which is therefore used to identify the middle class in the region, while the vulnerable are defined as individuals living on between $4 and $10 PPP a day.

10 Covariate shocks affect large shares of the population of entire communities (such as natural disasters or epidemics), while idiosyncratic shocks affect individuals (such as sickness, death, or job loss).

Figure O.3. Distribution of household per capita consumption (in Gourdes)



Sources: *ECVMAS 2012 and official poverty lines; World Bank and ONPES calculations.*

3. Improvements in monetary and multidimensional poverty

Significant economic, political, and natural shocks throughout the last decade had important impacts on people's well-being[11]. The available data on poverty are cross-sectional, implying that they provide snapshots of welfare at the beginning of the 21st century and in 2012, but do not allow a disaggregated analysis of how each of these shocks affected households. However, a comparison of these two points in time suggests that welfare did improve despite repeated shocks. In particular, at the national level, the extreme poverty rate declined from 31 to 24 percent between 2000 and 2012 (figure O.5).[12] Improvements in urban areas drove this decline because the extreme poverty rate fell from 21 to 12 percent in urban areas and from 20 to 5 percent in the Metropolitan Area, but stagnated in rural areas, at 38 percent. While data from 2000 are not available to assess the relevant trends, moderate consumption poverty is also estimated to have modestly improved in the last decade.[13]

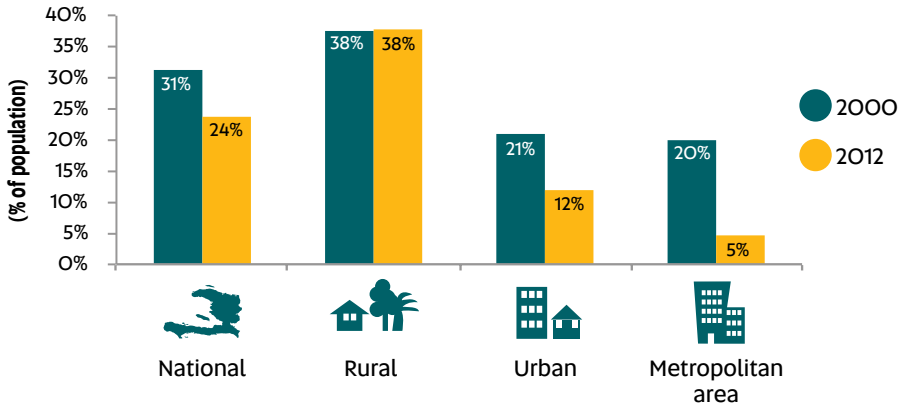
11 Among them the political crisis and floods of 2004, the hurricanes and increase in food prices of 2008, and the 2010 earthquake.

12 The 2000 poverty rates are from the Fafo Institute for Applied International Studies (2001), a Norwegian research center, based on the IHSI Enquête Budget et Consommation des Ménages 1999/2000 (household income and expenditure survey, EBCM) (see (http://www.fafo.no/indexenglish.htm). The consumption poverty indicators for 2000 were calculated based on a national food poverty line estimated in a slightly different manner than the official 2012 methodology. The consumption aggregate in 2000 was developed using over 50 items in the food basket, while the 2012 aggregate was based on a food basket of 26 items that reflects 85 percent of the value of the food consumed among the reference population in all regions of Haiti (deciles 2–6). Furthermore, the aggregate for 2000 does not include imputed rents, while the aggregate for 2012 does. Simulations show that, even excluding imputed rents from the 2012 aggregate, the declining trend in extreme poverty holds.

13 Income-based measures suggest that moderate poverty declined from 77 percent in 2001 based on the Enquete des Conditions de Vie des Menages 2001 (survey on living conditions in Haiti 2001, ECVH 2001) to 72 percent in 2012 (ECVMAS 2012). Consumption-based poverty measures are considered the most accurate in capturing welfare levels, especially in countries with high rates of rural poverty and significant income volatility; the new, official Haitian poverty measure is consumption based.

Despite a slight decrease in overall extreme poverty in Haiti, the number of poor remains extremely high, especially in rural areas.

Figure O.4. Evolution of extreme poverty in Haiti, 2000-2012



Source: EBC 1999/2000, en FAFO (2011), seuils de pauvrete officels ECVMAS (2012)

Nonmonetary welfare has also improved in Haiti since 2001 in both urban and rural areas (table O.1). The biggest gains have been in education, where participation rates among school-age children have risen from 78 to 90 percent. However, the quality of service delivery is a concern: because of a combination of late starts, dropouts, and repetitions, only one-third of all children aged 14 years are in the appropriate grade for their age.

Table O.1. Access to basic services.

Coverage rates, %

Indicator	*National*		*Urban*		*Rural*	
	2001	*2012*	*2001*	*2012*	*2001*	*2012*
School-age children in school	78	90	84	93	74	87
Access to improved drinking water sources						
WHO definition[a]	—	53	—	55	—	52
Access to tap water (in house)	7	11	13	18	3	5
Expanded definition[b]	—	73	—	91	—	56
Treated water (purchased)	—	20	—	36	—	4
Access to energy[c]	32	36	62	63	11	11
Rate of open defecation[d]	63	33	44	11	76	53
Access to improved sanitation[e]	—	31	—	48	—	16
Habitat, nonhazardous building materials	48	60	71	81	33	41

Sources: ECVH 2001; ECVMAS 2012; World Bank and ONPES calculations.
Note: — = not available. WHO = World Health Organization.

***a.** According to the international definition (WHO), access to improved drinking water is the proportion of people using improved drinking water sources: household connection, public standpipe, borehole, protected dug well, protected spring, rainwater. **b.** The expanded definition includes the international definition (WHO), plus treated water (purchased). **c.** Includes electricity, solar, and generators. **d.** Rate of open defecation refers to the proportion of individuals who do not have access to improved or unimproved sanitation. This indicator is part of the Millennium Development Goals (MDG) and is a key element of discussion for the post-2015 agenda The open defecation rate declined from 63 to 33 percent nationwide between 2000 and 2012, reflecting gains in both urban and rural areas. **e.** Improved sanitation is access to a flush toilet or an improved public or private latrine.*

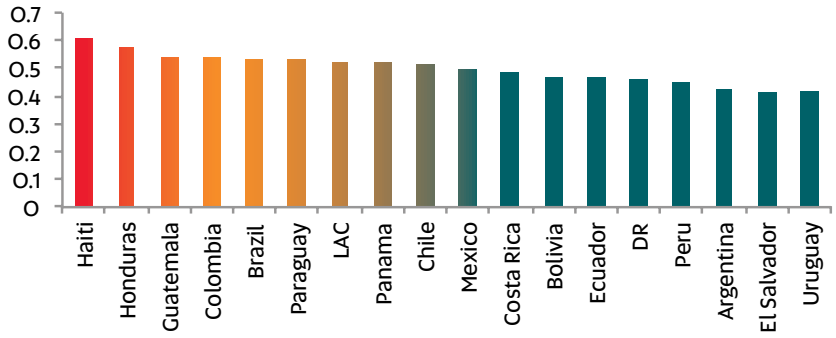
The quality of sanitation access, remains low: only 31 percent of the population had access in 2012 to improved sanitation overall, and 16 percent had access in rural areas.[14] Access to improved sources of drinking water is similar in urban and rural areas, at 55 and 52 percent, respectively. However, most of the remainder of the urban population (36 percent) purchases safe water directly from vendors; the rest (9 percent) use unimproved sources of drinking water. Meanwhile, most of the remainder of the rural population (44 percent) does not have this option and uses unimproved water sources (river water or unprotected wells) with a high probability of contamination. Access to energy (electricity, solar, or generators) expanded only slightly because of gains in urban areas, accompanied by stagnating levels in rural areas, which held at 11 percent.

Over the same period, income inequality stagnated: the Gini coefficient was static at 0.61 beginning in 2001.[15] The richest 20 percent holds more than 64 percent of the total income of the country, against the barely 1 percent held by the poorest 20 percent. However, this hides opposing trends in urban and rural areas, where inequality declined (from 0.64 to 0.59) and increased (from 0.49 to 0.56), respectively.[16] These levels of income inequality place Haiti among the most unequal countries in Latin America and in the world (figure 0.6).

Haiti is one of the most unequal countries in the world, in terms of both incomes and outcomes.

Figure 0.5. Income inequality in Haiti and in Latin America, circa 2012

a. Gini inequality coefficient, Latin America

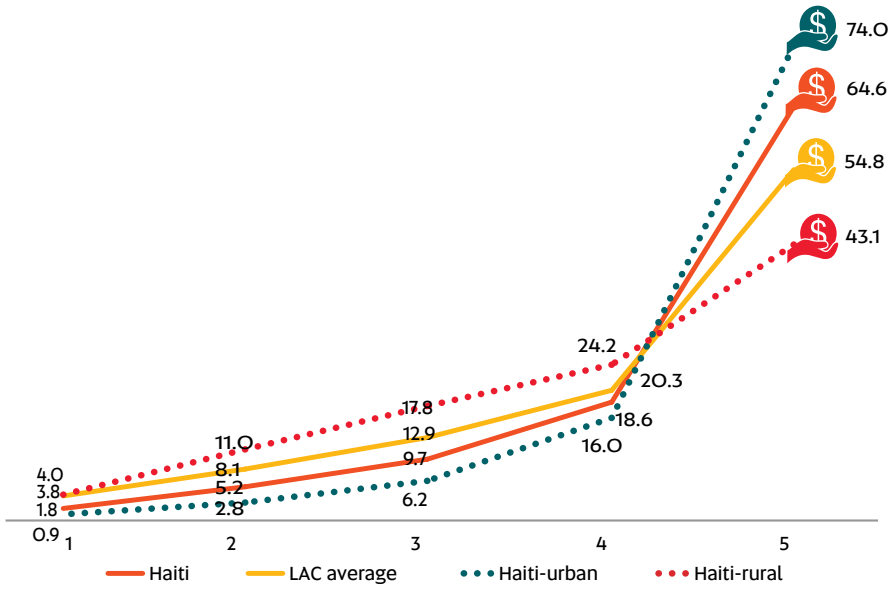


14 Improved sanitation includes flush toilets and improved latrines. According to the United Nations Children's Fund and the World Health Organization, an improved sanitation latrine is one that hygienically separates human excreta from human contact.

15 The Gini has been calculated using the income aggregate for 2001 and 2012, comprising household per capita labor income (including production for own consumption), nonlabor income, and imputed rent. The aggregate is built using the methodology of the Socio-Economic Database for Latin America and the Caribbean, as illustrated in CEDLAS and World Bank (2012).

16 It is not possible to compare trends in consumption inequality because the 2000 estimate did not exclude outliers, which strongly affect inequality estimates.

b. Income share, income quintiles, Haiti



Sources: *ECVMAS 2012; PovStat 2014; data of the Center for Distributive, Labor, and Social Studies.*
Note: *Average inequality in Latin America is based on income aggregates. The same methodology has been used to measure inequality in Haiti. However, comparability is not perfect because of differences in the questionnaires used to capture income.*

Despite improvements in basic services access, the poor face significantly larger barriers in accessing basic services. In 2012, 87 percent of 6- to 14-year-olds in poor households were in school, compared with 96 percent of children in nonpoor households. In the same year, child mortality in the highest welfare quintile was 62 per 1,000[17] live births, while it was 104 in the lowest income quintile. Similarly, the number of stunted children was four times greater in the lowest quintile relative to the highest.[18]. Fewer than 1 woman in 10 in the lowest quintile benefits from assisted delivery, versus 7 in 10 among the better off, which suggests that the poorest have limited access to maternal health services and are more likely to die during delivery.[19] These facts show that poverty is an important barrier to both school enrollment and health service utilization: in 83 and 49 percent of cases, respectively, cost is the main reason for keeping children out of school or not consulting a doctor if they are sick.[20] Households bear most of the burden of education costs (10 percent of their total budgets). In contrast, household health expenditures are relatively limited (less than 3 percent of total household budgets). These obstacles to investment in human capital are greater in rural areas, where poverty is more extensive and the supply of services more limited.

17 Health related data presented in this study are from the survey DHS/EMMUS 2012.

18 Welfare quintiles are based on a household asset index, not on household consumption.

19 In 2012, the coverage of deliveries within institutions was 8.4 times greater among the highest welfare quintile (76 percent) than among the lowest welfare quintile (9 percent). Welfare quintiles are based on a household asset indicator, not household consumption.

20 According to the 2012 demographic and health survey (DHS), 7 in 10 women aged 15–49 years do not seek medical support for lack of money, while 43 percent do not do so for lack of transport (see chapter 3).

Women and girls are particularly vulnerable because they face important obstacles to the accumulation and use of their assets, particular their human capital. Despite sizable progress in both education and health outcomes, adult women are still less well educated than adult men and are more likely to be illiterate, while their utilization level of health services is still very low. Apart from initial differences in endowments, women in Haiti also face additional obstacles in participating in the labor market where they are significantly less likely to be employed and earn significantly less than man (see below). Finally, gender-based violence and low participation in the public sphere are widespread in Haiti.

Due to extreme levels of poverty and vulnerability, the social protection system in Haiti faces difficulties in adequately meeting the needs of the population. In the face of the high incidence of and vulnerability to idiosyncratic or covariate shocks, the poor and vulnerable have limited access to public support, given the low capacity of the State. Most assistance arrives to them in the form of remittances or support from churches, other nongovernmental institutions, and donors. In 2012, only 11 percent of the extreme poor received public social assistance through scholarships, food aid, or other transfers.[21] Despite recent efforts to expand social assistance provision under the EDE PEP framework, the majority of the poor continue to lack access to formal safety nets that could allow them to smooth their consumption over time, prevent irreversible loss of human capital, and avoid destitution.

4. Poverty reduction: the importance of transfers and nonagricultural income

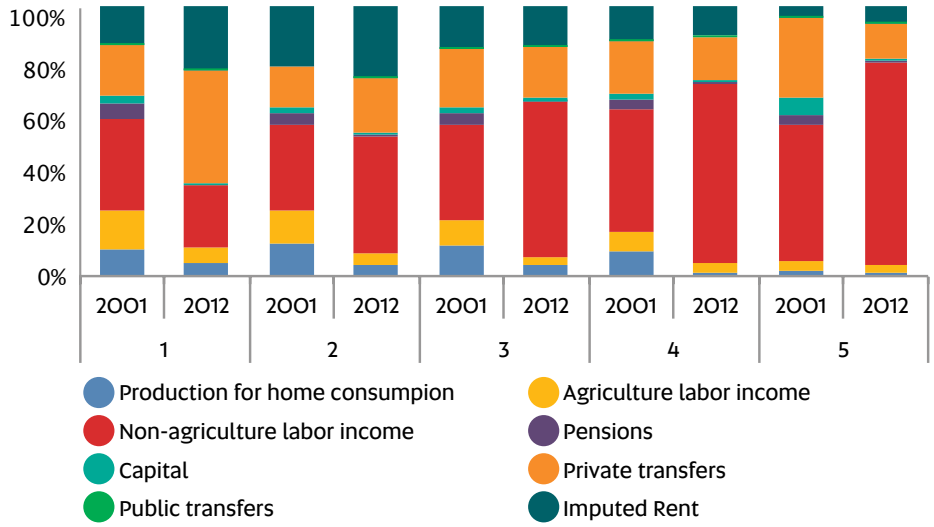
A special focus is needed on women, who face disproportionate challenges in all aspects of life in Haiti.

One of the key drivers behind the modest poverty gains in urban Haiti has been greater access to nonagricultural income. The share of nonagricultural income rose among all households in urban areas except for the poorest (figure O.7). The shift toward nonagricultural employment in urban areas likely reflects a transition toward better paid jobs in construction, transport, and telecommunications, sectors that experienced positive value added growth during the period. The average hourly labor income is two to four times higher in the informal and formal sectors than in the agricultural sector.[22] In contrast, households in the first quintile saw their share of nonagricultural and agricultural income fall, while the contribution of private transfers (domestic and international remittances) in their income rose.

21 The coverage rate does not capture a number of larger programs such as school feeding and tuition fee waivers or new programs introduced under the government platform, EDE PEP (in Haitian Creole, help the people).

22 The informal sector is defined by the International Labour Organization as unincorporated enterprises (household businesses) that are not registered, do not keep formal accounts, and are not in the primary sector (agriculture).

Figure O.6. Changes in per capita income composition in urban areas per income quintile, 2001–12



Sources: ECVMAS 2012 and ECVH 2001; World Bank and ONPES calculations.

Income generation opportunities in urban areas are limited by a two-sided problem: the scarcity of jobs and the prevalence of low-paid employment. Unemployment affects 40 percent of the urban workforce, and almost 50 percent of the female workforce. Youth face unemployment rates above 60 percent, which triggers not only economic, but also social concerns[23]. The challenge of finding a job ends up producing high levels of discouragement. Haiti has a low labor force participation rate compared to the rest of the region: only 60 percent of working-age individuals (15-64) participate in the labor market, compared, for example, with 70 percent in the neighboring Dominican Republic. Among those who find a job, 60 percent have earnings below the minimum wage and women earn, on average, 32% less than men[24].

Education plays a critical role in improving welfare in urban areas: labor income is, on average, 28 percent higher among individuals who have completed primary education than among uneducated individuals. In this context, the urban poor resort to self-employment or informal microenterprises[25] as a coping mechanism. Overall, almost 60 percent of the poor are in this type of occupation, and 75 percent of the poor are active in sectors such as trade, construction, and low-skill services.

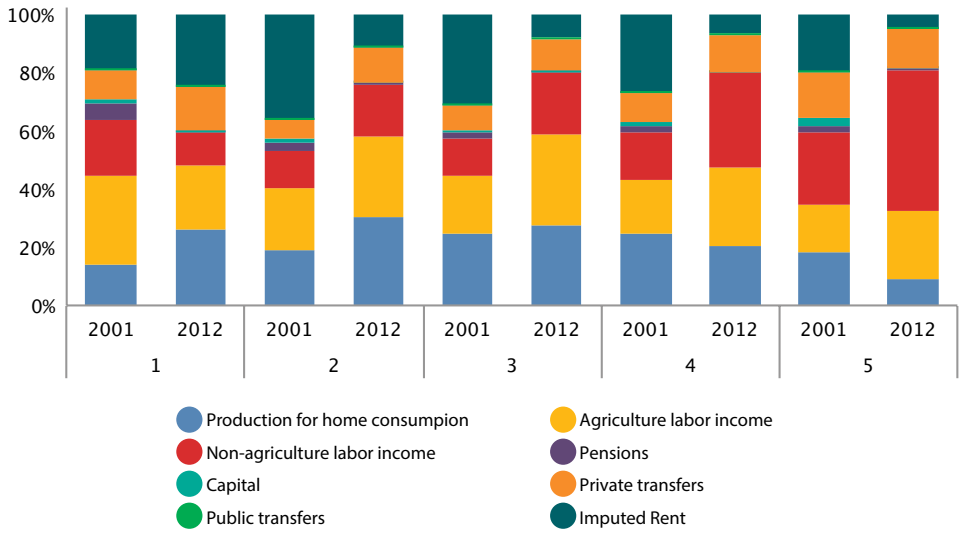
23 Extended unemployment rate, which includes not only people in working age who do not have a job but are looking for one, but also those who are not looking for a job because they are discouraged, waiting for a job answer, retired or sick, but would be immediately available if offered an opportunity.

24 This is so after one controls for age, education, experience, household size, number of young children in the household, urban location, and sector of activity.

25 Composed of one or two persons (including the owner).

The persistence of rural poverty reflects households growing reliance on a low-performing agricultural sector and production for home consumption. Over the decade, agricultural income (including production for own consumption and agricultural labor income) rose in importance, representing between 48 and 59 percent of the incomes among the first three quintiles (figure O.8). Rural livelihoods are highly dependent on agriculture: almost 80 percent of households engage in farming. Moreover, among half the households, farming is the sole economic activity. Unfortunately, the returns to agriculture are low and unreliable, and the activity resembles a subsistence strategy rather than reliance on a productive economic sector.[26] Lessons from better performing farmers suggest that improving access to inputs, product markets and supporting crop diversification are the main channels to elevating productivity. Among the poor, only 20 percent use fertilizer and pesticides. Moreover, even though the area of cultivated land is only slightly smaller among the poor than among the nonpoor (1.2 hectares versus 1.6 hectares, respectively), the poor spend two to four times less on fertilizer, pesticides, seeds, and labor[27].

Figure O.8. Changes in per capita income composition in rural areas per income quintile, 2001–12



Sources: ECVMAS 2012 and ECVH 2001; World Bank and ONPES calculations.

26 Since 2000, the sector has performed poorly, contracting by 0.6 percent annually as a consequence of repeated adverse climatic shocks. In 2012, agricultural production narrowed by 1.3 percent following a series of droughts, heavy rains, and hurricanes, which generated crop and seasonal income losses of 40 to 80 percent. The drop in production led to a decline in the demand for labor and a rise in the cost of locally produced food. Poor households thus lost income and faced higher consumption costs (prices). See "Haiti Food Security Outlook" (October 2012–March 2013), Famine Early Warning System Network, Washington, DC, http://www.fews.net/central-america-and-caribbean/haiti/food-security-outlook/october-2012.

27 Such a gap could arise from credit and liquidity constraints the poor face, as well as weak access to markets and knowledge about input use (Fritschel, 2002; Kydd et. al 2002; Jacoby, 1999).

Participation in the nonfarm sector is key to emerging from poverty in rural Haiti. Engaging in the nonfarm sector in rural areas reduces the probability of being poor by 10 percentage points. The typical nonfarm job in rural areas is a one- or two-person shop engaged in small retail. Still, the returns to this activity surpass those accruing to farming. About 40 percent of nonpoor households participate in the nonfarm sector, a participation rate that is 1.5 times higher than the participation rate among the poor.

External financial flows, including remittances and international aid, have also contributed to the decline in poverty. The share of households receiving private transfers in Haiti rose from 42 to 69 percent between 2001 (ECVH 2001) and 2012 (ECVMAS 2012). Worker transfers from abroad have represented more than a fifth of Haiti's GDP in recent years; they originate mainly from the Dominican Republic and the United States. Furthermore, in the aftermath of the 2010 earthquake, the country catalyzed international solidarity, resulting in unprecedented aid flows in money, goods, and services. These external flows contributed to poverty reduction over the period, especially in urban areas, which attracted most of the assistance.

Migrating, both domestically and abroad seems to be a profitable income generation solution for many households. An approximate cost-benefit comparison indicates that, on average, migration is profitable. A household with an out-migrant has forgone earnings of about G 5,000, but, in exchange, the migrant can expect to raise G 16,000 at destination (G 4,000 of which are sent in transfers). When controlling for individual and households characteristics, educated migrants earn on average between 20 and 30% more than their peer in rural areas.

5. Conclusions and Priority Areas for Development and Poverty Reduction Policy Action

This report identifies three main areas for action in the fight against poverty and inequality in Haiti, to complement efforts for better governance and sustainable growth: i) Boosting income generation in rural and urban areas to pull households out of poverty; ii) Improving provision of basic services, such as health and education, to increase productivity potential and provide the poor and vulnerable with the means to improve their lives in a durable manner; iii) Risk management and social protection policies to avoid livelihood losses.

Policies to boost households' income are essential to sustaining and accelerating welfare gains. In urban areas, achieving this objective will have to involve the creation of economic opportunities and better jobs, particularly among youth and women. A higher level of education, for example, is correlated with higher labor income. In rural areas, the stagnation of both extreme poverty and income inequality observed between 2000 and 2012 reflects the increasing reliance on the low-productivity agricultural sector. Because 80 percent of the extreme poor live in rural areas, it will be necessary to develop this sector by means of policies that support crop diversification and promote expanded access to inputs and to output markets. Furthermore, both in urban and rural areas it is necessary to improve the business

environment in order to increase the profitability of employment. Policies aimed at improving the mobility of goods and people, such as investments in transport or financial inclusion, could contribute to this goal, while allowing households to harness the potential of migration (domestic and international)

Enhancing access to education and health care is especially important in building individual and household human capital. In the context of limited economic opportunities, the public provision of services to increase the human capital accumulation capacity of the poor will be essential in breaking the vicious circle of intergenerational poverty. Expanding access and the quality of services, while reducing costs among households will be critical to improving health and education outcomes, particularly among children and women. Addressing early childhood development and gaining deeper knowledge about the determinants of school learning are essential in the education sector. Achieving universal primary enrollment will also require a short- to medium-term financing plan and an improved coordination with social protection programs. On the health care front, policies should aim at improving the accountability of service providers, increasing service utilization and quality, and expanding preventive health care services to reduce costs. In both sectors, furthermore, the establishment of an information system allowing for better identification and targeting of vulnerable populations, as well as for services quality control, will be critical in optimizing the use of available resources.

In the face of recurring shocks and vulnerability, better targeting in social protection and better risk management strategies should be prioritized to protect households and individual livelihoods. One million people are vulnerable to shocks that could push them into poverty. Despite the significant expansion of social assistance provision within the EDE PEP framework, developing a targeting system is an essential step to enhancing human capital accumulation among the poor and vulnerable using, among others, a national poverty map allowing for the identification of pockets of poverty and therefore to expand coverage. Besides social protection measures, the ex-ante identification and understanding of disaster risks are crucial for the protection of the assets of the poor, as are risk reduction policies such as the retrofitting of critical buildings and the construction of protective infrastructures. It will also be necessary to improve the country's capacity to manage disaster-related emergencies ex-post by strengthening institutional arrangements.

The regular monitoring of poverty and living conditions is a necessary step to promoting evidence-based and effective policy making. One of the many obstacles to post earthquake reconstruction and emergency operations is represented by the lack of sound statistical information at the national level. Strengthening the national statistical system through investments in this sector will allow the country to have reliable data from various sectors, through regular national censuses and surveys, such as ECVMAS, that will permit regular and systematic monitoring of poverty and households living conditions in Haiti, relying on the new reference rates for the country. At the same time, regular monitoring built on the solid baseline set out in this report will contribute to enhancing the design and efficacy of antipoverty policy making.

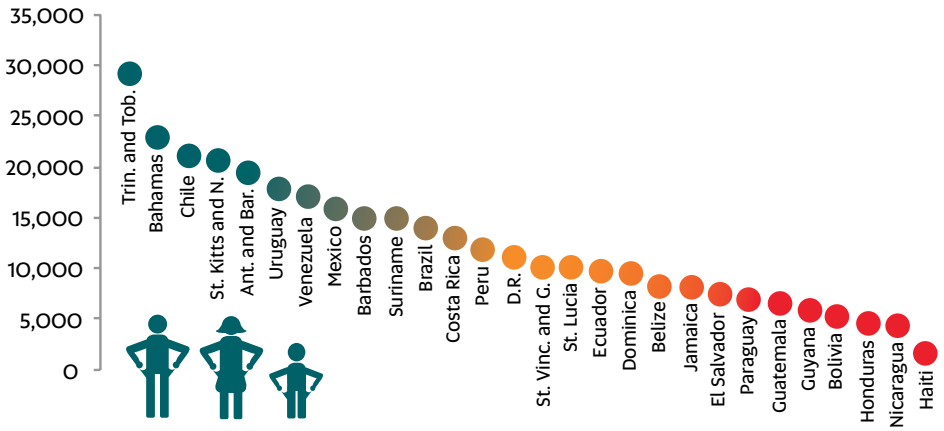
To combat poverty and inequality in a sustainable way, policies should focus in three key areas, alongside strong economic growth and better governance: Investing in People; Boosting Incomes and Opportunities; and Protecting the Poor and Vulnerable from shocks.

Background and introduction

Haiti is one of the biggest, most densely populated nations in the Caribbean and one of the richest in challenges and opportunities. Haiti occupies the western half of Hispañola Island in the Caribbean Sea, sharing the island with the neighboring Dominican Republic on its eastern border. With a population of 10.4 million people (49.5 percent men and 50.5 percent women) according to the latest population projections of the IHSI (2012), Haiti is one of the most densely populated countries in Latin America (fifth, after four other Caribbean countries)[28]. While 22 percent of the total population lives in Port-au-Prince, a small majority of Haitians still live in rural areas (52 percent against 48 percent in urban areas). The population is highly concentrated in three departments: Ouest (35.6 percent, mainly urban), Artibonite (16.3 percent, mainly rural), and Nord (almost 9.8 percent). The fertility rate of 3.5 children per woman is reflected in a population growth rate of 1.6 percent according to the latest estimates, relatively low compared with other countries at a similar level of economic development.[29] Haiti's strategic position in the middle of the Caribbean, its potential as touristic destination, its young labor force, and its rich cultural heritage account for a wide range of economic and geopolitical opportunities. Despite this, the wealth generated in the country is largely inadequate to meet the needs of the people: today, Haiti has one of the lowest GDP per capita in Latin America and in the world ($1,575 in 2011 PPP dollars), while scoring 161st among 186 countries according to the United Nations Development Programme's Human Development Index (figure BI.1).[30]

Figure BI.1. GDP per capita in Haiti and in Latin America

Per capita GDP, 2012 (in 2011 PPP U.S. dollars)



Sources: WEO (World Economic Outlook Database), International Monetary Fund, Washington, DC, October 2013, http://www.imf.org/external/pubs/ft/weo/2013/02/weodata/index.aspx; WDI (World Development Indicators) (database), World Bank, Washington, DC, http://data.worldbank.org/data-catalog/world-development-indicators.

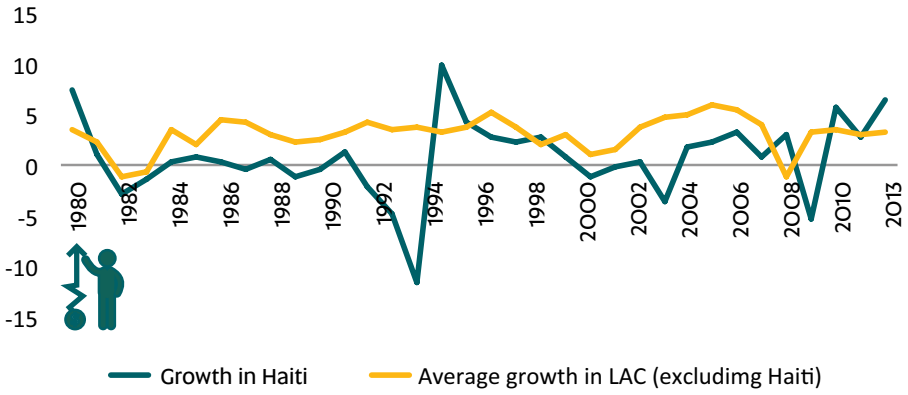
28 World Bank World Development Indicators (WDI).

29 The demographic growth rate refers to extrapolations performed by IHSI on the basis of population projections for 2010–15. The previous growth rate was 2.5 percent and corresponds to the intercensus growth rate (1982–2003).

30 "Human Development Index (HDI) Value," United Nations Development Programme, New York, https://data.undp.org/dataset/Human-Development-Index-HDI-value/8ruz-shxu.

The economic performance of the last 50 years has been disappointing; average growth has been among the lowest in the world. Between 1960 and 2010, Haiti recorded one of the lowest average growth performance in the world (below the averages in Latin America and Sub-Saharan Africa) (figure BI.2). In 1961–2000, average real per capita GDP contracted 1 percent a year, resulting in a cumulative reduction of 45 percent (World Bank 2006). In 2001–09, GDP growth was a mere 0.8 percent, and average real GDP growth per capita was −0.8 percent, while the earthquake of January 2010 caused a 5.5 percent contraction in the economy. The few periods of positive growth were short-lived. Historically, sustained economic growth only occurred in the 1970s, mainly because of favorable terms of trade and key public investments.[31]

Figure BI.2. GDP growth rate in Haiti and Latin America in 1980–2013



Source: WEO (World Economic Outlook Database), International Monetary Fund, Washington, DC, April 2014, http://www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx.

Low economic growth, poor governance, and fragility are among the main causes of substantial poverty and low human development outcomes. Poverty analysis based on household survey data has been extremely limited because of a lack of reliable data. The last Poverty Assessment produced by the World Bank dates from 1998.[32] It describes poverty as widespread and the access to basic services as limited, particularly in rural areas. The report emphasized the huge economic gap between urban and rural areas, and attributed to it the migration from rural to urban areas, exacerbating the uneven distribution of public resources toward urban areas, especially Port-au-Prince. Despite this and as a result of demographic pressures, living conditions in the capital were characterized by relatively poor access to services and unhealthy housing conditions. Regardless of location of residence, the average poor household was less well educated, had less access to wage income or transfers (in absolute terms), and depended more on self-employment and

31 During this period, tourism grew considerably as well as the nascent export-oriented assembly–light manufacturing sector, which took advantage of the proximity of the U.S. market and tax incentives. The growing economy incentivized urbanization and boosted the construction sector in Port-au-Prince, fueling private consumption. Meanwhile, the government supported the momentum of growth by raising public investment in key infrastructure, such as telecommunications, energy, and ports.

32 The assessment was based on a series of surveys, including a rural livelihood survey and a micro survey of three urban areas (La Saline, St. Martin, and Tokio). No national poverty rate was provided because of the lack of a national survey.

production for home consumption. The report listed a series of factors accounting for "the dire extent of poverty" (World Bank 1998), including poor governance and corruption, inadequate growth caused by poor macroeconomic management and limited private investment, underinvestment in human capital, and the bad quality of public expenditure. It stated that "the interaction of these various factors, including high population growth, produces a 'poverty trap' with one outcome: an increase in poverty and associated human, physical, social, and environmental degradation" (World Bank 1998). Based on the Enquete des Conditions de Vie des Menages 2001 (survey on living conditions in Haiti 2001, ECVH 2001) and a poverty line of $1.08 a day, a report of the Fafo Institute for Applied International Studies (Fafo) in 2004 provides similar stylized facts on income poverty in Haiti, suggesting that the situation had not significantly evolved at least since the late 1990s (Sletten and Egset 2004).

A study of the World Bank (2006) confirmed that the causes of Haiti's weak economic performance since the beginning of the 1980s are to be sought in political instability, fragility, and poor economic governance, but also acknowledged the impact of external shocks. A poor business environment, decreasing investment in physical and human capital, the erosion of public expenditure efficiency, low growth, and, ultimately, the self-perpetuating persistence of poverty have been the result of the joint prevalence of political and economic factors of internal and external origin, as follows:

- *Political instability*: Despite the glorious past that made Haiti the first independent black republic in 1804, the country's most recent history has been marked by several authoritarian regimes and popular uprisings, starting with the Duvalier era (father and son) that lasted 26 years, until 1986. Since then, political instability has worsened, and Haiti has seen a succession of 18 heads of state and few democratic transitions. The last significant political crisis occurred in 2004, with the ousting of President Jean Bertrand Aristide by popular upheaval.

- *Economic mismanagement:* Progressively, poor economic policy decisions from the late 1970s on have resulted in the creation of monopolistic public enterprises, the weakening of the private domestic sector and foreign investment, and the reduction of productive public investment, such as in key infrastructure and human capital, leading to a deterioration in the country's potential for growth.

- *External shocks of economic origin:* Haiti's dependence on agricultural exports and imports as a source of revenue and for domestic consumption, respectively, has made the country extremely vulnerable to external shocks, particularly shocks related to prices fluctuations for major exports (such as coffee and cocoa) or imported food (such as rice). Terms-of-trade shocks were experienced in 1981–92 (a fall in coffee prices), 2000–02 (a fall in coffee and cacao prices), and 2008 (a rise in imported food prices).

- *External shocks of political origin:* In response to domestic political instability, Haiti's main partners have repeatedly stopped or drastically cut official development assistance or trade relations. This was the case in the Duvalier era, when the country received almost no aid for development purposes, or the political crisis of the early 2000s. The embargo imposed by the United States between 1991 and 1994 had a

devastating impact on the economy by significantly reducing productive capacity, thereby destroying the nascent export manufacturing–assembly industries.

- *External shocks of climatic-natural origin*: Its geographical position, compounded by its dependence on agriculture, makes the country especially vulnerable to the impacts of climate-related shocks, such as hurricanes or droughts. Environmental degradation caused by deforestation and soil erosion has progressively worsened the impact of these shocks, which greatly affect economic and agricultural activity.[33] In 2004, floods aggravated the ongoing political crisis, causing damage to the economy estimated at 5.5 percent of GDP. In 2008, Haiti was hit by four hurricanes, causing a contraction in agricultural production by more than 7 percentage points and a rise in domestic food prices. The 2010 earthquake was destructive and led to significant loss of human life and displacements, as well as damage to infrastructure, dwellings, and, to a lesser extent, jobs. In 2012, the country was hit by two hurricanes (Isaac and Sandy) and one drought, leading to negative growth of 1.3 percent in the national agricultural sector.

In 2007, a new poverty reduction strategy was finalized, but its objectives have not been completely achieved. Subsequent to the World Bank Poverty Assessment (World Bank 1998) and the 2004 poverty profile of Fafo (Sletten and Egset 2004), a highly consultative Poverty Reduction Strategy Paper was developed in 2007 by the government and its partners within the framework of the Highly Indebted Poor Countries Initiative (MPCE 2008).[34] However, setbacks related to the political environment, extreme weather events and the major 2010 earthquake impeded the achievement of the objectives set by Poverty Reduction Paper (MPCE, 2011).

Despite this gloomy picture and the dramatic setback generated by the earthquake, positive signs have recently emerged. In 2005–09, Haiti experienced a period of continued economic growth (an annual average of 2.3 percent), with a peak in 2009 (3.1 percent), driven by agriculture and industry (figure BI.3).[35] The return to growth as well as other positive signals, sealed by the cancellation of most of the country's public debt through the Heavily Indebted Poor Countries Initiative, represented the difference with previous short-lived growth spurts and contributed to the generation of optimism in the country and among the country's partners.

The democratic election of René Préval in 2004 and the onset of structural reforms marked the return to macroeconomic and political stability. The earthquake that hit the country on January 12, 2010 suddenly stopped the momentum.

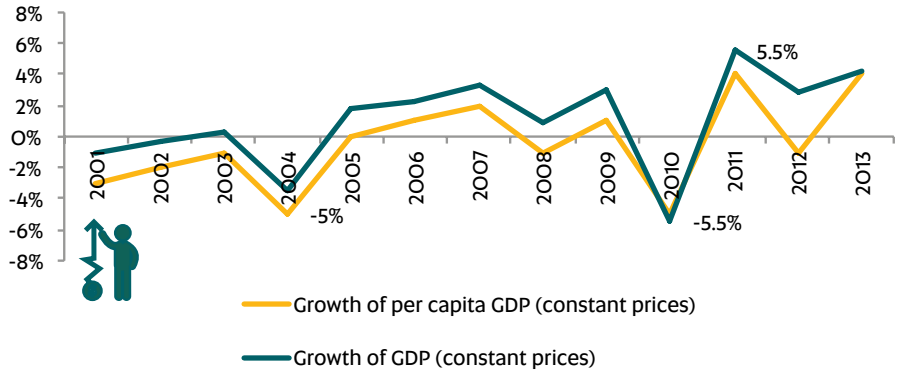
33 The forested area shrank by 13 percent between 1990 and 2010 (United Nations Development Programme, Human Development Indicators, https://data.undp.org/dataset/Change-in-forest-area-1990-2010-/77qj-63mn).

34 Based on the ECVH 2001 and a poverty line of $1.08 a day, the Fafo study (Sletten and Egset 2004) provides a picture of (income) poverty in Haiti similar to the World Bank 1998 study, describing it as a predominantly rural phenomenon, with 77 percent of the extreme poor living outside the Metropolitan Area. At that time, poor households were more likely to be headed by women, especially in Port-au-Prince, have less access to wage income or transfers (in absolute terms), and depend more on self-employment and self-production.

35 During this period, growth slowed only in 2008 because of food-price riots and the subsequent political crisis.

This tragedy caused over 200,000 deaths, considerable economic and infrastructure damage, estimated at 120 percent of GDP, and the destruction of the state apparatus. Nonetheless, the country's progress toward political and economic stabilization resumed almost immediately after the earthquake, partly thanks to the solidarity of development partners. Post-disaster reconstruction and a strong inflow of development assistance and remittances from the Haitian diaspora fueled economic recovery (a 5.5 percent growth rate in 2011), and the election of Michel Martelly in late 2010 was the first transition between two democratically elected presidents since 1996 and the first democratic political transition between opposing parties ever.

Figure BI.3. Real and per capita GDP growth in 2001–2013



Sources: IHSI 2014; World Bank and ONPES calculations.

While the country aligns efforts to improve governance and set the economy on the path of sustained, broad-based growth, reducing dependence on international assistance, positive signals suggest there are new opportunities for poverty reduction. Government institutions were progressively rebuilt in the aftermath of the earthquake, since the new government has elaborated a strategic document setting the goal of becoming an emerging economy by 2030 (Plan Stratégique de Développement d'Haïti (PSDH)). Associated with this vision, the government has resumed the path of reform (including a public financial management reform plan adopted in June 2014.) and its midterm investment planning activity. The government has made of poverty reduction a planning priority, and consistently expanded the budget devoted to social sectors. A new social protection strategy is currently under implementation, and aimes at reducing fragmentation, fostering coordination across government agencies, and increasing efficiency by enhancing monitoring and evaluation and the targeting of social programs. However, much still needs to be done to see concrete results in improved governance in Haiti, in particular with respect to corruption, the government effectiveness and productive public investments. Indeed, data indicates that corruption and weak government effectiveness are still very much an issue in Haiti[36].

36 The IMF (2011) ranks Haiti 56th out of 71 countries for which an index of efficiency of the public investment management process is available. Furthermore, the 2013 World Bank Worldwide Governance Indicator for Haiti suggests that the country ranks in the lowest decile in measures such as control of corruption, government effectiveness and rule of law.

The focus of this Poverty Assessment is to produce a thorough diagnosis of the levels, evolution, and drivers of poverty in Haiti, and to identify a set of priority areas for policy action. The objective of this joint ONPES/World Bank study is to serve as platform to discuss and prioritize policies, and contribute with robust evidence to resource-allocation decisions**.** The joint work was built mostly, but not solely, on the newly available ECVMAS 2012, the first such survey in more than a decade, the progress made by the government in poverty measurement through the launch of the first official poverty numbers in May 2014 (Box BI.1 provides a summary history of poverty measurement in Haiti.) and the deep knowledge of the country by the Haitian institutions and the World Bank sectorial teams. A distinctive strength of this Poverty Assessment is that it identifies a set of priority areas of action in each of the sectors covered by the analysis. With the new evidence and identified priority areas, policy and resource allocation discussion and decisions of the Government and its partners will be enhanced and better informed.

Box BI.1. The history of poverty measurement in Haiti

Historically, the analysis of monetary poverty in Haiti has been limited by the lack of credible, standard statistical information, as well as of an official measurement methodology. This led to multiple attempts to measure poverty between 2001 and 2006, contributing to some confusion. The surveys available for this type of exercise include two household income and expenditure surveys (EBCM I and II) conducted by IHSI, respectively, in 1986/87 and 1999/2000 and one living conditions survey collected in 2001 by IHSI in collaboration with Fafo (ECVH 2001). While the first two surveys include data on household consumption and expenditure, the third only covers income. Based on these data, two different types of analysis were conducted, as follows:

- In 2001, a nonofficial national poverty line was defined on the basis of the cost-of-basic-needs approach and household consumption data from EBCM I and II (Pedersen and Lakewood 2001). This exercise produced relatively comparable poverty rates for two years, showing a decrease in consumption poverty from 59.6 percent in 1986/87 to 48.0 percent in 1999/2000. These results, however, were later contested on the basis of a methodological weakness in the definition of the line and of the nonfood component (Montas 2005). Alternative calculations suggest that the incidence of poverty did not change between the two periods.

- Between 2003 and 2006, poverty was measured using the international poverty lines of the time ($1 and $2 PPP per head per day) applied to the income data of the ECVH 2001. Several agencies and researchers conducted the same analysis, producing different poverty rates based on a different use of PPP coefficients. Hence, the extreme poverty rate obtained using the $1 PPP line and data from 2001 ranged from 48.9 percent (Verner 2005) to 53.9 percent (World Bank and SEDLAC 2005/06) and 55.0 percent (UNDP 2003).

The only poverty rate commissioned by the government and used regularly thereafter was produced in 2006 based on 2001 data. In 2006, the Ministry of Economy and Finance asked IHSI to produce a poverty profile for Haiti based on the ECVH 2001 to facilitate forthcoming discussions with the International Monetary Fund on a new program of assistance and to prepare the ground for the definition of a Poverty Reduction Strategy Paper (see MPCE 2008). The joint work of IHSI and Fafo, based on income data of the ECVH 2001, produced an extreme poverty rate of 56 percent and a poverty rate of 76 percent. The related report, published by Fafo in 2004, described poverty as a mostly rural phenomenon because 77 percent of the extreme poor were living outside the Metropolitan Area (see Sletten and Egset 2004).

Between 2001 and 2012, no household survey was collected by IHSI, preventing any further attempt to update the poverty rate. The only national survey that took place regularly every five years was the demographic and health surveys (DHS), which, however, do not facilitate the monitoring of monetary poverty. In 2011, the World Bank used data from two DHS (1995 and 2005) to study poverty based on household assets in 1990–2000, before the earthquake. The study showed an improvement by 5 percentage points between 1995 and 2005 and a deterioration of 3 percentage points between 2000 and 2004, reflecting the economic and political crisis characterizing 2001–04.

In the aftermath of the earthquake, IHSI and its partners decided to collect a new survey on household living conditions, this time including household consumption. Starting in 2010, the French research center DIAL (Développement, Institutions et Mondialisation), IHSI, and the World Bank collaborated to produce a survey that was representative at the national, urban-rural, and departmental levels and that had the goal of measuring living standards after the earthquake. The survey—ECVMAS 2012—took place in 2012.

The availability of consumption data made the definition of a national poverty line possible, as well as the calculation of consumption-based poverty rates and the production of long-awaited poverty analyses. Between October 2013 and February 2014, an interinstitutional technical committee led by the National Observatory for Poverty and Social Exclusion (ONPES) and including IHSI, FAES, and the CNSA, developed the first official national poverty line for Haiti, with technical assistance from the World Bank. This threshold is inspired by the cost-of-basic-needs approach and has a value of G 81.7 per capita and per day ($1.98 in 2012 U.S. dollars) and G 41.6 per capita and per day ($1.00 in 2012 U.S. dollars). The poverty rates for 2012 and the associated profiles are therefore based on the new official national poverty lines (alternative measures of monetary poverty overtime are included in annex C).

The analysis developed in the Poverty Assessment is framed around the importance of supporting the poor and vulnerable in building, using, and protecting assets. Creating an environment that promotes greater growth and prosperity is critical for the country, but, if growth is to be boosted and shared among the less favored, the assets of the poor and vulnerable must be built up, used, and protected. All these three elements are necessary to achieve sustainable poverty reduction and shared prosperity. Improving access to assets such as human capital (education, health), and physical and financial capital is a key first step. Promoting utilization of those assets and fostering their returns is a second pillar for genuine poverty reduction via income generation. . Finally, in a context of significant exposure to aggregate and idiosyncratic shocks, it will be essential to protect the assets of the poor through enhanced safety nets and social protection services for better risk management.

Consistent with the conceptual framework presented above, the report is organized in three parts: the first part offers a thorough diagnostic of poverty and inequality in the country; including levels and trends over time, and socio-economic and demographic profiles of the poor. The second part refers to the main drivers and obstacles to poverty reduction. It distinguishes three pillars: accumulation of key assets, namely education and health; urban and rural income generation; and risk management strategies to protect households livelihood, including disasters risk management and social protection. Finally, the concluding chapter summarizes the key messages and priority areas of action for policy. Within this framework, each chapter is organized in three main parts: an introduction, a diagnostics, and a key-messages concluding section.

This approach implies that institutional and macro constraints to poverty reduction, such as issues of governance, fragility, and low economic growth, or issues of public resources availability, sustainability and allocation are not the focus of the analysis in this report. This choice has been motivated by the opportunity to use the newly available survey for a household-based analysis, as well as the parallel work being conducted by the World Bank, especially the Public Expenditure Review and the Systematic Country Diagnostic. The main objectives of these studies will be to draw a diagnosis of the major constraints to broad-based growth, with special attention to governance and public resource management. The Poverty Assessment, the Public Expenditure Review, and the Systematic Country Diagnostic will therefore provide a comprehensive picture of the constraints on poverty reduction in Haiti and the avenues for improvement.

Part I

Poverty and Inequality Diagnostic, 2012

Chapter 1: Poverty profile and trends

Two years after the earthquake, monetary and multidimensional poverty is still stark in Haiti, particularly in rural areas. In 2012, almost 60 percent of the population was poor, and one person in four was living below the extreme poverty line. Nearly half the households are considered chronically poor because they are living below the moderate poverty line and lack at least three of the seven basic dimensions of nonmonetary well-being. In rural areas, these numbers rise even higher: three-quarters of all households are monetarily poor, and two-thirds are considered to be living in chronic poverty.

Compared with 2000, monetary and multidimensional poverty has improved slightly. Consumption-based extreme poverty declined from 31 to 24 percent between 2000 and 2012, and there have been some gains in access to education and basic infrastructure, although the levels and quality are low. Income inequality is the highest in the region—at a Gini coefficient of 0.61—and has been steady at that value since 2001.

Urban areas have fared better than rural areas, reflecting larger private transfers, more nonagricultural employment opportunities, narrowing inequality, and more access to critical goods and services.

Continued progress in reducing extreme and moderate poverty will require greater, more broadbased growth, but also a concerted focus on improving access to basic opportunities in rural areas, where more than half the population resides, extreme poverty has stagnated, and income inequality is increasing. The regular monitoring of social indicators will provide the evidence base necessary for informed decision making.

1. Introduction

This chapter presents the poverty profile in Haiti and trends in poverty since early 2000. This is the first time such a diagnostic has been possible in more than a decade. The analysis is based on the nationally representative post-earthquake living conditions survey conducted by IHSI in 2012 (ECVMAS 2012), except where otherwise indicated[37]. The poverty estimates are based on official national poverty lines developed by the government on the basis of fresh household consumption data. The new methodology has meant that comparisons across time are delicate. Comparisons have been conducted using two data sources produced by IHSI: the living conditions survey of 2001 (ECVH 2001), which provides information on the socioeconomic characteristics of the population, and the budget and expenditure survey of 1999/2000 (EBCM), which provides the only nonofficial poverty line and consumption-based poverty estimates.

37 The final sample of ECVMAS 2012 includes 23,555 individuals from 4,930 households.

The rest of the chapter is organized into three sections. The next section illustrates and explains trends in poverty and inequality since 2000. The subsequent section offers a description of the poverty profile in 2012. The final section concludes.

2. Poverty and extreme poverty: levels and trends since 2001

2.5 million people in Haiti live below the national extreme poverty line, 80 percent of whom live in rural areas.

Poverty is endemic in Haiti, with a poverty headcount at 58.5 percent and extreme poverty at 23.8 percent at the national level in 2012 (table 1.1). These numbers indicate that almost 6.3 million Haitians cannot meet their basic consumption needs. Among these, around 2.5 million cannot feed themselves adequately. The poverty gap indicator is also high, at 24.4 percent at the national level. This indicator, the poverty deficit, represents the average distance from the poverty line.[38] This means that, on average, the poor live on less than 60 percent of the value of the poverty line, hence, less than G 48 per capita per day[39].

Table 1.1. Poverty and extreme poverty in Haiti, 2012

Moderate poverty	*Estimate*	*Standard error*	*95% confidence intervals*	
Share of the poor	58.5	0.0150	58.4	58.5
Poverty gap	24.4	0.0083	24.3	24.4
Severity of poverty	13.4	0.0059	13.4	13.4
Extreme poverty				
Share of the poor	23.8	0.0129	23.7	23.8
Poverty gap	7.7	0.0052	7.7	7.7
Severity of poverty	3.5	0.0030	3.5	3.5

Sources: ECVMAS 2012; World Bank and ONPES calculations.

Geographically, the poverty and extreme poverty rates are considerably higher in rural areas. Rural residents are at significantly greater risk of poverty relative to urban residents. In 2012, the majority of the population was still living in rural areas (52 percent compared with 59 percent in 2001), although the gap between the urban and rural populations was progressively disappearing because of constant migration from the countryside to the cities. Among the rural population, the poverty rate was as high as 74.9 percent, representing 67.0 percent of the total number of poor in the country. In contrast, the poverty headcount in urban areas was 40.6 percent. Port-au-Prince features the lowest poverty headcount in the country, at 29.2 percent, and hosts 11.0 percent of the total number of the poor. Extreme poverty follows a similar pattern (figure 1.1).

38 The equation of Foster, Greer, and Thorbecke (1984) to calculate poverty indicators is as follows:

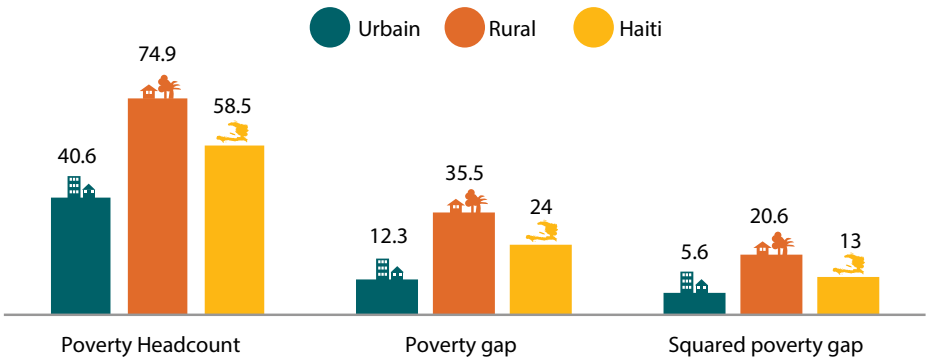
$$P\alpha=1/ni\mathrm{I}yi<z[z-yi]\alpha \quad (1.1)$$

where *n* is population size, *i* are individuals, *y* is the per capita measure of well-being (that is, consumption), *z* is the poverty line, and *I* is a function that takes the value of 1 if the statement is true and 0 if not. If α = 0, the resulting indicator is the headcount (the per capita poverty rate); if α = 1, the result is the indicator of the poverty gap; and, if α = 2, the result is the indicator of the depth of poverty.

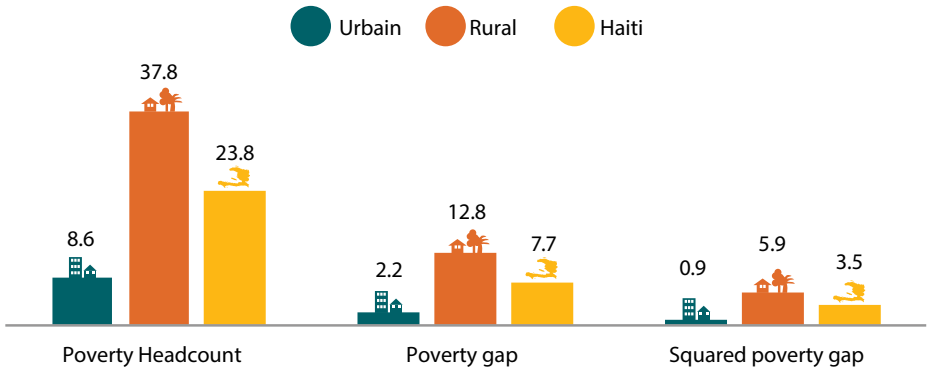
39 Since the poverty gap can be written as the product of the poverty rate and the average distance of poor households to the poverty line, a poverty gap of 24.4 and a headcount of 58.5 percent imply that the average poor household lives on 58 percent of the poverty line.

Figure 1.1. Incidence of moderate and extreme poverty in urban and rural areas, 2012.

a. Poverty



b. Extreme poverty



Sources: ECVMAS 2012; World Bank and ONPES calculations.

Not only is poverty greater and more widespread in rural areas, but it is also more entrenched. The poverty gap is 35.5 percent in rural areas, compared with 12.3 percent in urban areas. This means that the budget of the rural poor must rise by an average G 39 per capita per day if the poor are to step out of poverty, while G 25 would suffice in urban areas. The severity of poverty is also greater in rural areas, where the squared poverty gap indicator is almost four times higher than in urban areas (5.6 versus 20.6). This indicator takes into account the incidence and depth of poverty, as well as inequalities among the poor.

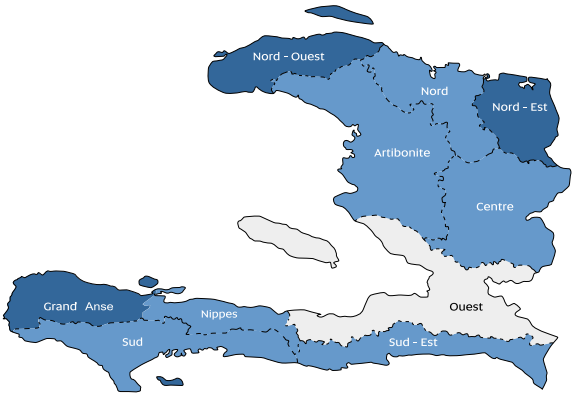
The poorest departments are the farthest from the capital and the most isolated. They are geographically concentrated in the North (Nord-Est, at 79.3 percent, and Nord-Ouest, at 81.8 percent) and the South (Grand'Anse, at 79.6 percent).[40] In these departments, poverty is also the deepest and the most severe (appendix A).

40 In the framework of this report, Haiti was divided in five geographical regions: the North, the South, the Transversale (the Center), the West, and the Metropolitan Area.

The same pattern characterizes extreme poverty (map 1.1). Nord-Est and Nord-Ouest have the highest poverty incidence rates. These two departments and Grand'Anse share two features: remoteness from the capital and isolation because of the poor transportation infrastructure, which makes them almost inaccessible during the rainy season. The departments hosting the three largest cities also have the lowest poverty rates: Ouest, at 39.1 percent, includes the capital, Port-au-Prince; Artibonite, at 60.5 percent, includes Gonaïves, the third largest city of Haiti and a dynamic trade center that also accounts for 70 percent of the domestic production of rice; and Nord, at 68.8 percent, includes Cap Haïtien, the second largest city and the second commercial and tourism port of the country.[41]

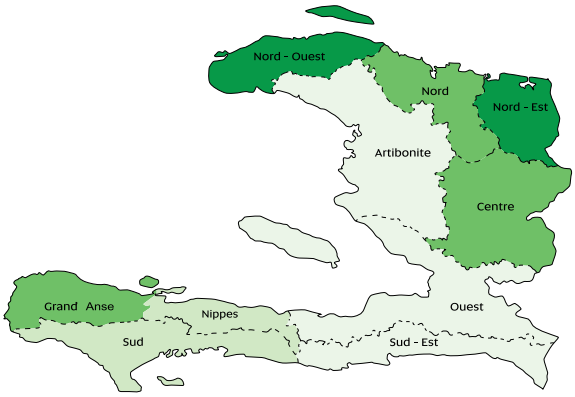
Map 1.1. Moderate and extreme poverty rates, by department, 2012

a. Poverty headcount



Below 40%
Between 40% and 60%
Between 60% and 78%
Above 78%

b. Extreme poverty headcount



From 10% to 25%
From 27% to 32%
From 33% to 37%
More than 37%

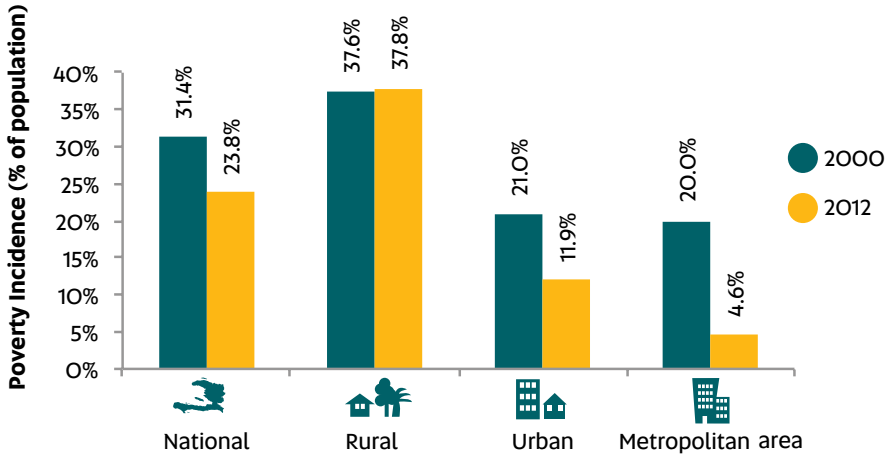
Sources: ECVMAS 2012; World Bank and ONPES calculations.

Since 2000, poverty has marginally decreased across the country, especially in urban areas (figure 1.2). Extreme poverty declined from 31.4 percent in 2000 to 24.0 percent in 2012, driven by progress in urban areas. While it moved from around 21 and 20 percent down to 12 and 5 percent in other urban areas and the Metropolitan Area, respectively, extreme poverty stagnated in rural areas. Data are not available to assess the relevant trends, but moderate consumption poverty is also estimated to have modestly improved in the last decade.[42]

41 For the details on Gonaïves, see "Haiti-USAID Best Analysis," March 2013, Office of Food for Peace, U.S. Agency for International Development, Washington, DC, http://www.usaidbest.org/docs/haitiReport.pdf.

42 Income-based measures suggest that moderate poverty declined from 77 percent in 2001 (ECVH 2001) to 72 percent in 2012 (ECVMAS 2012). Consumption-based poverty measures are considered

Figure 1.2. Trends in extreme poverty in urban and rural areas, 2000-2012



Sources: *EBCM 1999/2001; ECVH 2001; ECVMAS 2012; World Bank and ONPES calculations.*

More generally, living conditions measured according to indicators of access to basic services have improved in Haiti since 2001, but challenges remain (table 1.2). The biggest gains were in education, where participation rates among school-age children rose from 78 to 90 percent. However, the quality of education is a concern: because of a combination of late starts, dropouts, and repetitions, only one-third of all 14-year-olds are in the appropriate grade for age.[43] The open defecation rate declined from 63 to 33 percent nationwide between 2000 and 2012, reflecting gains in both urban and rural areas. However, the quality of sanitation access is low. Only 31 percent of the population had access in 2012 to improved sanitation; in rural areas, the share was 16 percent.[44] Access to an improved source of water is similar in urban and rural areas, at 55 and 52 percent, respectively. However, most of the remainder of the urban population (36 percent) can still access clean water by purchasing it, while the rest of the rural population (40 percent) use unimproved water sources, with a high probability of contamination.[45] Access to energy (electricity, solar, or generators) expanded overall only slightly because of gains in urban areas, while it was constant in rural areas, at 11 percent.

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the most accurate in capturing welfare levels, especially in countries with high rates of rural poverty and significant income volatility; the new, official Haitian poverty measure is consumption based. Further poverty measures are presented in appendix C.

43 Education background paper (2014), Haiti Poverty Assessment, World Bank, Washington, DC.

44 Improved sanitation includes flush toilets as well as improved latrines. According to the United Nations Children's Fund and the World Health Organization, an improved sanitation latrine is one that hygienically separates human excreta from human contact.

45 Such as dwellings constructed with hazardous materials, untreated sources of water, and use of surface water (rivers, lakes).

Table 1.2. Access to basic services.

Coverage rates, %

Indicator	Nationwide		Urban		Rural	
	2001	2012	2001	2012	2001	2012
School-age children in school	78.0	89.9	83.8	93.2	74.1	86.9
Access to improved drinking water sources						
WHO definitiona	—	53.2	—	54.9	—	51.7
Access to tap water (in house)	7.2	11.3	13.1	18.2	3.2	4.9
Expanded definitionb	—	72.7	—	90.7	—	56.2
Treated water (purchased)	—	19.5	—	35.8	—	4.5
Access to energyc	31.8	35.9	62.2	62.6	11.1	11.3
Rate of open defecationd	63.1	33.0	44.3	11.2	76.0	53.0
Access to improved sanitatione	—	31.3	—	47.9	—	15.9
Habitat, nonhazardous building materials	48.4	60.1	70.8	81.3	33.1	40.6

Sources: *ECVH 2001; ECVMAS 2012; World Bank and ONPES calculations.*
Note: *— = not available. WHO = World Health Organization.*

a. *According to the international definition (WHO), access to improved drinking water is the proportion of people using improved drinking water sources: household connection, public standpipe, borehole, protected dug well, protected spring, rainwater.* ***b.*** *The expanded definition includes the international definition (WHO), plus treated water (purchased).* ***c.*** *Includes electricity, solar, and generators.* ***d.*** *Rate of open defecation refers to the proportion of individuals who do not have access to improved or unimproved sanitation. This indicator is part of the Millennium Development Goals (MDG) and is a key element of discussion for the post-2015 agenda The open defecation rate declined from 63 to 33 percent nationwide between 2000 and 2012, reflecting gains in both urban and rural areas.* ***e.*** *Improved sanitation is access to a flush toilet or an improved public or private latrine.*

Haiti is a very unequal country, and income inequality in rural areas has increased. While income inequality—the Gini coefficient—has stagnated at 0.61 over slightly more than 10 years, it deteriorated in rural areas from 0.50 to 0.56.[46] Furthermore, the top quintile of the distribution gathers more than 60 percent of the national wealth, and the top 1 percent of the population was living on more than 50 times the resources of the bottom 10 percent.[47] These results suggest that Haiti is among the most unequal countries in Latin America (figure 1.3)[48].

46 The income aggregates in 2001 and 2012 were calculated using the same methodology (CEDLAS and World Bank 2012). To ensure comparability, the aggregate was not geographically deflated. However, the Gini coefficient would barely move in 2012 if it were geographically deflated (from 0.608 to 0.610). Part of the stagnation in inequality is driven by the imputed rent component of the income aggregate, which is of dubious quality in the case of the 2001 data. If this component is removed for both years, inequality decreases (from 0.67 to 0.63). Inequality would still increase in rural areas, although marginally, and decrease in urban areas.

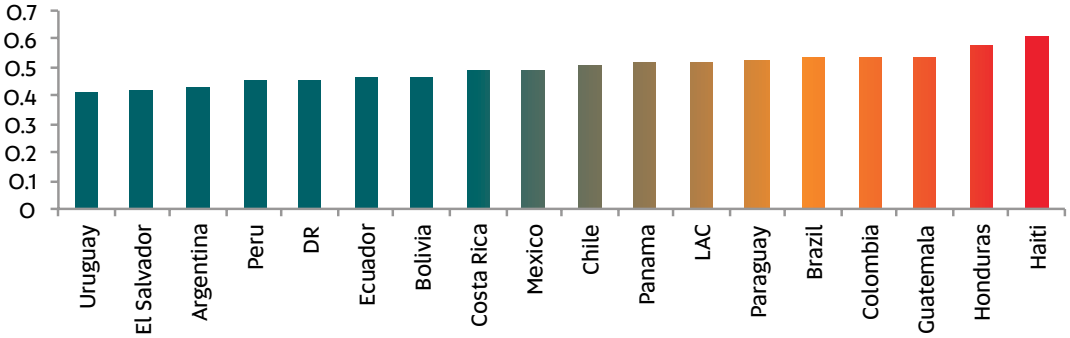
47 The gap between the top 1 percent and the bottom 10 percent is most likely larger because the richest households tend not to be fully represented in the household data. The statistics are based on household income.

48 Appendix B presents Lorenz curves at the national, urban and rural levels.

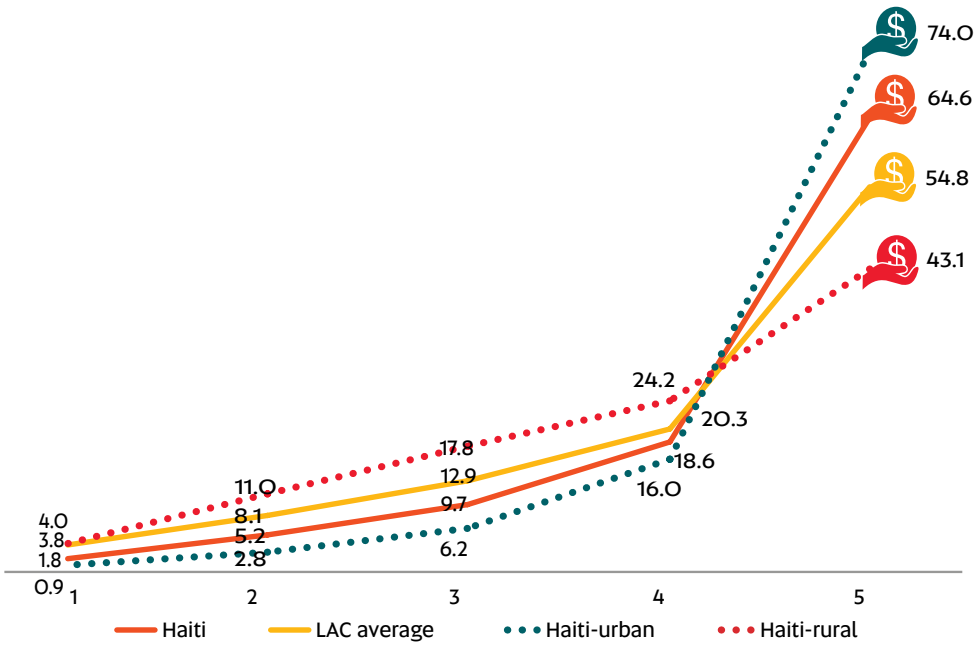
20 percent of the richest households hold 64 percent of total incomes in Haiti

Figure 1.3. Income inequality in Haiti and in Latin America

a. Gini coefficient (income based), selected Latin American countries, circa 2012



b. Wealth accumulation, by income quintile ranked from highest to lowest



Sources: *ECVMAS 2012; World Bank and ONPES calculations.*

In Haiti, 60 percent of households are considered multidimensionally poor in that they lack access to at least three of seven basic characteristics of well-being (education of children and adults, improved sanitation, clean water, reliable energy, nonhazardous housing, and food security) (box 1.1). Households that are below the monetary consumption poverty line and lack access to basic goods and services are considered chronically poor because they face particularly difficult challenges in emerging from poverty compared with the transient poor, who may lack monetary resources, but who have access to basic services. Nearly half the households in Haiti are chronically poor, suggesting that their opportunities to emerge out of poverty and improve living conditions are highly constrained (figure 1.4). Almost 70 percent of rural households are considered chronically poor, compared with only slightly over 20 percent in urban areas, highlighting the particularly narrow opportunity to emerge from poverty in rural Haiti. Only 14 percent of households nationally are accounted for by the transient poor in that they lack monetary resources, but have access to basic services and are more likely to be able to rise above the poverty line, while another 12 percent are above the moderate poverty line, but are made vulnerable by their deprivation in access to basic services.

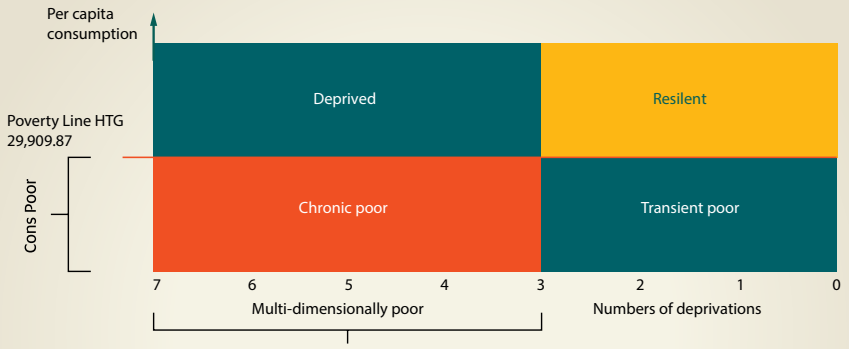
Box 1.1. The use of the multidimensional poverty index to identify the chronic poor

The division of poverty into the chronic, deprived, and transient poor is based on a combination of the multidimensional poverty index (MPI) methodology and monetary poverty as measured by the poverty headcount indicator. The MPI, which includes nonmonetary poverty indicators, identifies deprivation as the lack of access to basic services and infrastructure. We have included seven dimensions in the MPI indicator, namely, the educational attainment of children, the educational attainment of adults, health, water, sanitation, energy, and habitat, along with seven indicators, encompassing each dimension: education (the household head is literate; all school-age children are in school), health (the food security index), water (access to an improved source of drinking water), sanitation (access to improved sanitation), energy (access to a sustainable energy source), and habitat (access to a dwelling constructed of nonhazardous materials)[49]. To be considered MPI poor, households must be deprived across at least three dimensions (López-Calva 2013). In 2012, Haiti had a multidimensional poverty rate of 60 percent (figure B1.1.1).

49 For details of the methodology see appendix D.

Nearly half of the population (45 %) is not only poor but also lack access to essential services and infrastructure

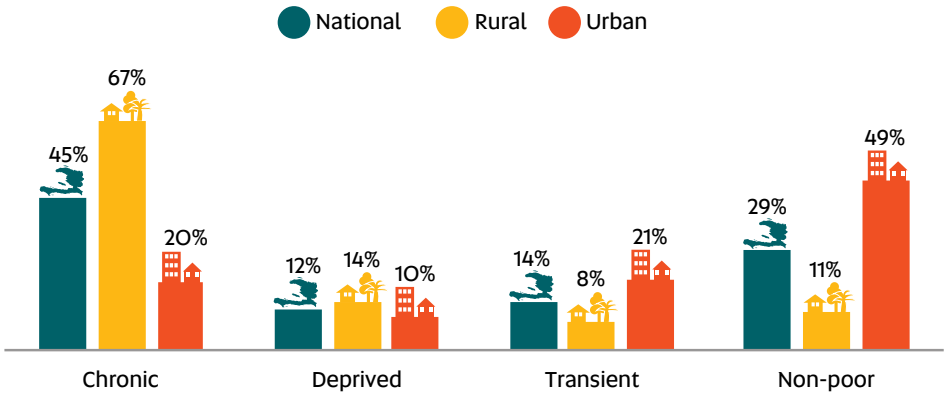
Figure B1.1.1. Poverty decomposition according to the MPI and monetary poverty



Sources: *ECVMAS 2012; World Bank and ONPES calculations.*

The chronic poor are those individuals living in households that are deprived in terms of access to basic services, infrastructure or that are food insecure (deprived across at least three dimensions of the MPI) and poor in monetary terms. The deprived are those individuals living in households that do not consist of the monetary poor, but that are deprived across the MPI dimensions. The transient poor are those who are among the monetary poor, but who are not MPI deprived. Finally, to be defined as resilient, individuals must live in households that are neither deprived, nor among the monetary poor.

Figure 1.4. Chronic and transitory poverty, service access deprivation and resilience in Haiti, 2012



Sources: *ECVMAS 2012; World Bank and ONPES calculations.*

3. Poverty profiles

This section provides answers to two main questions: Who are the poor? and Which factors are correlated with the escape from poverty? The answer to the first describes the demographic, social, and economic characteristics of the poor. The answer to the second illustrates levers and dimensions that reduce the risk of poverty. Each answer is presented in turn in the next subsections.

Characteristics of the poor

The poor live in larger households characterized by greater economic dependence and less educational attainment. While the average size of households among nonpoor households is 4.0 persons, the corresponding size among the poor is 5.3 (table 1.3). Among these poor households, 80 percent have five or more persons. The dependency ratio is 54 percent among nonpoor households, but 88 percent among poor households, pointing to greater pressure on the productive population in these households.[50] The poor live in households in which the heads have an average of three times fewer years of education, and as many as 61 percent of the heads of poor households are illiterate, compared with 34 percent among nonpoor households. These characteristics are exacerbated among the extreme poor and in rural areas, where poverty is more extensive and more entrenched, and are consistent with other studies on the issue[51] (for example, see Sletten and Egset 2004; World Bank 2006; ONPES 2014).

Table 1.3. Basic sociodemographic and socioeconomic characteristics of poor, extreme poor, and nonpoor households.

Averages

Variable	*National*			*Urban*			*Rural*		
	Nonpoor	*Poor*	*Extreme poor*	*Nonpoor*	*Poor*	*Extreme poor*	*Nonpoor*	*Poor*	*Extreme poor*
Household size, number[a]	3.9	5.3	6.2	4.1	5.7	6.4	3.6	5.1	6.2
Age of the head, years	44.7	46.7	48.9	43.1	44.1	43.8	48.2	48.9	50.0
Under-5-year-olds, %[a]	0.3	0.7	1.0	0.4	0.7	1.0	0.3	0.7	1.0
Dependency ratio[a]	53.8	88.4	114.0	53.6	79.0	115.2	54.2	95.2	113.7
Head, man, %	56.8	56.0	59.6	53.5	49.6	48.1	63.9	61.1	62.0
Education, head, years[a]	6.3	3.5	1.7	7.5	5.0	3.2	4.1	2.5	1.4
Literacy, heads w/>5 years of education, %	65.8	38.5	19.6	74.2	54.1	34.5	47.6	26.1	16.5
Employed head, %	73.2	67.8	72.9	68.7	59.8	53.2	82.8	74.2	77.1

50 The dependency ratio is the proportion of household members aged 15–70 relative to the total number of members, regardless of age. Normally, the dependency ratio is defined on the basis of the 15–65 age-group, reflecting the formal retirement age. However, in the case of Haiti, where formality represents a small share of the labor force, the age threshold of 65 is not realistic.

51 For the evolution of characteristics of households between 2001 and 2012 see appendix E.

Unemployed head, %	15.8	18.3	11.9	20.1	28.7	32.1	6.4	10.1	7.7
Inactive head, %	11.0	13.9	15.2	11.2	11.5	14.7	10.7	15.7	15.3
Employed household members, number[a]	1.4	1.5	1.6	1.3	1.3	1.2	1.6	1.6	1.7
Head employed in agriculture, %	25.5	49.1	77.5	6.1	16.3	41.1	60.7	70.2	82.7
Head employed in the formal sector, %	17.5	6.1	1.6	24.6	9.5	2.2	4.7	4.0	1.6
Head employed in the informal sector,%	57.0	44.7	20.9	69.3	74.3	56.7	34.5	25.8	15.7
Households receiving private transfers (excluding remittances), %	58.58	60.56	58.23	57.56	64.14	64.81	60.5	58.84	56.91
Households receiving remittances , %	37.76	18.21	13.83	40.72	25.72	14.87	32.13	14.59	13.62
Average per capita consumption, HTG	58,372	22,335	10,300	60,989	23,360	11,322	52,657	21,520	10,086
Average food share in total consumption, %	46.7	57.5	62.4	42.4	48.9	47.2	56.0	64.3	65.5
Access to improved sanitation, %	49.6	23.2	11.1	57.9	35.4	24.9	31.3	13.4	8.2
Access to tap water, %	15.3	10.6	5.4	18.4	18.1	17.8	8.6	4.6	2.8
Access to a sustainable source of energy, %	58.3	28.2	7.9	73.0	51.3	32.4	26.1	9.8	2.8
Dwellings made w/nonhazardous materials, %	80.7	57.1	28.6	88.2	75.8	53.6	64.3	42.2	23.4
Food security rate, %	88.2	72.2	43.4	88.0	71.9	33.7	88.6	72.5	45.5

Note: The estimates for the poor exclude the extreme poor. Variables reflect the percent share of individuals. a. Share of households relative to the average household.

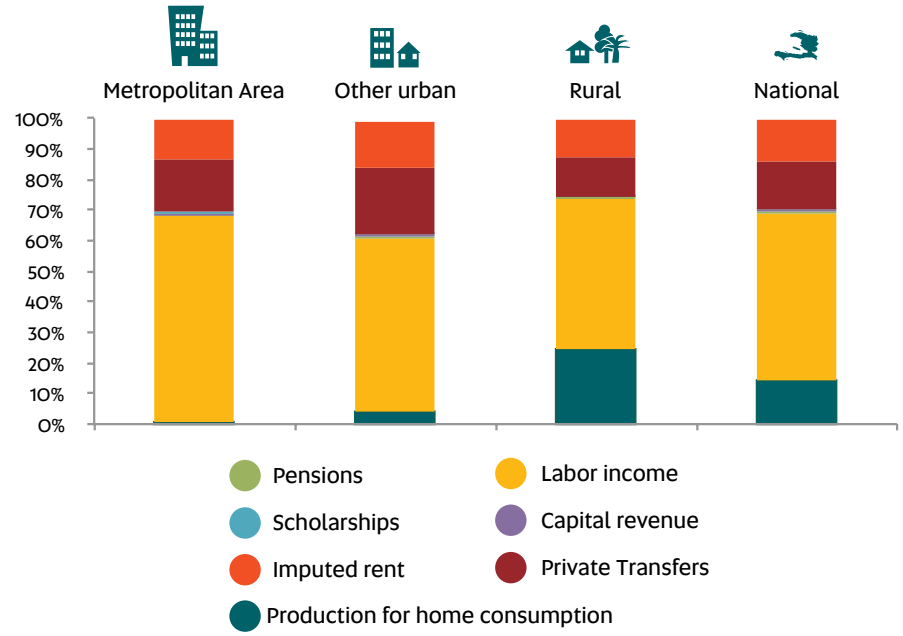
Poor urban and rural households have evolved in different environments that generate specific challenges. While average per capita consumption is similar among the rural poor and the urban poor, there are still important differences characterizing rural and urban livelihoods. Thus, rural households devote a much higher share of their consumption to food (63 percent), while urban households can afford a larger share of nonfood consumption (55 percent), including higher-value dwellings, more assets, and more access to services. These differences reflect a different composition of expenditure and better access to goods and services in urban areas.

Most of the poor work, but their earnings are insufficient to lift them out of poverty, particularly if they are working in the primary sector. Almost 70 percent of the heads of poor households have jobs (against 73 percent among the nonpoor). However, among the former, 61 percent work in agriculture, where average earnings are less than 20 percent of the earnings in the formal sector. Among the remainder, 35 percent work in the informal sector, where earnings are less than half those in the formal sector (4 percent) As a result, more than half of poor households undertake two or more income generating activities.

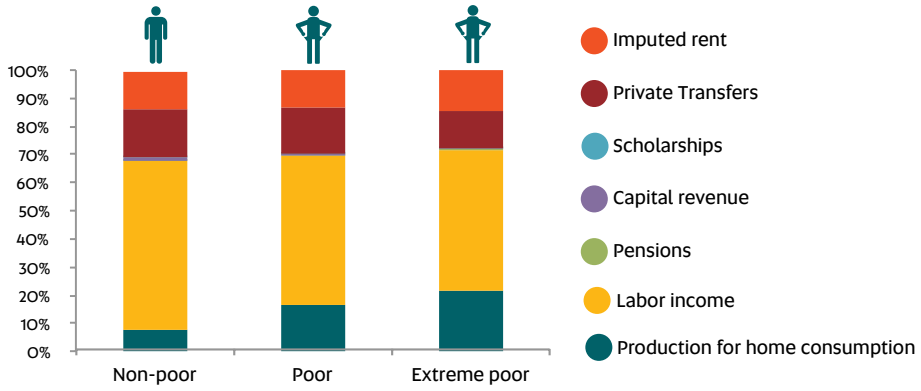
Compared with the nonpoor, the poor rely significantly more on private transfers and production for home consumption and less on labor income (figure 1.5). Although labor income tends to be the main source of livelihoods among Haitian households, this is not the case among the extreme poor, who depend more on private transfers (in urban areas) and production for home consumption (in rural areas). More broadly, livelihoods in rural areas are substantially less well connected to markets and more dependent on a self-sufficiency economy. Of the means of livelihood in rural areas, 25 percent derive from production for home consumption.

Figure 1.5. Income composition in urban and rural areas and by poverty status

a. Income composition, by area of residence



b. Income composition, by poverty status



Sources: *ECVMAS 2012; World Bank and ONPES calculations.*

The most abundant asset of the poor is human capital, but the poor face significantly higher barriers in access to health care and education.[52] Children in poor households are less likely to be in school: 87 percent of children aged 6–14 in poor households are in school, compared with 96 percent of children in nonpoor households (see chapter 3). This suggests that poverty is an important barrier to school enrollment, which is further supported by the fact that, in 83 percent of cases, cost is

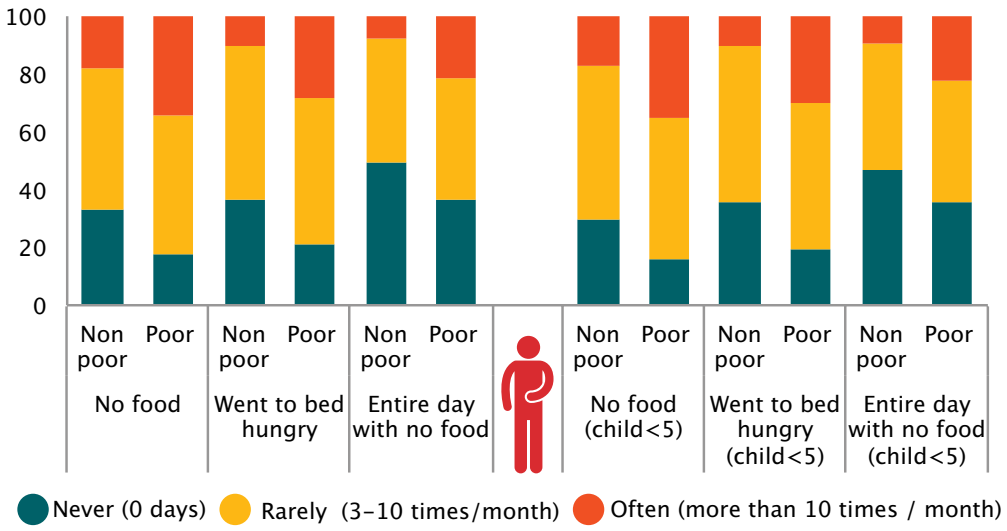
52 Human capital is defined here broadly as a set of intangible assets, skills, and knowledge that can create economic value and generate more remunerative labor outcomes.

the main reason for keeping children out of school. Financial barriers are also the key obstacle to access to health care among the poorest, followed by lack of transportation.[53] These barriers to investment in human capital are larger in rural areas, where poverty incidence is greater and service delivery more limited. Still, even though the education levels and health status of the poor are low, human capital is their strongest asset because their access to physical or financial capital is constrained.

The poor suffer from poor nutrition early in life and from food insecurity, which also affects their investments in human capital. Food insecurity is significant in Haiti, at 28 percent nationwide and 34 percent in rural areas.[54] Poor household members are much more likely to report frequent hunger or lack of food at bed time relative to the members of nonpoor households (figure 1.6). Households with children under the age of 5 are much more likely to experience repeated food shortages.[55] As a result, one-fifth of under-5-year-olds are chronically malnourished (DHS 2012). This is a particular cause of concern because proper nutrition in early life is crucial for brain development and subsequent life outcomes (Alderman and King 2006).

Figure 1.6. Food insecurity in Haiti, 2012.

Food availability among the poor and nonpoor and among households with and without young children



Sources: ECVMAS 2012; World Bank and ONPES calculations. Note: The survey questionnaire asked how often, over the past four weeks, a household had experienced "no food at all" or that at least one household member "went to bed hungry" or "spent all day without eating."

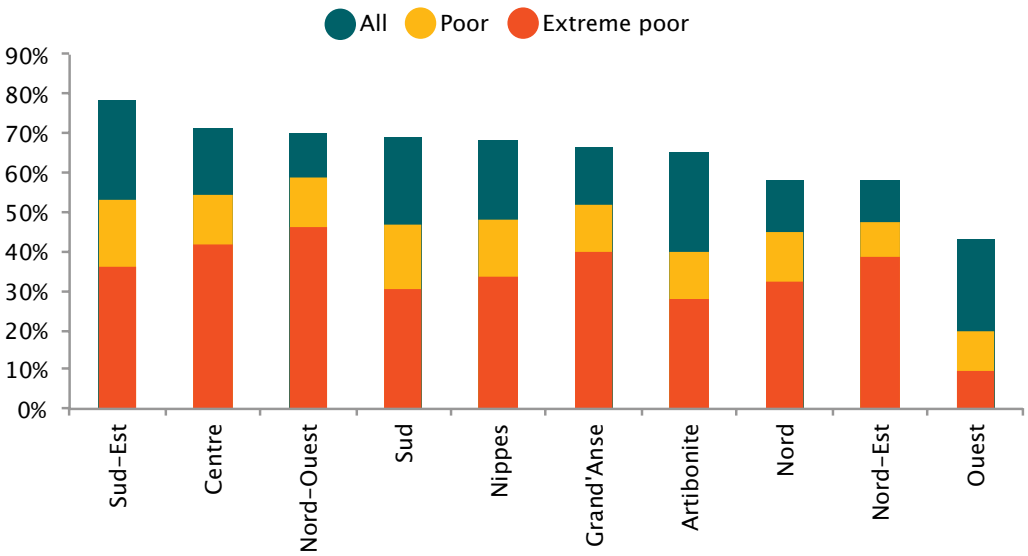
53 Because of a lack of money, 7 in 10 women aged 15–49 do not seek medical support, while 43 percent do not seek the support for lack of transportation, according to the DHS 2012 (see chapter 3).

54 According to the National Food Security Coordination Unit, the food insecurity rate was 28 percent nationwide and 48 percent in rural areas in 2011. To measure food insecurity, the unit uses a composite indicator composed of both quantitative and qualitative measures. The numbers contained in this chapter, on the other hand, refer exclusively to the food security indicator of the Food and Agriculture Organization of the United Nations, which is based on food intake.

55 Shared prosperity background paper (2014), Haiti Poverty Assessment, World Bank, Washington, DC.

The poor in Haiti are particularly vulnerable to shocks and are more likely to resort to strategies that are harmful to human and physical capital accumulation (figure 1.7). A typical Haitian household faces multiple shocks annually: nearly 75 percent of households suffer economic consequences following a shock.[56] Households in poverty are more vulnerable, particularly those in extreme poverty. Among poor households, 95 percent experience at least one economically damaging shock per year. In most cases, households cope through monetary support provided by others (27 percent) or by changing nutritional inputs (16 percent).[57] However, the extreme poor receive relatively less financial support (17 percent versus 37 percent in resilient households) and change their food consumption habits more frequently (22 versus 10 percent). In particular, if the shock hits the entire community, a staggering 56 percent of households in extreme poverty change their nutritional behavior, as opposed to 37 percent of resilient households. The extreme poor are also more likely to remove their children from school because of shocks, particularly if the household is experiencing a change in composition (such as the birth or death of a household member) or a decline in the monetary support from outside the household, which is often used to pay school fees. (Box 1.2 examines the issue of gender inequality, another determinant of poverty.)

Figure 1.7. Share of the population affected by a climatic shock and poverty level, by department



Source: ECVMAS 2012; World Bank and ONPES calculations.Note: The poverty line isG29,909.87. The extreme poverty line is G15,240.03. Climatic shocks include hurricanes, floods, droughts, and excessive rainfall. The survey questionnaire asked "during the last 12 months, was your household affected by one of the following?"

56 Shocks background paper (2014), Haiti Poverty Assessment, World Bank, Washington, DC.

57 The latter strategy includes decreasing the quantity of food, the number of meals consumed, or food quality; consuming food harvested before maturity; gathering food in the wild; and reliance on seeds as food.

Box 1.2. Gender inequalities generate great vulnerabilities in Haiti

Women and girls in Haiti face significant obstacles when accumulating assets, including human capital, and register lower education and health outcomes. Despite sizable progress in school enrollment among younger cohorts, adult women are still less well educated than adult men and are more likely to be illiterate. Adult men have, on average, two more years of education than women and are over 10 percentage points more likely to be literate. Early withdrawal from school can have lifelong consequences. Underage marriage and teen pregnancy, for instance, represent additional threats for girls who are not in school: 17 percent of Haitian women are married in adolescence, compared with 2 percent of men, while this number drops among girls with higher education (Cicmil 2013).

Maternal mortality, at 380 deaths per 100,000 live births, is still five times higher than the regional average (WHO 2014a)[58]. Fertility rates are also way above regional figures, particularly among less well educated women household heads: those with no formal education have twice the number of children relative to women with at least upper-secondary schooling. Poor nutrition is also a threat for both children and mothers: according to the DHS 2012, 22 percent of children are stunted or too short for their age, while nearly half of women aged 15–49 have anemia. The prevalence of HIV/AIDS is higher among women (2.7 percent) than men (1.7 percent), reflecting, among other things, knowledge differentials: only 15 percent of young women have correct information on how to prevent sexual HIV transmission, versus 28 of young man. (Boesten and Poku 2009). Furthermore, poor education and gender norms interact with health outcomes: there is anecdotal evidence that cultural reasons play a major role in the high percentage of birth deliveries in Haiti that take place outside a health care facility (65 percent), generating more risk of maternal mortality.

Women are significantly disadvantaged in using their assets and obtaining the relevant returns, particularly in the labor market. Apart from initial differences in endowments, women in Haiti seem to face additional obstacles in participating in the labor market. Holding constant several social and demographic characteristics, one finds that women are 20 percentage points more likely than men to be unemployed and, if working, 6 percentage points more likely to be in the informal sector. Wages among women are also 32 percent lower than wages among men. Statistical tests show that over two-thirds of this difference is unexplained by observable characteristics, suggesting that discrimination could play a role in accounting for the result.

Gender-based violence and low participation in the public sphere are widespread in Haiti. Gender-based violence is a chronic problem: according to the DHS 2012, 13 percent of Haitian women have experienced sexual violence, and 29 percent of women who have ever been married have ex-

58 This number is not accepted by the Ministry of Public Health and Population (MSPP).

perienced spousal violence, whether emotional, physical, or sexual. Vulnerability is particularly high among internally displaced people in camps and areas affected by the 2010 earthquake: a survey in 2011 indicated that 64 percent of 981 pregnant adolescent girls who were interviewed had become pregnant after being raped (PotoFi 2012). Raising awareness, improving security and legislation, and creating economic opportunities for women are important measures to address the immediate and long-term needs of women and girls against gender-based violence.

Only 4 percent of all parliamentary seats are occupied by women, placing Haiti 136th of 142 countries and well below the regional average of 26 percent. At the national level, as of April 2014, 8 of 23 ministers and 3 of 20 secretaries of state were women.[a] At the local level, women account for only 12 percent of all mayors. The government has taken steps to expand women's representation, including by creating the Gender Equality Office in Parliament and amending the Constitution to stipulate a quota of at least 30 percent women in all public offices, but there is no enforcement mechanism, and implementation remains low at all levels of formal political life.

a. CEPALSTAT (database), Statistics Division, United Nations Economic Commission for Latin America and the Caribbean, Santiago, Chile, http://estadisticas.cepal.org/cepalstat/WEB_CEPALSTAT/Portada.asp?idioma=i.

Risk factors associated with poverty[59]

Larger households and children are more likely to be poor. Poverty is three times more widespread among households with more than six members relative to households with fewer than three members (73.6 versus 24.6 percent) (table 1.4). In particular, the presence of young children more often translates into higher poverty rates. Poverty is more extensive among children and relatively less extensive among adults. Almost 70 percent of preschool-age children (under 5 years of age) live in poor households, highlighting the vulnerability of this age-group. The poverty rate among school-age children (ages 5–14) is the second highest, at 66 percent, representing 27 percent of all the poor.

59 For the results of linear regressions to identify poverty correlates, see appendix F. The regressions take into account demographic and socioeconomic characteristics such as educational attainment among heads of household, household composition, and labor market participation to predict per capita consumption (log and normalized by poverty line).

Table 1.4. Poverty incidence, by category of household

Characteristic	Headcount		Share, %		
	Poverty	Extreme poverty	Population	Poor	Extreme poor
Area of residence					
Urban	40.6	8.6	48.0	33.4	17.8
Rural	74.9	37.8	52.0	66.6	82.2
Household size, persons					
1	13.5	2.5	1.4	0.3	0.2
2	24.6	6.1	4.6	1.9	1.2
3–4	41.6	11.6	24.0	17.1	11.8
5–6	58.4	22.1	32.4	32.4	30.1
7–9	73.4	34.9	27.7	34.6	40.5
10 or more	79.8	38.5	9.9	13.5	16.3
Household compositiona					
Age 0–4	69.3	30.7	12.0	14.0	15.0
Age 5–14	65.8	28.9	24.0	27.0	29.0
Age 15–64	54.0	20.6	59.0	55.0	51.0
Age 65 or older	56.0	22.5	5.0	5.0	5.0
Gender, head					
Man	58.7	24.8	57.2	57.8	59.5
Woman	58.1	22.4	42.8	42.5	40.5
Status of the head					
Married	55.2	22.0	33.1	31.3	31.0
Placé[b]	66.5	30.0	36.1	41.1	45.0
Cohabiting	54.5	24.5	4.5	4.2	5.0
Single	40.0	12.4	6.7	4.5	4.0
Divorced	10.4	0.0	0.2	0.0	-
Separated (married)	42.6	7.1	1.7	1.2	1.0
Separated (plaçage)[b]	55.4	13.4	7.3	67.0	4.0
Widow, widower	60.2	26.5	10.3	10.6	12.0
Educational attainment, head					
None	77.6	40.2	38.4	50.9	65.3
Incomplete primary	61.4	21.4	22.0	23.3	19.5
Completed primary	50.0	14.4	16.6	14.2	10.0
Completed secondary	34.5	7.10	16.2	9.5	4.8
Completed tertiary	17.8	1.4	6.7	2.0	0.4
Total	58.5	23.8	100.0	100.0	100.0

Labor force status, head					
Working	57.3	24.3	71.3	70.0	72.6
Unemployed	58.3	17.9	15.7	15.7	11.8
Inactive	64.7	27.7	13.0	14.3	15.6
Sector of activity, head					
Agriculture	76.3	41	32.7	42.8	56.1
Industry, construction	38.3	9.5	5.0	3.2	2.0
Trade	47.5	11.6	17.0	13.9	8.4
Transportation	28.3	3.3	2.6	1.3	0.4
Education, health	30.9	4.1	3.2	1.7	0.5
Other services	38.8	11.6	10.6	7.1	5.2
Socioeconomic position, head					
Executive	22.4	5.6	1.7	0.7	0.4
Skilled worker	25.6	4.3	4.6	2.0	0.8
Unskilled worker	39.2	8.9	5.6	3.7	2.1
Manual laborer	58.3	25.6	5.7	5.7	6.1
Owner	68.0	33.8	29.3	34.1	41.4
Self-employed	56.5	20.3	23.4	22.8	20.1
Family aide	67.5	46.4	0.8	1.0	1.7
Total	*58.5*	*22.37*	*100*	*100*	*100*

Sources: ECVMAS 2012; World Bank and ONPES calculations. a. Poverty measured at the individual level, by age-group. b. See the text for an explanation of plaçage.

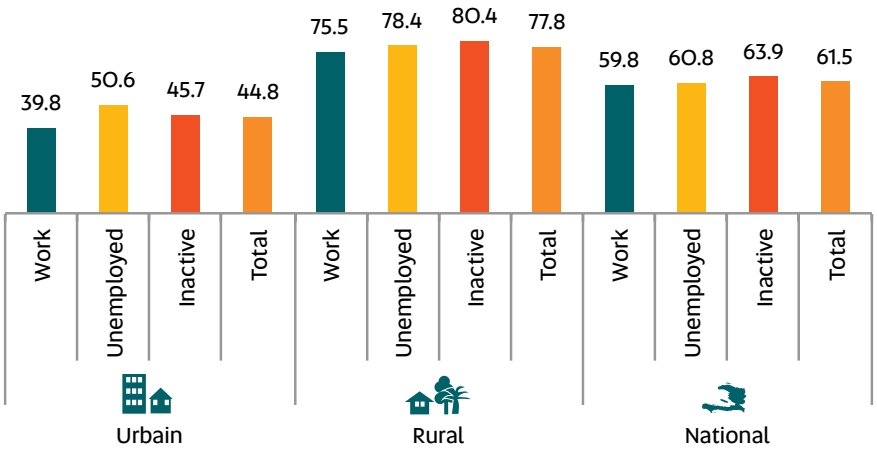
Poverty incidence does not differ by gender, but it does differ by marital status. Unlike in 2001, the poverty rate among individuals living in woman- or man-headed households is not statistically different, at 58.3 and 59.0 percent, respectively. Meanwhile, 72 percent of the poor live in households in which the head is in a formal relationship, either married or placé. Plaçage is a form of customary union.. Plaçage is common in Haiti, particularly in rural areas, where it involves 36.2 percent of all household heads. Poverty incidence is more than 10 percentage points higher among households in which the heads are placés than among households in which the heads are married.

The poverty rate is higher among households in which the heads are relatively uneducated. Poverty incidence is more than four times greater among households headed by a person with no education relative to households with heads who have completed secondary or higher education (77.6 versus 17.8 percent). Households with uneducated heads represent more than 50.0 percent of the poor, while a staggering 60.5 percent have heads who have not completed primary education.

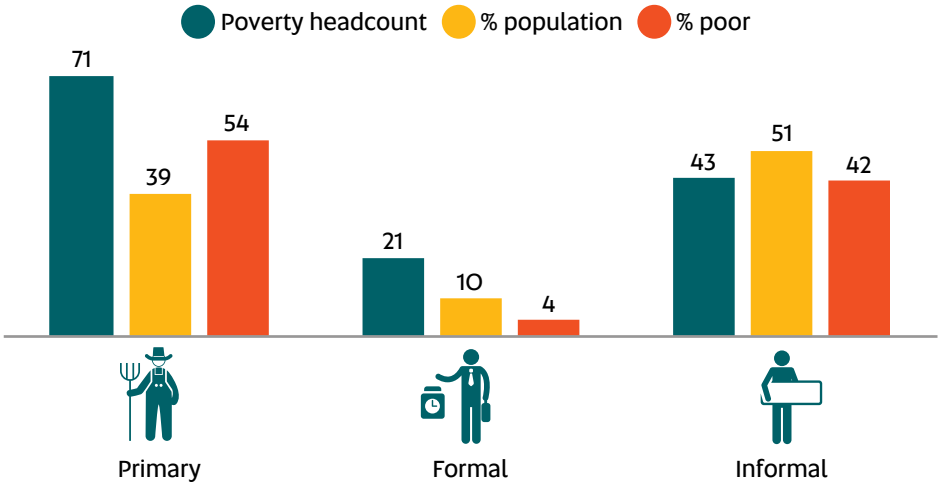
The poverty rate is higher among the unemployed, but only in urban areas. Participation in work is associated with somewhat less poverty incidence only in urban areas, where unemployment increases the poverty rate by more than 10 percentage points (figure 1.8). Almost 40.0 percent of those in urban areas who work do not earn enough to stay out of poverty. The corresponding share is 75.5 percent in rural areas, and, nationwide, there is no statistically significant difference in poverty rates among those who work and those who are unemployed, though those not in the labor force show a slightly higher poverty rate. The poverty rate is especially high among households in which the heads work in the primary sector, at 76 percent (for example, in agriculture, forestry, or fishing), or in the informal sector, at 45.2 percent, which employs 73.0 and 32.6 percent of the total urban and rural labor force, respectively.

Figure 1.8. Poverty rate by region, economic situation and household head's sector of activity.

a. By area of residence and economic status



b. By sector of activity



Sources: *ECVMAS 2012; World Bank and ONPES calculations.*

4. Key messages

Only 10 percent of the poorest households in Haiti have access to improved sanitation; compared with 65 percent of the richest households.

More than 10 years after the last household living conditions survey, the availability of new data has made a fresh diagnosis possible. The use of the recent postearthquake living conditions survey (ECVMAS 2012) and the official poverty lines developed by the government has served as a basis for the identification of the poor, a description of the main characteristics of the poor, and a determination of the principal risks associated with poverty.

Poverty is widespread in Haiti, and it is deeper and more severe in rural areas. In 2012, the overall poverty headcount was 58.5 percent, and the extreme poverty rate was 23.8 percent. The incidence of poverty is considerably higher in rural areas and in the North. More than 80 percent of the extreme poor live in rural areas, where 38 percent live in extreme poverty, compared with 12 percent in urban areas and 5 percent in the Metropolitan Area.

The progress in reducing poverty has been modest in urban areas, but the stagnation in rural areas generates concern. At the national level, the extreme poverty rate declined from 31 to 24 percent between 2000 and 2012. However, advances in urban areas were behind this decline, while poverty stagnated in rural areas. Almost 70 percent of rural households are considered chronically poor, compared with 20 percent in urban areas, highlighting a double deprivation—in monetary terms and in access to basic services and infrastructure—and the particularly narrow opportunities to emerge from poverty in rural Haiti.

Inequality is still wide in terms of both income and access to basic services, preventing the poor from accumulating and effectively using their human capital and improving their well-being. Income inequality is the highest in Latin America; the Gini coefficient was 0.61 in 2012 and the richest 20 percent of the distribution gathers more than 60 percent of the national wealth. Although access to basic services has improved since 2001, levels are still low, particularly in rural areas, and the quality of services is limited. Furthermore, access increases with wealth, and the poor have markedly less access to services, including education and health care, because the cost represents a considerable burden on the budgets of the poor and an important barrier to human capital accumulation. In particular, educational attainment, which correlates strongly with welfare, is low among the poor, affecting the capacity of the poor to generate income.

Women and girls are particularly vulnerable because they face important obstacles to the accumulation and use of their assets, particularly their human capital. Despite sizable progress in both education and health outcomes, adult women are still less well educated than adult men and are more likely to be illiterate, while maternal mortality is still dramatically high. Apart from initial differences in endowments, women in Haiti also face additional obstacles in participating in the labor market because they are significantly less likely to be employed and earn more than 30 percent less than men. Finally, gender-based violence and low participation in the public sphere are widespread in Haiti.

In light of this diagnostic, the following messages emerge as key for additional, sustainable poverty reduction:

The regular monitoring of poverty and living conditions is a necessary step to promoting evidence-based, effective policy making. One of the many obstacles to postearthquake reconstruction and emergency operations was the lack of sound statistical information at the national level. Strengthening the national statistical system through investments in this sector will allow the country to have reliable data from various sectors, through regular national censuses and surveys, such as ECVMAS, that will permit regular and systematic monitoring of poverty and households living conditions in Haiti, relying on the new reference rates for the country. At the same time, regular monitoring built on the solid baseline set out in this report will contribute to enhancing the design and efficacy of antipoverty policy making.

Policies should encompass ways to boost the income generation capacity of the poor and to protecting their assets from shocks more effectively, while overall economic growth remains a prerequisite for any poverty reduction. This diagnostic highlights that the poor in Haiti face significant obstacles to accumulating, using, obtaining the returns to, and protecting their assets. In urban areas, the poor struggle to find a (decent) job and heavily rely on private transfers; in rural areas, the poor are highly dependent on subsistence agriculture, the productivity of which is severely affected by frequent natural disasters and which is associated with significant food insecurity. Three-quarters of Haitians and 95 percent of the poor suffer from at least one economically damaging shock per year. Human capital accumulation to seize the best opportunities, protection from shocks to reduce losses and damage, and ex ante and ex post coping strategies are the priority areas of the actions needed to reduce chronic poverty and promote shared prosperity.

Part II

Drivers and Constraints for Poverty Reduction

Chapter 2: Income generation in rural and urban areas

Sustainable poverty and inequality reduction builds on strengthening the capacity of rural and urban populations to generate income in a reliable form. Haiti's population is equally split: half the people live in rural areas, and half live in urban areas. While there is a trend toward greater urbanization, half the country still depends on income sources that are subject to rural realities and end up with a poverty incidence of 75 percent. The other half strives to find job opportunities that may propel them above the poverty line today, but render them highly vulnerable to recurrent adverse social and economic shocks tomorrow.

This chapter outlines the challenges and opportunities for income generation in Haiti. It is organized as follows.[60] The introduction discusses the role of income in the poverty trends observed in the past decade. The next section delves into the rural reality of income generation and the constraints faced in productive farming. The following section addresses labor opportunities in urban areas and the case of self-employment, one of the most salient aspects of the urban job market. The subsequent section presents migration and foreign and internal transfers as a strategy to complement labor income and enhance well-being. The final section concludes.

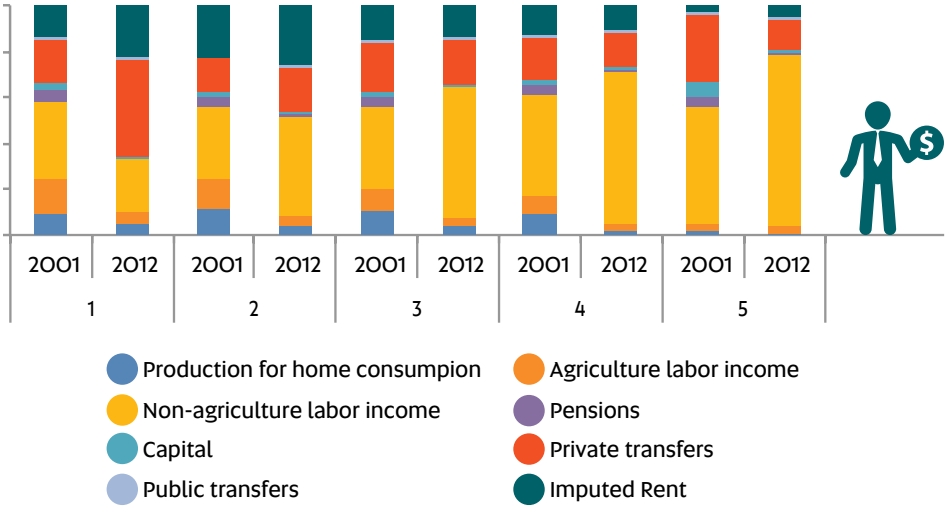
1. Introduction

The key driver of the poverty gains in Haiti was increased access to nonagricultural income in urban areas. In a context of limited economic growth (see the Background and introduction), the share of nonagricultural income rose among all households in urban areas except for the first quintile, the extreme poor (figure 2.1). The shift toward nonagricultural employment in urban areas likely reflects a transition toward better paid jobs in construction, transport, and telecommunications, sectors that experienced positive GDP growth during the period. The average hourly labor income is two to four times higher in the informal and formal sectors than in the agricultural sector.[61] In contrast, households in the first quintile saw their share of nonagricultural income fall, while the contribution of private transfers (domestic and international remittances) in their income rose. The movement out of the agricultural sector has been accompanied by a deepening in migration from rural to urban areas, where access to economic opportunities and services is greater.

60 This chapter draws on Atuesta, Cuevas, and Rodella (2014), Coello et al. (2014), ONPES (2014) and Cuevas, Marzo and Scot (2014) background papers prepared for the study by the World Bank and Observatoire National de la Pauvreté et de l'Exclusion Sociale (ONPES). 2014. Investing in People to Fight Poverty in Haiti, Reflections for Evidence-based Policy Making. Washington, DC: World Bank..

61 The informal sector is defined by the International Labour Organization as unincorporated enterprises (household businesses) that are not registered, do not keep formal accounts, and are not in the primary sector (agriculture).

Figure 2.1. Change in per capita income in urban areas, by income quintile, 2001-2012



Sources: ECVMAS 2012 and ECVH 2001; World Bank and ONPES calculations.

More than half of the working poor operate in agriculture and more than 40% work in the informal sector, mainly as self-employed.

Income generation opportunities in urban areas are limited by a two-sided problem: the low growth and scarcity of jobs and the prevalence of low-quality employment. Unemployment affects 40 percent of the urban workforce and almost 50 percent of the female workforce. Youth face unemployment rates that are above 60 percent, which triggers not only economic, but also social concerns[62]. The steep challenge of finding a job ends up producing high levels of discouragement.[63] Haiti has a low labor force participation rate compared to the rest of the region: only 60 percent of working-age individuals (15-64) participate in the labor market, compared, for example, with 70 percent in the neighboring Dominican Republic. Among the people who find a job, 60 percent earn less than the minimum wage, and women earn, on average, 32 percent less than men.[64]

Education plays a critical role in improving welfare in urban areas: labor income is, on average, 28 percent higher among individuals who have completed primary education than among uneducated individuals. In this context, the urban poor resort to self-employment or two-person businesses as a coping mechanism. Overall, almost 60 percent of the poor are in this type of occupation, and 75 percent of the poor are active in sectors such as trade, construction, and low-skilled services.

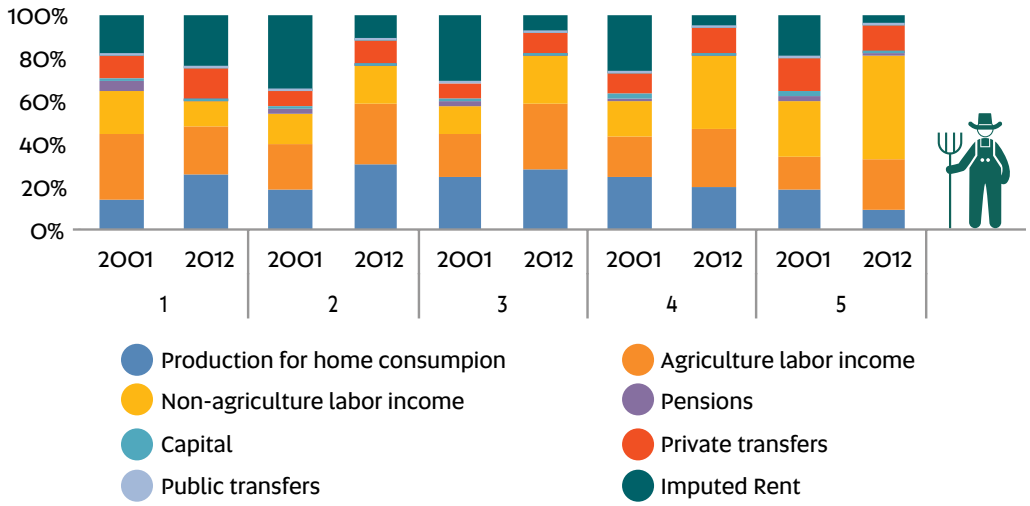
62 Extended unemployment rate, which includes not only people in working age who do not have a job but are looking for one, but also those who are not looking for a job because they are discouraged, waiting for a job answer, retired or sick, but would be immediately available if offered an opportunity.

63 Finding a job is made difficult by the limited opportunities as well as lack of information on job opportunities, as formal channels to access job offers are generally unavailable: two wage workers in three use personal connections to look for and find jobs (ECVMAS 2012).

64 This is so after one controls for age, education, experience, household size, number of young children in the household, urban location, and sector of activity.

The stagnation in rural poverty reflects an increasing reliance on the low-performing agricultural sector and production for home consumption. Over the decade, agricultural income (including production for own consumption and agricultural labor income) grew in importance, representing between 48 and 59 percent of the incomes among the first three quintiles (figure 2.2). Rural livelihoods are highly dependent on agriculture: almost 80 percent of households engage in farming. Moreover, among half the households, farming is the sole economic activity. Returns to agriculture are low and unreliable, and the activity resembles a subsistence strategy rather than reliance on a productive economic sector.[65] The experiences of more successful farmers suggest that improving access to inputs and supporting crop diversification are the main channels to elevating productivity (see below). Among the poor, only 20 percent use fertilizer and pesticides. Moreover, even though the average area of cultivated land is only slightly smaller among the poor than among the nonpoor (1.2 hectares versus 1.6 hectares, respectively), the poor spend two to four times less on fertilizer, pesticides, seeds, and labor.

Figure 2.2. Change in per capita income in rural areas, by income quintile, 2001-2012



Sources: ECVMAS 2012 and ECVH 2001; World Bank and ONPES calculations.

65 Since 2000, the sector has performed poorly, contracting by 0.6 percent annually as a consequence of repeated adverse climatic shocks. In 2012, agricultural production contracted by 1.3 percent following a series of droughts, heavy rains, and hurricanes, which generated crop and seasonal income losses of 40 to 80 percent. The drop in production led to a decline in the demand for labor and a rise in the cost of locally produced food. As a result, poor households lost income and faced higher consumption costs (prices) (Haiti Food Security Outlook, Famine Early Warning System Network, October 2012–March 2013).

Participation in the nonfarm sector is key to emerging from poverty in rural Haiti. Engaging in the nonfarm sector in rural areas reduces the probability of being poor by 10 percentage points. The typical nonfarm job in rural areas is a one- or two-person shop engaged in small retail. Still, the returns to this activity surpass those accruing to farming. About 40 percent of nonpoor households participate in the nonfarm sector, a participation rate that is 1.5 times higher than the participation rate among the poor.

External financial flows, including remittances and international aid, have also contributed to the decline in poverty. The share of households receiving private transfers in Haiti rose from 42 to 69 percent between 2001 and 2012, including both domestic and international transfers. Per capita remittances increased by 26 percent between 2001 and 2012 (in real terms).[66] Worker transfers from abroad have represented more than a fifth of Haiti's GDP in recent years; they originate mainly from the Dominican Republic and the United States. While transfers from the former are more likely to reduce poverty because they tend to benefit poorer households located in rural areas, the remittance flows from the United States are larger. Furthermore, in the aftermath of the 2010 earthquake, the country catalyzed international solidarity, resulting in unprecedented aid flows in the form of money, goods, and services. These external flows also contributed to poverty reduction over the period, especially in urban areas, which attracted most of the assistance.

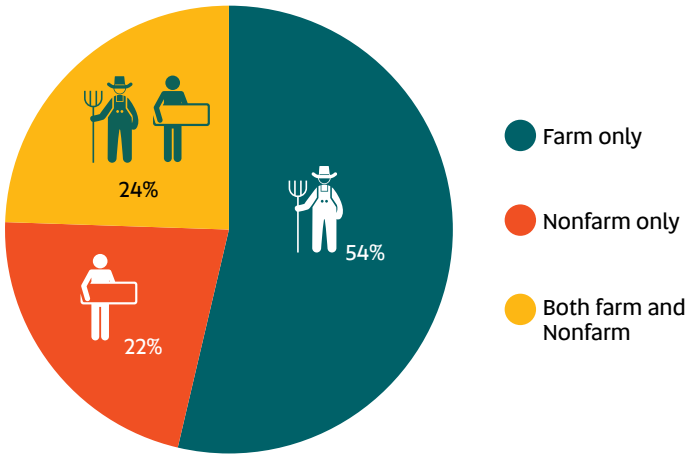
2. Income generation in rural areas: opportunities and challenges

Although the main economic activity in rural areas involves farming, there are also opportunities for diversification into the nonfarm economy. Agriculture is the dominant economic activity in rural Haiti; about 78 percent of households are engaged in the sector, but almost a third of agricultural households also manage to diversify and perform nonfarm activities (figure 2.3). Overall, about half the households in rural Haiti undertake farm activities exclusively; a quarter of households work only in the nonfarm sector; and a quarter work in a mix of activities.[67]

66 Based on remittance inflow data (balance of payments, government of Haiti, 2014).

67 The farm-only category is defined as households in which all economically active members are engaged in a farm activity. This includes households in which all members are only engaged in agricultural wage activities. The nonfarm-only category refers to households in which all economically active members are engaged in nonfarm activities, whether a household enterprise or nonfarm wage or salary work. The both farm and nonfarm category refers to households in which economically active members are engaged in a combination of farm and nonfarm activities. Some examples of nonfarm activity include selling shoes, soap, and packaged foods such as rice or candy.

Figure 2.3. Farm and nonfarm labor force participation, rural households

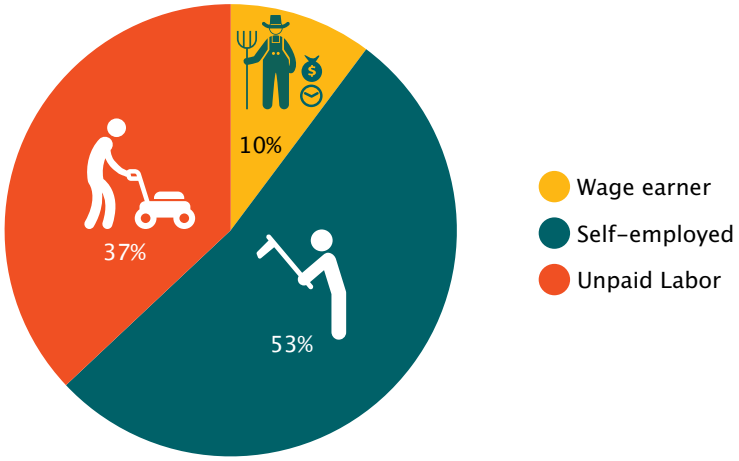


Source: *ECVMAS 2012; World Bank and ONPES calculations*

The West has the highest participation in nonfarm activities (32.4 percent). It has the highest education levels and literacy rates, which are important factors in the participation in nonfarm activities. It is also the closest to Port-au-Prince and therefore has better access to infrastructure such as electricity and safe sources of water, which are especially relevant for nonfarm activities.

The vast majority of the working population in rural Haiti is involved in household economic activities (90 percent) either as self-employed or unpaid family labor. This means that most individuals are working on household farms or in household-run nonfarm enterprises to which they contribute as unpaid workers or owners. Wage work is especially limited in rural Haiti; only a small share of individuals (10 percent) are employed as wage workers there (figure 2.4).

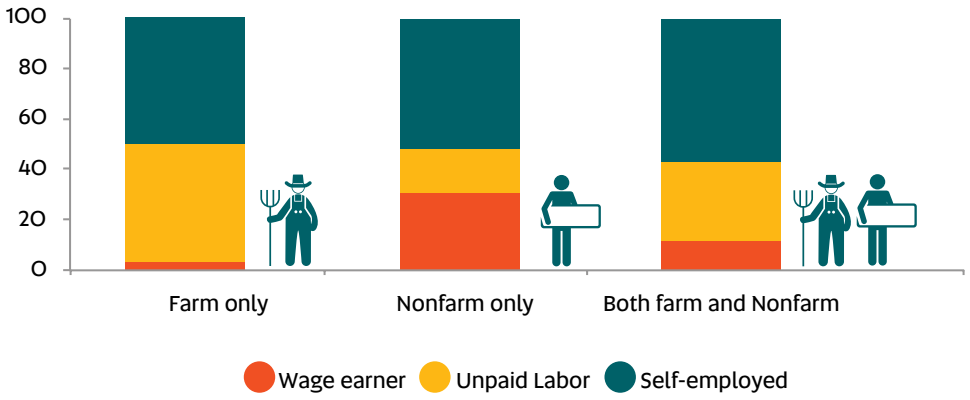
Figure 2.4. Labor force participation, by type of employment



Source: *ECVMAS 2012; World Bank and ONPES calculations*

Among both agricultural and nonagricultural households, self-employment is the most common type of work (figure 2.5). Within farm households, there is an almost equal share of self-employed individuals and unpaid household labor. However, in the nonfarm sector, the self-employed and wage earners are much more common than unpaid household labor. Self-employment is the most common type of work in all four rural regions.

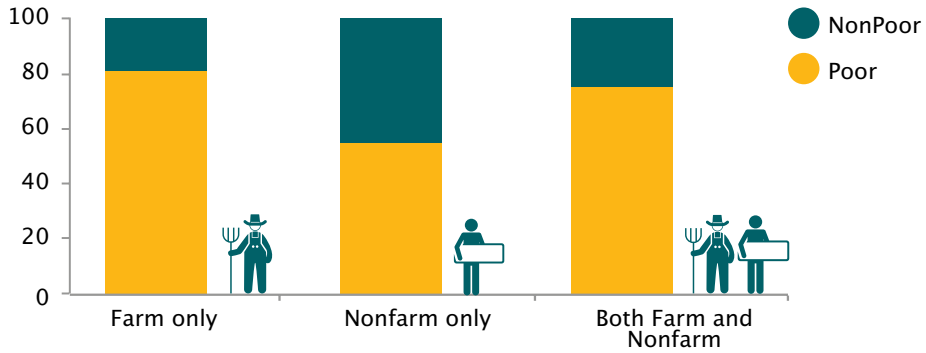
Figure 2.5. Employment, by farm and nonfarm participation



Source: *ECVMAS 2012; World Bank and ONPES calculations*

Among rural households, not being poor is strongly related to engaging in the nonfarm sector. More than 80 percent of farm-only households are poor. If agricultural households are able to diversify, they are significantly less likely to be poor.[68] Among diversifying households, poverty reaches 75 percent. The importance of the nonfarm sector in reducing poverty is most clearly seen among nonfarm-only households, among which poverty incidence is below 55 percent (figure 2.6).

Figure 2.6. Economic activity, by poverty level



Source: *ECVMAS 2012; World Bank and ONPES calculations*

68 Agricultural households are defined as households that have crop, livestock, or agricultural wage activity. Some of these households also perform nonfarm activities.

If one holds household sociodemographic characteristics constant, a multivariate analysis of the correlates of rural poverty shows that (box 2.1):

- Accessing income from nonfarm activities is associated with a reduction by 10–12 percentage points in the probability of being poor.
- Receiving remittances from abroad is associated with a reduction by 9 percentage points in the likelihood of falling into poverty.
- In agriculture, the number of crops matters, rather than the type: every additional crop reduces poverty by 1.25 percent; there is no significant association between poverty and cultivating cash crops.
- For every additional year of education of the household head, the probability of poverty falls by 1 percentage point.
- The gender of the household head is not a predictor of poverty status in rural areas.

Box 2.1. The correlates of poverty and food security

We estimate the correlates of poverty and food security using a Logit model of the following form:

$$P_{np}=\beta_0+\beta_1 P_{N\,FE}+\beta_2 P_{N\,FW}+\phi Z+\Omega Z+\Omega X+\lambda+\varepsilon \quad (B2.1.1)$$

$$P_{fs}=\beta_0+\beta_1 P_{N\,FE}+\beta_2 P_{N\,FW}+\phi Z+\Omega Z+\Omega X+\lambda+\varepsilon \quad (B2.1.1)$$

where P_{np} = 1 if household consumption expenditure is above the national poverty line of $1.98 a day (nonpoor); P_{fs} = 1 if households are defined as food secure based on the household dietary diversity score of the Food and Agriculture Organization of the United Nations; P_{NFE} = 1 if at least one household member is participating in a nonfarm enterprise activity; P_{NFW} = 1 if at least one household member is participating in a nonfarm wage activity; Z is a vector of farm household characteristics; X is a vector of household characteristics; department-fixed effects are captured by λ; and ε is the idiosyncratic error term.

We estimate the models (B2.1.1) and (B2.1.2) on the whole rural sample and on the farm household subsample to discover if any correlates are more likely to affect farm households. For details on the estimated model please see appendix G.

Agriculture

In Haiti, agriculture is an economic activity mostly conducted to produce for home consumption, with limited market connectivity. The average household in rural areas consumes most of its output. The ratio between the value of the output sold to the value of the output produced, a proxy measure of the connection to markets, is below 40 percent. The poor are less well connected to markets than the nonpoor; the ratio is 37 for the poor to 43 for the nonpoor.

Factors of production

Agricultural households in Haiti tend to cultivate relatively small plots of land of approximately 1.3 hectares, similar to the size of the plots in Sub-Saharan African countries such as Ethiopia, Lesotho, and Malawi, where over 80 percent of landholdings also tend to be smaller than 1.5 hectares. Landownership rates in rural Haiti are high, nearing 90 percent. Poor and nonpoor households are equally likely to own the land they work. However, the average amount of land cultivated by nonpoor households is more than 30 percent larger than the corresponding amount among poor households. The size of the plots leased in or leased out by households is small relative to the size of owned plots: the average leased in plot is about 0.3 hectares (table 2.1). Most likely to increase soil fertility, many farmers practice self-fertility as evidenced by the substantial share of households that leave some land fallow. It may also be that the cost of cultivating infertile land is high relative to the expected gains, making it more practical to leave land fallow.

Table 2.1. Land acquisition.

Percent, unless otherwise indicated

Indicator	*All rural*	*Women*	*Men*	*T-test*	*Poor*	*Nonpoor*	*T-test*
Own land	89.7	89.8	89.6	−0.2	90.1	88.3	1.7
Land size, owned, hectares	1.0	0.9	1.1	0.1*	0.9	1.2	−0.3
Leased in land	31.7	23.3	35.4	12.1***	30.2	36.6	−6.4*
Leased out land	16.4	12.8	17.9	5.1**	14.9	21.0	−6.1**
Left land fallow	34.5	31.4	35.9	0.0	34.7	33.9	0.9
Land size, cultivated, hectares	1.3	1.2	1.4	0.2*	1.2	1.6	−0.4**

**** p <0.01 ** p <0.05 * p <0.1*

Nonpoor households enjoy better access to productive factors, including both labor and nonlabor inputs. Given the intensity of the planting and harvest periods, households rely on hired labor to supplement their own labor (table 2.2). Nonpoor households are not only more likely to use both household and nonhousehold labor; they also use higher numbers of workers relative to the poor.[69] A similar trend also holds for fertilizer, seeds, and pesticides: the nonpoor are more likely to use these inputs and also spend more on them.[70] However, as a share of total production value, poor and nonpoor households spend equally.

69 Nonhousehold labor cannot be separated into paid and unpaid labor (for example, exchange labor) because this information is not available in the survey.

70 The survey does not offer adequate information to distinguish between farmers who purchase improved seeds and farmers who purchase regular seeds.

Table 2.2. Agricultural inputs.

Percent, unless otherwise indicated

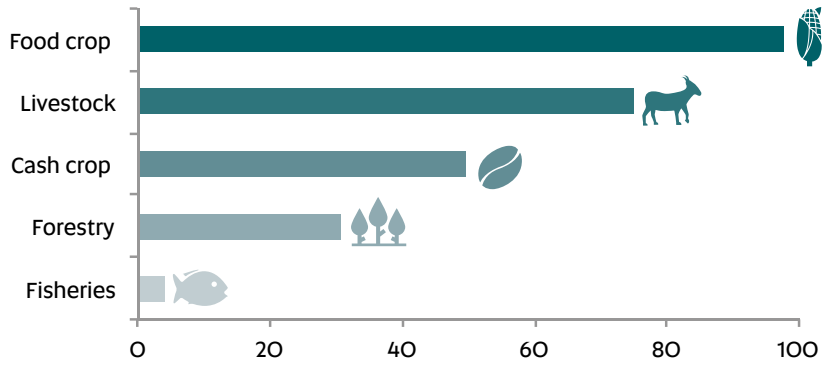
Indicator	*All rural*	*Women*	*Men*	*T-test*	*Poor*	*Nonpoor*	*T-test*
Labor inputs							
Used nonhousehold labor	67.3	59.4	70.7	11.3***	65.1	74.3	−9.3**
Nonhousehold labor, number	5.7	5.0	6.1	1.1	5.1	7.7	−2.5**
Value of nonhousehold labor, HTG	2,068.7	1,414.8	2,355.2	940.4**	1,663.5	3,347.7	−1,684.1***
Household labor, number, including owner	2.6	2.4	2.6	0.2	2.7	2.2	0.5***
Nonlabor inputs							
Fertilizer, incidence	21.1	21.3	21.0	−0.3	17.8	31.5	−13.6***
Fertilizer, amount spent, HTG	650.1	413.4	753.9	340.5	363.5	1,555.1	−1,191.6**
Seeds, incidence	53.8	48.8	56.0	7.2**	52.2	58.7	−6.5*
Seeds, amount spent, HTG	960.2	642.4	1,099.4	457.0***	821.0	1,399.5	−578.6***
Pesticides, incidence	20.1	16.4	21.7	5.4	19.6	21.6	−2.0
Pesticides, amount spent, HTG	95.6	77.3	103.6	26.4	73.1	166.7	−93.6*
Total input cost/total value of production	49.7	30.4	58.2	27.8***	50.5	47.4	3.1

**** p <0.01 ** p <0.05 * p <0.1 / *** p <0.01 ** p <0.05 * p <0.1*

Types of agricultural activities

Virtually all farm households grow food crops, while nearly half also grow at least one cash crop. Among households growing food crops, 84.3 percent sell part of what they grow.[71] In addition to growing crops, 75 percent of households raise cattle and other livestock, and 30.4 are engaged in forestry activities (figure 2.7). There are no salient contrasts among the types of agricultural activities that poor and nonpoor households undertake, with the exception of cash crops. Relative to households below the poverty line, households above the poverty line are more likely to cultivate cash crops, thereby improving their income generation prospects (table 2.3).

Figure 2.7. Share of households, by farm activity



Source: ECVMAS 2012; World Bank and ONPES calculations

71 The agricultural module does not provide information on the quantities produced, sold, or consumed, but does provide the relevant values. This limits the ability to analyze the share of production sold, consumed, or otherwise.

Table 2.3. Activities of agricultural households

Percent

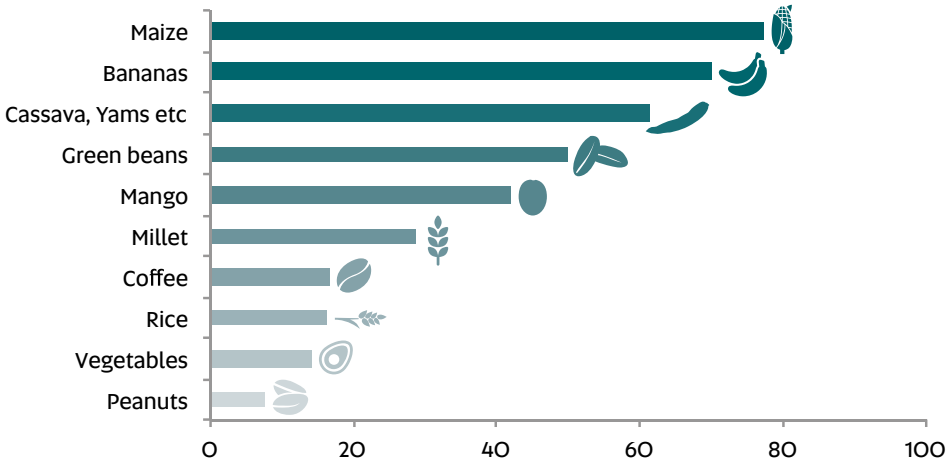
Indicator	*Cash crop*[a]	*Food crop*	*Livestock*	*Fisheries*	*Forestry*
All rural	49.7	97.7	74.8	4.2	30.4
Gender of head					
Woman	46.9	96.9	69.8	4.7	21.6
Man	51.0	98.1	77.0	3.9	34.3
Poverty status					
Poor	47.8	97.6	74.1	3.2	30.8
Nonpoor	55.7	98.2	77.0	7.1	29.0
Food security status					
Food secure	53.5	97.5	77.0	5.9	30.8
Food insecure	42.7	98.0	70.7	1.0	29.7

a.. Cash crops are defined as the sale of mangos or coffee.

Crop diversification is common in rural Haiti. Poor and nonpoor households are equally likely to diversify (figure 2.8). The top three crops are maize, bananas, and cassava or yams. Among cash crops, mangoes are more common: over 40 percent of households grow them, compared with about 17 percent growing coffee. On average, farm households cultivate about five crops each, and 70 percent of households grow at least four different crops on their plots (table 2.4).

Figure 2.8. Farm crops grown

% of households producing



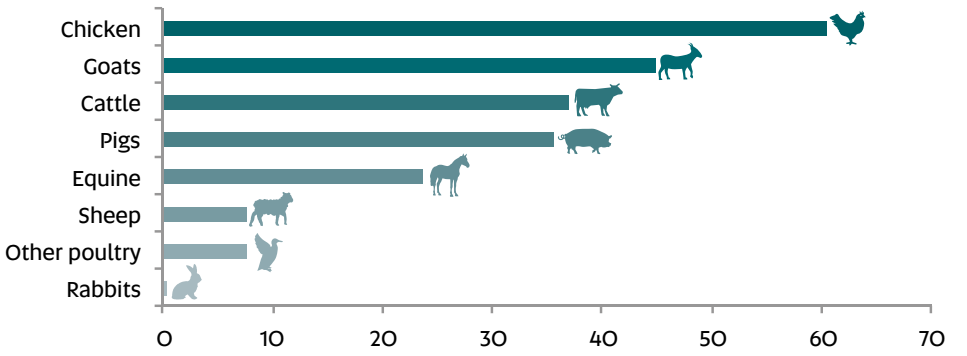
Source: ECVMAS 2012; World Bank and ONPES calculations

Table 2.4. Diversity among the crops grown

Indicator	*Crops grown, average number*	*Farms that grow four or more crops, %*
All rural	4.7	72.5
Region		
North	4.6	74.6
South	4.9	78.6
Transversale	4.5	66.1
West	4.7	73.4
Gender of head		
Woman	4.4	68.6
Man	4.8	74.2
Poverty status		
Poor	4.6	73.0
Nonpoor	4.7	70.8
Food security status		
Food secure	4.8	74.4
Food insecure	4.4	69.0

The livestock sector is characterized by small animals such as chickens and goats, and there are no remarkable differences across poor and nonpoor households except for the use of nonlabor inputs. Poultry are the most common livestock raised in rural Haiti (figure 2.9). Although the poor and nonpoor do not differ in the use of labor inputs to raise livestock, nonpoor households have better access to nonlabor inputs (for example, veterinarians) in their livestock activities (table 2.5).

Figure 2.9. Percentage of households, by livestock raised



Source: ECVMAS 2012; World Bank and ONPES calculations

Table 2.5. Livestock inputs.

Percent

Indicator	*All rural*	*Women*	*Men*	*T-test*	*Poor*	*Nonpoor*	*T-test*
Incidence of owning livestock	74.8	69.8	77.0	7.2**	74.1	77.0	−2.9
Labor input							
Incidence of labor	33.5	34.1	33.2	−0.9	32.8	35.7	−2.9
Nonlabor input, vet and other							
Incidence of nonlabor	71.1	65.4	73.7	8.3***	69.6	76.1	−6.5**

**** p <0.01 ** p <0.05 * p <0.1*

Agricultural productivity

Increasing agricultural productivity is still considered the key engine to reducing poverty and improving food security in developing countries (World Bank 2007). About 80 percent of rural households are engaged in the sector, and improving agricultural productivity is one of the main levers for pro-poor growth, but also to alleviate food insecurity. This highlights the importance of examining the sector to identify factors that are crucial to raising productivity (box 2.2).

Box 2.2. Estimating correlates of agricultural productivity

Although the data used for the analysis are cross-sectional, they help in understanding the main factors of production and the contextual characteristics that correlate with greater productivity in the agricultural sector. The analysis, therefore, does not claim causality, but rather aims to establish robust correlations. Other studies have examined the determinants of the agricultural sector in Haiti (see Verner 2008). However, the availability of new data allows us to update the information.

The measure of agricultural productivity used is the value of the total harvest per hectare. In line with the literature, we include the following variables as covariates: household characteristics such as gender of head, education of head, age of head, and household size; land size; physical inputs such as fertilizer, seeds, and pesticides; labor inputs; and other plot characteristics. We explore the correlates of agricultural productivity using a simple household ordinary least squares specification in the form:

$$\ln Y = \beta_0 + \beta_1 L + \beta_2 L^2 + \sum_i \alpha_i \ln P_i + \sum_j \gamma_j \ln D_j + \Omega X + \lambda + \varepsilon, \quad \text{(B2.2.1)}$$

where Y is the total value of harvest per hectare; L is the total land size cultivated by the household in hectares; P_i and D_j represent the physical and labor inputs, respectively, used by the household; X is a vector of other household and plot characteristics; department-fixed effects are captured by λ, and ε is the idiosyncratic error term.[a] In addition to estimating the regression for the entire rural sample, we also estimate the model for poor and nonpoor agricultural households separately to find if there are noticeable differences in significant factors of production between these households.

a. All physical input variables—log fertilizer use, log pesticide use, log seeds use—refer to input costs that have been divided by the hectare size cultivated and normalized by log transformation. The household growth of a cash crop is a dummy variable for whether the household produces either mango or coffee. The assistance postearthquake variable is a dummy for whether the household received help in the form of agricultural physical inputs such as fertilizer since the earthquake. There is no information on the amounts received in the module. The number of working-age men and women refers to household members aged 15–64.

There is an inverse relationship between farm size and agricultural productivity, a common finding in developing countries with limited access to input markets. Controlling for relevant farm and household characteristics, one finds that larger plots are less productive than smaller plots (table 2.6). In particular, a 1 percent increase in farm size is correlated with a drop of 0.6 percent in agricultural productivity. This inverse relationship arises because of a lack of access to credit markets, irrigation, and labor and agricultural input markets that impedes the exploitation of larger plots with the same intensity as smaller ones.[72]

Table 2.6. Correlates of agricultural productivity

Independent variable	*All rural*	*Poor*	*Nonpoor*
Land size			
Log harvested hectares	−0.464***	−0.442***	−0.446**
	(0.092)	(0.108)	(0.188)
Log harvested hectares, squared	0.047***	0.040***	0.102***
	(0.013)	(0.014)	(0.034)
Physical inputs			
Log fertilizer use, G/hectare	0.109***	0.101***	0.132***
	(0.020)	(0.025)	(0.038)
Log pesticide use, G/hectare	0.042*	0.059**	−0.041
	(0.024)	(0.028)	(0.051)
Log seed use, G/hectare	0.047***	0.035**	0.094***
	(0.013)	(0.015)	(0.030)
Labor inputs			
Log household labor used per hectare	0.206**	0.260***	0.131
	(0.081)	(0.095)	(0.167)
Log nonhousehold labor used per hectare	0.195***	0.189***	0.151*
	(0.037)	(0.042)	(0.086)
Other agricultural/plot characteristics			
Household owns livestock	−0.017	−0.037	0.085
	(0.113)	(0.128)	(0.266)
Household grows at least one cash crop[1]	0.022	0.063	−0.122
	(0.113)	(0.129)	(0.244)
Number of crops grown	0.367***	0.400***	0.252***
	(0.029)	(0.033)	(0.059)

72 According to Barrett et al. (2010), the inverse relationship (IR) between farm size and productivity likely arises for one of three main reasons: (a) imperfect factor markets, (b) omitted variables, or (c) statistical issues related to the measurement of plot size. As Carletto (2013) describes, imperfect factor markets (land, labor, insurance) are linked to differences in the shadow price of production factors that, in turn, lead to differences in the application of inputs per unit of land in ways that are correlated with farm size. Carletto (2013) assesses the concerns about measurement issues and finds that, with better land measurements, the IR finding is strengthened, not weakened. This supports studies by Unal (2008), who shows that the IR exists in Turkey, where it is driven by failures in the labor market. Masterson (2007) and Vadivelu et al. (2001) also find empirical evidence of an IR in India and Paraguay. For other examples, see Eastwood et al. (2010); Lipton (2009).

Household owns plot	1.977***	1.951***	2.159***
	(0.155)	(0.176)	(0.338)
Assistance postearthquake	−0.071	−0.150	0.136
Fertilizer, tools, seeds, plant cutting	(0.362)	(0.422)	(0.729)
Household characteristics:			
Household head			
Man	0.096	0.091	0.066
	(0.107)	(0.121)	(0.239)
Age	0.026	0.026	0.024
	(0.021)	(0.025)	(0.044)
Age, squared	−0.000	−0.000	−0.000
	(0.000)	(0.000)	(0.000)
Years education	0.020	0.014	0.017
	(0.018)	(0.023)	(0.031)
Household composition			
Working-age men, number	0.024	−0.001	0.087
	(0.049)	(0.055)	(0.116)
Working-age women, number	0.005	−0.002	0.017
	(0.053)	(0.061)	(0.130)
Dependents	−0.030	−0.025	−0.010
	(0.028)	(0.032)	(0.076)
Other economic activities			
Nonfarm household enterprise	−0.044	0.042	−0.295
	(0.111)	(0.129)	(0.238)
Other nonfarm wage	−0.309*	−0.229	−0.220
	(0.183)	(0.207)	(0.427)
Asset-based wealth index	0.009	0.018	−0.009
	(0.008)	(0.012)	(0.013)
Constant	3.461***	3.294***	3.935***
	(0.559)	(0.642)	(1.199)
Observations	1,505	1,184	321
R-squared, adjusted	0.460	0.458	0.501

Note: The dependent variable is the log of the total crop value per hectare. Ordinary least square point estimates with robust standard errors are shown in parentheses. The results for state-fixed effects are not shown.

** p <0.10 ** p <0.05 *** p <0.01*

Greater access and use of inputs are correlated with increased productivity in both poor and nonpoor agricultural households. There is a positive correlation among physical inputs (fertilizer, pesticides, and seeds), labor inputs (household and nonhousehold labor), and agricultural productivity. A 10 percent rise in non-household labor use per hectare is correlated with about a 2 percent expansion in agricultural productivity. However, household labor is more important in poor

households, where a 10 percent increase in household labor use per hectare is correlated with a 2.6 percent rise in productivity. Nonpoor households can hire non-household labor more easily.

Crop diversification is correlated with greater agricultural productivity in both poor and nonpoor households. While causality cannot be implied, diversification seems beneficial as a risk management strategy. This finding may also hint at the benefits of intercropping practices. Growing cash crops (mangos and coffee) does not appear to be significantly correlated with agricultural productivity.

Agricultural productivity does not vary by household demographic characteristics. Whether the household head is a man or a woman, young or old, less or better educated, the crop value per hectare is not affected (if all else is equal).

Population pressures and environmental degradation are additional important factors contributing to the declining productivity in agriculture. In a country that is already densely populated, steady population growth continues to put pressure on the natural resource base; average farm size has declined over time; and farms have become less productive (Dilley et al. 2005). Moreover, Haiti's exposure to frequent hurricanes and tropical storms, combined with high rates of soil erosion that have reduced soil fertility and adversely affected crop output, cause annual productivity losses in agriculture ranging from 0.5 to 1.2 percent. Extensive deforestation in many parts of the country has worsened the erosion problem and led to the loss of enormous quantities of fertile topsoil (Dilley et al. 2005; Verner 2008).[73]

The nonfarm sector

The nonfarm sector in rural Haiti is predominantly characterized by trade and commerce, and, as the more reliable source of income in rural areas, it is a main source of livelihoods among nonpoor households. About 40 percent of nonpoor households participate in the nonfarm sector (table 2.7). Nonpoor households have 50 percent more access to the nonfarm sector than the poor; the difference is statistically significant. Within nonfarm households, the nonpoor participate relatively more in higher-skilled industries or sectors such as education and health care, while the poor concentrate more around low-skilled services (table 2.8).

73 The forest cover is now less than 2 percent of the country (Library of Congress 2006).

Table 2.7. Nonfarm activity, by type of household.

Percent

Indicator	*Household enterprises*	*Salaried/wage nonfarm*	*Other nonfarm[a]*
All rural	31.5	13.8	6.6
Gender of head			
Woman	34.6**	13.3	6.9
Man	29.6**	14.1	6.4
Poverty status			
Poor	27.8***	12.9	5.7**
Nonpoor	40.4***	15.9	8.7**

*Note: * Indicates statistically significant differences within each category.* ***a.*** *Other nonfarm activity includes unpaid apprenticeship and household labor.*
**** p <0.01 ** p <0.05 * p <0.1*

Table 2.8. Household participation in non farm activities, by industry.

Percent

Indicator	*Industry and construction*	*Trade and commerce*	*Transport*	*Education and health*	*Other services*
All rural	15.6	63.9	6.2	8.9	24.0
Gender of head					
Woman	16.3	66.5	5.6	7.7	21.0
Man	15.1	62.1	6.6	9.7	26.1
Poverty status					
Poor	16.9	62.2	4.9	7.8	28.5
Nonpoor	13.4	66.6	8.4	10.7	16.5

Most of the nonfarm enterprises in rural Haiti operate on a small scale and are in the informal sector, mostly selling prefabricated products. Nonfarm businesses are micro in nature and have an average of 1.5 workers, including the owner (table 2.9). A limited share of businesses hire laborers, only 7 percent among nonpoor households and 5 percent among poor households. The most common reasons provided by households for starting nonfarm enterprises are to increase income and because of the unavailability of wage employment; the biggest market they serve are other households.

Table 2.9. Household enterprise profile

Indicator	*Workforce*				*Type of business*
	Number	Hired[a]		Household workers[b]	Informal, %
	Mean	%	Mean	Mean	
All rural	1.6	5.4	2.8	1.7	100.0
Region					
North	1.5	6.6	2.1	1.4	100.0
South	1.9	6.8	4.2	1.9	100.0
Transversale	1.3	2.7	2.8	1.7	100.0
West	1.5	5.5	1.9	1.8	100.0
Gender of head					
Woman	1.3	1.3	3.1	1.6	100.0
Man	1.8	8.4	2.8	1.7	100.0
Poverty status					
Poor	1.5	4.6	2.3	1.6	100.0
Nonpoor	1.7	6.7	3.4	1.7	100.0

a. *Conditional on using hired labor.* ***b.*** *Conditional on having other household members working for the enterprise besides the owner.*

Box 2.3. The government strategy for rural development

Rebuilding the nation's agricultural production base ranks among the top priorities of the government.a Promoting the development of the rural nonfarm sector is also considered important because an expanding nonfarm sector could absorb surplus unproductive labor as it exits from the agricultural sector, slowing rural-to-urban migration, while creating opportunities to boost household income (Lewis 1954; Verner 2008).

The Ministry of Agricultural Resources and Rural Development has implemented key agriculture policy reforms. In 2010, the government launched a short- to medium-term strategy and investment plan for 2013–16. The plan identifies four main objectives for the agricultural sector: (1) modernize the ministry to enable better governance; (2) raise agricultural productivity to improve food security and increase revenue; (3) develop agricultural value chains, with particular emphasis on increasing exports; and (4) adopt and promote ecological agriculture to preserve natural resources. Other major agricultural policy reforms have dramatically changed the way direct support to farmers is handled. For the first time, subsidies for agricultural inputs are being provided through voucher schemes, which are less distortionary than traditional subsidies applied across the board according to input prices.

The use of vouchers has encouraged greater participation by the private sector in the provision of inputs, allowing for a general positive spillover effect on non-beneficiaries. Progress has also been made in strengthening the capacity of the key institutions charged with the provision of agricultural public goods and services, especially in animal and plant health, but also in research and development and extension services.

a. The objectives of the National Plan of Agricultural Investments (2011–16) includes (1) raising the productivity and competitiveness of the agricultural sector, (2) increasing the contribution of agricultural productivity to national food availability by 25 percent, (3) reducing the number of individuals experiencing food insecurity by 50 percent, (3) boosting agricultural income among at least 500,000 households, and (4) enhancing the resilience of the population in the face of natural hazards (Arias et al. 2013).

3. Income generation in urban areas: opportunities and challenges

Labor force participation in Haiti is low compared to Latin America[74] **and comparable with levels in Sub-Saharan Africa.** Less than two-thirds of the working-age population participates in the labor market. Labor force participation is slightly higher in urban areas than in rural areas (table 2.10).

Table 2.10. Labor market indicators geographically disaggregated.

Percent except where otherwise indicated

Location	*Participation rate*	*Employment rate*	*Unemployment rate, extended*	*Informal employment*	*Invisible underemployment, minimum wage*	*Urban/rural population ratio*
Nationwide	64.7	44.5	31.2	49.6	70.0	0.9
Urban	66.0	39.8	39.6	68.6	57.3	n.a.
Rural	63.3	49.2	22.3	34.1	80.3	n.a.
Regions						
North	63.7	42.6	33.2	46.8	76.4	0.6
South	66.0	50.5	23.5	37.2	78.6	0.2
Transversale	63.0	47.4	24.8	40.4	76.0	0.5
West	64.3	44.4	31.0	53.7	68.3	0.6
Metropolitan Area	66.4	39.9	39.9	68.0	52.5	All urban

Source: ECVMAS 2012. Note: See appendix G for the definition of concepts. n.a. = not applicable.

74 When compared to the rest of the region, the participation rate is calculated for the population aged 15-64, whereas in table 2.10 the rate is calculated for the population over 15 years, which explains the difference in rates (60% vs 64.7%).

Compared to formal workers, agricultural workers earn on average 75% less, and informal workers earn more than 50% less.

Differences between urban and rural settings arise if one looks at unemployment rates, which tend to be higher in urban settings.[75] The unemployment rate in urban areas is almost twice the rate in rural areas (39.6 and 22.3 percent, respectively) (see table 2.10). Because the levels of participation are similar, this means that overall employment rates are lower in urban areas. These facts are perfectly reflected in the employment and unemployment rates of the regions, where the regions with the highest percentage of urban population, such as the Metropolitan Area and the North, have the lowest employment rates and the highest unemployment rates, while the opposite occurs in less urban regions, such as the South. Because of the importance of labor income in all urban Haitian household budgets, a rate of unemployment of almost 40 percent in urban areas is a matter of concern.

Labor market earnings are particularly low among the vast majority of the workers in both urban and rural areas. Around 60 percent of workers in urban areas earn less than the minimum wage; this goes up to 80 percent in rural areas, where most workers are employed in agriculture (see table 2.10). Moreover, slightly less than 70 percent of the workers in urban areas are in the informal sector.[76]

In urban areas, poor individuals present higher average unemployment and underemployment rates than the nonpoor. The poor have a harder time finding a job, and, if they find a job, it is most often associated with low-quality status; thus, two-thirds of poor workers hold jobs with earnings below the minimum wage (table 2.11).

75 More than one definition of unemployment, underemployment, and informality is available, but, for ease of exposition and considering the definitions most well adapted to the Haitian context, this chapter presents only the results based on the definitions of extended unemployment, invisible underemployment, and informal employment. See appendix H for these definitions as well as those also considered, but not presented in the main text. Results based on other definitions are available upon request.

76 Informal employment is defined as all contributing family workers, all independent workers in the informal sector, and all employees without written contracts and not benefiting from social protection. This definition does not include people working in the primary sector (agriculture). The informal sector is defined as all unincorporated enterprises (household businesses) that are not registered or do not keep formal accounts. This definition also does not include people working in the primary sector (agriculture). The definition of underemployment here corresponds to invisible underemployment, which includes all employed individuals who earn less than a minimum amount of money an employee should earn by law (in this case, G 250 per day = G 7,500 monthly, which was the minimum wage before October 2012). Admitting that the concept of underemployment is used repeatedly throughout this chapter (in part with the intention of international comparison), the relevant definition, that is, the proportion of people earning less than the minimum wage, might not be the most appropriate indicator of job quality and competitive wages in the Haitian context. Indeed, labor earnings vary widely across industries and types of occupations, and the minimum wage is not enforced equally in all industries. For these reasons and following Herrera and Merceron (2013), who write on underemployment and job mismatches in Sub-Saharan Africa, the next section presents rates of people earning less than the average labor income within industries and occupations as a proxy for job quality and competitive wages in the labor market.

Table 2.11. Labor market indicators in urban settings, by poverty level.

Percent

Indicator	*Nonpoor*	*Poor*	*Non–extreme poor*	*Extreme poor*
Participation	66.5	64.9	66.5	62.6
Employment	42.6	34.6	41.0	32.7
Unemployment	35.9	46.6	38.3	47.7
Invisible underemployment	53.4	66.1	55.5	69.9
Informal employment	67.2	71.6	68.5	69.0

Note: Invisible underemployment captures the proportion of people earning less than the minimum wage.

An analysis of individual characteristics and labor market outcomes shows that women, youth, and less well educated individuals are at a significant disadvantage. A first analysis looks into the issue of unemployment. Holding constant social and demographic characteristics, one finds that women are almost 20 percentage points more likely than men to be unemployed.[77] Young inexperienced workers are disfavored: for every year of additional experience, the probability of unemployment is reduced by about 1.5 percentage points. Education plays a substantive role, and the role is more sizable, the higher the level of education. Complete unemployment is 7 points less likely among those with lower-secondary education than among those without education, while, in upper-secondary education, the difference is 15 points.

Gender and age are important correlates of the probability of earning less than the minimum wage, that is, being among the invisible underemployed. All else being equal, women are 6 percentage points more likely than men to earn less than the minimum wage (see appendix I, table I.1). This difference holds even after we control for the type of industry that women and men select themselves into. Invisible underemployment is also a more severe issue among younger workers (aged 15–24): the likelihood of earning less than the minimum wage among them is 13 percentage points higher than among workers aged 25–54.[78]

Education appears to be a strong mitigating factor in invisible underemployment. Higher levels of education are correlated with a decrease in the probability of earning less than the minimum wage (appendix I, table I.1). The labor market recognizes the accumulation of and investments in skills. There are also returns to experience; thus, higher levels of experience reduce the chances of invisible underemployment.

Gender, age, and education are closely associated with the likelihood of informal employment. Women are more likely than men to have an informal job.

77 The analysis makes use of ordinary least squares and Probit regressions to study factors associated with the likelihood of unemployment. The regression results are included in appendix I.

78 The government defines youth as people 15–24 years of age.

Women are 20 p.p. more likely than men to be unemployed and earn 32% less than men.

Other factors being equal, women workers are 6 percentage points more likely to be employed informally. Similarly, youth are more affected by informality; workers aged 15–24 are 5 points more likely than workers aged 25–54 to be informally employed. But the most sizable difference is associated with education, and the difference widens, the higher the level of education. Compared with workers without education, workers with lower-secondary educational attainment are 20 points less likely to be informal, while workers with upper-secondary educational attainment or more are more than 40 points less likely to be in the informal sector (appendix I, table I.1).

Hourly earnings, a measure of labor market productivity, confirm that education, experience, and gender matter substantially. The labor market rewards formal education. Even completing basic education yields almost 30 percent more earnings per hour than not attending or not completing the primary level. Moreover, returns to education increase steeply with the level of attainment. Hourly earnings among workers with lower-secondary education are almost 50 percent higher, while, among workers with upper-secondary education or more, earnings are 125 percent higher compared with workers without education (appendix I, table I.1). Experience is also rewarded in the market. Five additional years of experience are associated with a 15 percent increase in earnings per hour. Women make 32 percent less per hour than men. The difference holds even after comparing workers of similar education and working in the same sector. Box 2.4 analyzes whether there are signs of discrimination affecting women in the labor market.

Box 2.4. Zooming in on the gender earnings gap using the Oaxaca-Blinder decomposition

If earnings gaps between men and women appear in the labor market, it is conceivable that the difference, to some extent, may be explained by differences in individual characteristics between men and women, for instance, if men are, on average, better educated than women. After one controls for such characteristics, the labor earnings of women and men should be the same if no gender discrimination is present.

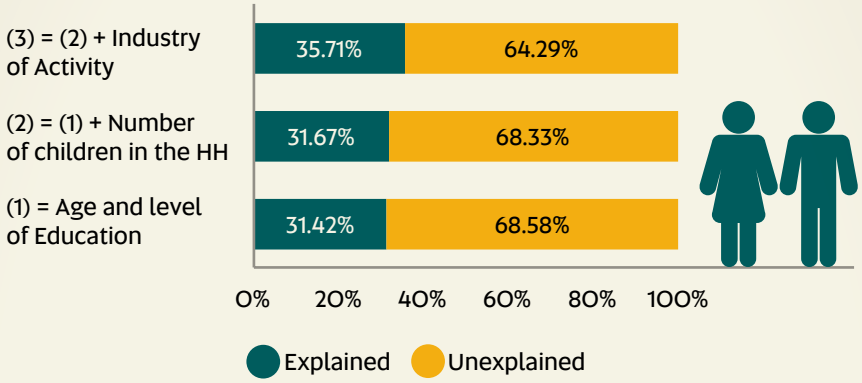
However, the results presented in appendix J, table J.1 show that the hourly labor income among women is around 32 percent lower than among men after one holds education, experience, and even industry of employment constant. Is this a sign of discrimination?

To refine the drivers of the differences between the hourly labor incomes of men and women in urban areas in Haiti, Oaxaca-Blinder decompositions were used (Jann 2008). The Oaxaca-Blinder decomposition therefore provides additional elements to help us understand the extent to which the gender earnings gap can be accounted for by observable and unobservable characteristics.

For this purpose, we define three specifications. The first includes age and level of education as the individual characteristics that may explain the gender earnings gap. The second specification includes the same observable

characteristics as the first, plus the number of children in the household. The third specification includes those included in the second, plus dummies for the industry of activity. The results are summarized in figure B2.4.1.

Figure B2.4.1. Oaxaca-Blinder decomposition results for different specifications, urban Haiti



Sources: ECVMAS 2012; World Bank calculations.

Based on the third specification, observable characteristics such as age, the level of education, the number of children in the household, and the industry of activity explain almost 36 percent of the gender earnings gap, but the other 64 percent remains unexplained. The existence of the gender gap unexplained by observable characteristics suggests some gender discrimination takes place in the labor market.a

The fraction of the gender wage gap unexplained by observable characteristics in urban Haiti is higher than in African and other Latin American countries, alerting to the urgency of addressing this particular dimension. According to Ñopo (2012), the part of the gender wage gap attributable to differences between men and women that cannot be explained by observable characteristics in Latin American and Caribbean countries averages around 18 percent (in circa 2007). There is, however, a large variation across countries. For instance, the widest reported gap occurs in Nicaragua, at 28 percent, and the smallest occurs in Colombia, at 7.3 percent, but none is wider than the one in urban Haiti. However, Nordman, Robilliard, and Roubaud (2013) show that, in the main cities in seven French-speaking countries in Africa, the corresponding results ranged from 40 to 67 percent in 2001/02, which is a little closer to the urban situation in Haiti in 2012. For example, the unexplained part of the gender gap in Lomé (Togo) is around 45 percent after one controls for sector.

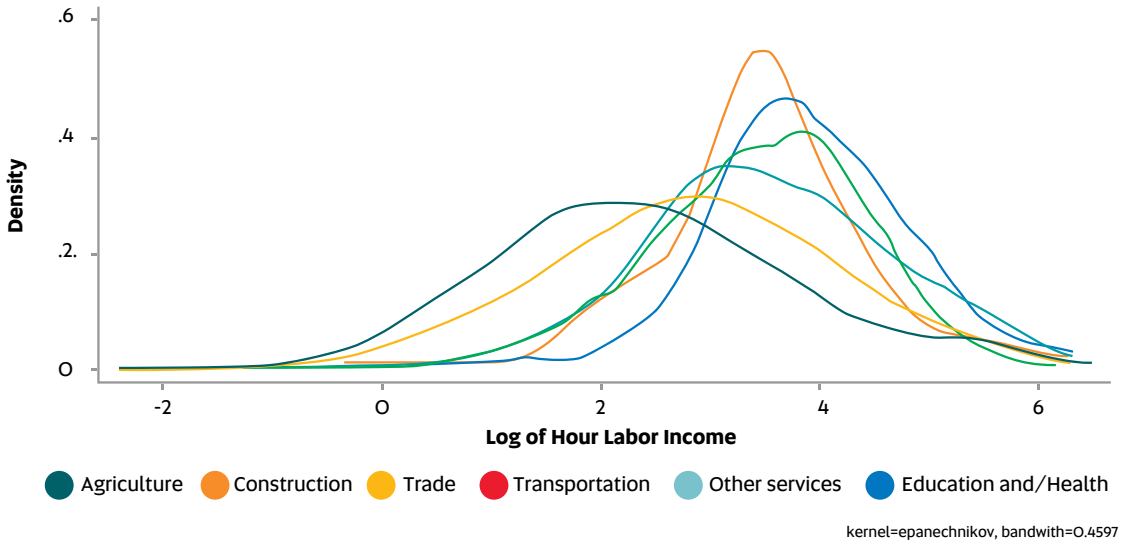
a. A caveat of these results is that they might include some selectivity bias in the sense that the gender gap is calculated only for people who are working and who are thus selected into the labor market. There is also a high probability of self-selection into particular industries of activity.

Despite the high rates of unemployment, informality, and underemployment, urban settings are much better connected to markets and services and therefore present undeniable opportunities for poverty reduction in Haiti. While a large share of the employed population continues to earn low wages and is not protected by safety nets, overall urban areas offer comparatively the best income generation prospects because of their links to domestic and international markets, their dynamic tertiary sector, and better access to services.

Understanding the sectoral structure of the labor market

Although certain industries provide opportunities for better earnings, most jobs are in the low-earnings trade sector. Figure 2.10 shows that earnings are not only higher in industries such as education and health care, transportation, construction, and other services than in trade and agriculture, but also more equally distributed. The case of trade is particularly important since it employs about 40 percent of urban workers. Trade workers receive earnings that are both lower in level, but also higher in variability.

Figure 2.10. The distribution of hourly labor income in urban areas, by industry



Sources: ECVMAS 2012; World Bank and ONPES calculations. Note: Outliers have been eliminated from the calculation. An outlier is defined as an observation with a value larger than the median, plus three times the standard deviation. In urban areas, 0.91 percent of all observations were discarded.

The sectorial structure of the labor market has women at a disadvantage. In the trade sector, the low-earnings and high-variability sector of the labor market, the vast majority of workers are women. About 70 percent of the trade jobs are held by women, whereas, in the better-pay sectors of education and health care, fewer than half the workers are women (table 2.12).

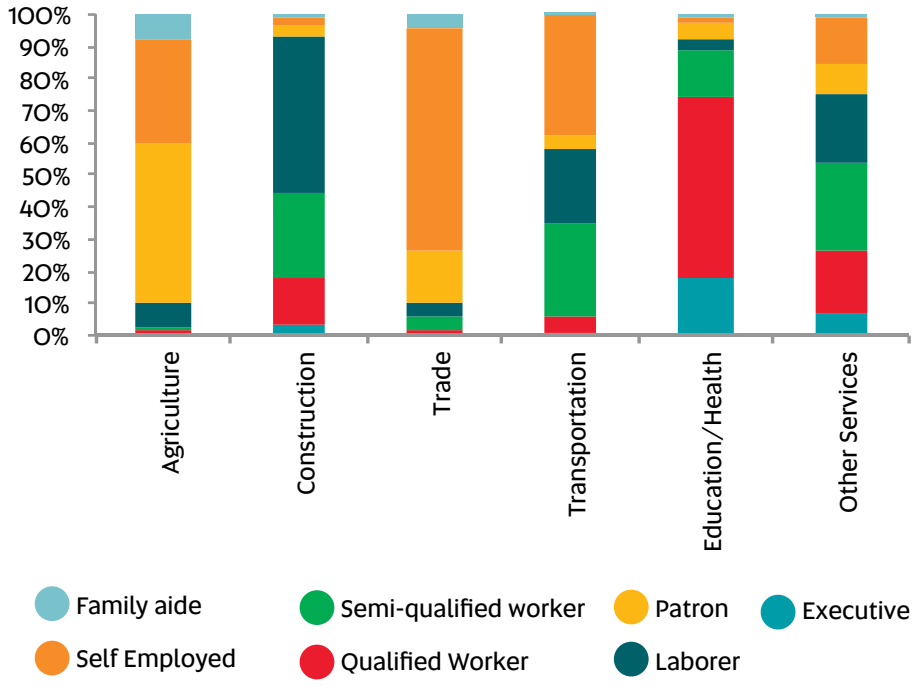
Table 2.12. Gender, poverty and labor income in urban areas, by industry

Sector	Observations	Weighted observations	Workers, %	Women in each sector, %	Hourly labor income, HTG, 2005 prices
Agriculture	195	116,217	8.0	12.8	30.6
Construction	459	181,820	13.0	11.6	49.8
Trade	1,250	542,143	39.0	70.5	35.0
Transportation	151	70,108	5.0	0.3	66.5
Education/health	279	118,774	8.5	46.0	62.9
Other services	951	364,896	26.0	42.8	61.8
Total	*3,285*	*1,393,958*	*100.0*	*45.2*	*47.5*

Sources: ECVMAS 2012; World Bank calculations. Note: Outliers have been eliminated from the calculation. An outlier is defined as an observation with a value larger than the median, plus three times the standard deviation. In urban areas, 0.91 percent of all observations were discarded.

The majority of trade workers are involved in self-employment. Figure 2.11 reveals that industries with low earnings potential and high variability, such as trade, tend to hold a larger proportion of the self-employed than other industries. Overall, almost 37 percent of all workers are self-employed. On the other hand, industries with better pay prospects, such as education and health care, transportation, and construction, are more likely to have executives, qualified and semiqualified workers, and laborers.

Figure 2.11. Composition of occupations in urban areas, by industry



Sources: ECVMAS 2012; World Bank calculations.

Overall, trade and self-employment are, respectively, the industry and the occupation with the largest numbers and percentages of women, the poor, the least well paid, and the least well educated workers in urban Haiti. Is this nearly 40 percent of urban workers destined to be poor and remain in poverty? Or do they have a chance to mobilize out of poverty? Can public policies be implemented to improve the labor market and economic conditions among this large share of the urban population?

Self-employment: scope for improvement?

In the short run, improving the labor situation of the self-employed in urban areas could significantly enhance the well-being of at least 40 percent of workers. Self-employment covers a wide range of situations. While it is a relatively low-earnings occupation, there are workers among the self-employed who manage to receive earnings comparable with those in other occupations. Moreover, because it is the most common form of occupation, notably among women and poorer individuals, one should try to learn some lessons about what might help improve self-employment.

Looking at the positive deviation among the self-employed, that is, those workers deviating from the norm and obtaining better outcomes than the rest, one finds that a small investment in skills can have big payoffs. Within self-employment, table 2.13 compares those people receiving more than the average in hourly earnings—around one-fourth of the self-employed—with those people earning less than the average. Perhaps the most salient result is that, with an average of only 1.3 more years of education, the self-employed who earn more than the average of the occupation have an hourly labor income of HTG 105, while those earning less than the average obtain only around G 12 per hour.

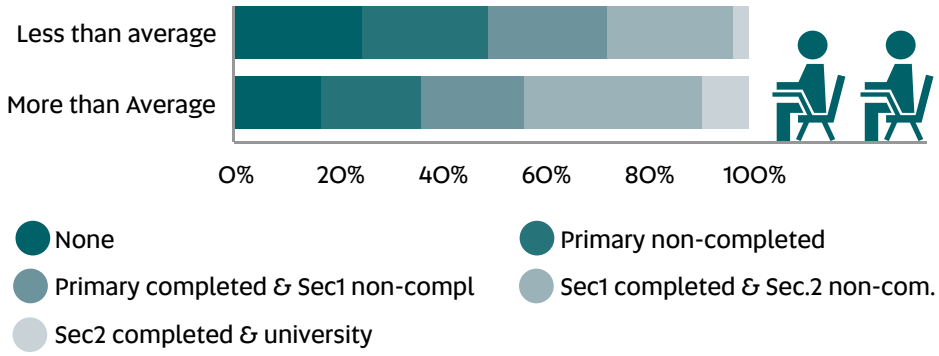
Table 2.13. Differences between the self-employed who earn more or less than the average wage of the occupation, urban areas

Indicator	*More than average*	*Less than average*	*Difference*	*Significance*
Observations	276	833		
Weighted observations	117,118	359,965		
Percent	24.5%	75.4%		
Women	59.2%	69.2%	9.9%	***
Hourly labor income, HTG	107.1	12.4	−94.7	***
Experience, years	27.6	30.8	3.2	**
Average years of education	6.6	5.3	−1.3	***
Age	39.7	42.04	2.3	*
Informal employment	94.2%	91.6%	−2.6%	**

Sources: *ECVMAS 2012. World Bank calculations. *** p <0.01 ** p <0.05 * p <0*

An encouraging lesson is that the income prospects of the self-employed could be substantially enhanced by relatively modest improvements in skills. Among the self-employed earning more than the average, two-thirds have attained a level of education equal to or higher than primary school, while 50 percent of the self-employed earning less than the average are in this group (figure 2.12). Passing from five to six years of education (thus completing the primary level) is associated with an increase in salary of almost G 95 per hour. This striking result implies that a little investment in years of education or remedial training for skills acquisition among people who have been out of the school system for a long time could substantially increase the labor income of the urban poor.

Figure 2.12. Education among the self-employed earning less or more than the average hourly labor income, urban areas



Sources: ECVMAS 2012; World Bank and ONPES calculations.

4. Internal transfers and remittances: a common strategy for income generation

International migration is an important complement to household income in Haiti and, despite the relatively limited share of the population migrating, the returns to migration are significant. For political and economic reasons, large numbers of Haitians emigrated throughout the 20th century, mostly to Canada, the Dominican Republic, France, and the United States (see Jadotte 2008; Orozco 2006). As of 2010, over a million Haitians (10 percent of the population) were estimated to be living abroad, half in the United States.[79] An important economic dimension associated with migration is remittances, which, in Haiti, account for almost 20.0 percent of GDP. Among all the countries on which data are available for 2012, only El Salvador and Guyana (16.4 percent), Honduras (15.7 percent), and Jamaica (14.5 percent) registered remittances as a share of GDP larger than 10 percent. The fact that several of these countries have larger diasporas relative to their population suggests that the economic ties of Haiti's migrants are rather

79 See "Bilateral Migration Matrix 2010," Bilateral Migration and Remittances (database), World Bank, Washington, DC, http://go.worldbank.org/JITC7NYTTO.

strong. and that migrants have a higher income potential (their income as migrants is disproportionately higher than what they could have earned in Haiti).

Internal migration and transfers are also relevant, particularly among the rural population. The decision of a household to send one of its members abroad can be seen as an investment: families incur upfront costs (airplane tickets, visa fees, and so on) to reap future income gains from better labor opportunities.[80] If the initial costs are too high for poorer households, however, moving within the country can be a second-best option.[81] In Haiti, over one-fifth of the population was not born in the department of residence, and the majority of the internal migrants are now living in the Ouest Department (65 percent). In 2012, more than half the population in the Metropolitan Area had migrated from other departments (ECVH 2001; ECVMAS 2012). According to the available data, the share of internal migrants has marginally risen, from 20.4 percent in 2001 to 23.9 percent in 2012, probably attracted by the new opportunities generated in and around Port-au-Prince during the postearthquake reconstruction or seeking escape from the continued deterioration in agricultural productivity.

Migrants are generally better off, and migration overseas bears significantly different results from migration to the Dominican Republic or within Haiti. Migrants are generally better educated than nonmigrants. However, while migrants to the countries of the Organisation for Economic Co-operation and Development are far more likely to have secondary and tertiary education, domestic migrants are relatively less well educated. In all, the Dominican Republic option for international migration is more similar to domestic migration than to migration overseas. Even if less well-off relative to international migrants, internal migrants are, on average, better off than nonmigrants in terms of education, quality of employment (they are more likely to be wage earners and to be formal workers), and welfare in general.

Relative to men migrants, women migrants are less well educated and more likely to be self-employed and to work in the informal sector: these differences are even more pronounced than among nonmigrants. Compared with men migrants, women migrating to the Metropolitan Area are significantly less well educated and more likely to be unemployed (60 percent, against 41 percent among men), inactive, or to be working in the informal sector. These characteristics are even more pronounced among migrants than among man and women in general. Despite the difficulties encountered by women in the labor market, migrating women are generally better off than their nonmigrant peers. Migrant women are also more likely to be single or separated.

Because the returns on both domestic and international migration are high, labor income in Haiti is supplemented significantly by private transfers.

80 For details on this approach to migration and remittances, see Clemens and Ogden (2013). Clemens (2011) estimates that unskilled Haitian farmers migrating to the United States could increase their annual incomes by a factor of 20.

81 Clemens (2014) gathers evidence that migration tends to increase with income until a certain threshold, suggesting that poorer households would like to migrate, but do not have the means to do so.

An approximate cost-benefit comparison indicates that, on average, migration is profitable. A household with a migrant has forgone earnings of about G 5,000 because the migrant is no longer working at the origin, but, in exchange, the migrant can expect to raise G 16,000 at destination (G 4,000 of which are sent back home in transfers). Although these numbers may look similar, both the migrant and the migrant's household at origin are better off because the migrant receives greater labor income, and the household shares resources among fewer people and obtains the transfer besides. When controlling for individual and households characteristics, educated migrants earn on average between 20 and 30% more than their peer in rural areas. In rural areas, half of all income derives from labor, a quarter from production for home consumption, and 13 percent from private transfers. In urban areas, private transfers account for about 20 percent of household income, while labor represents two-thirds.[82]

Monetary transfers, especially remittances, are predominantly an urban phenomenon and contribute more to income, while nonmonetary transfers are more widespread, but represent less value. For the country as a whole, over 35 percent of urban households receive remittances, while only 20 percent of households in rural areas do so. Domestic monetary transfers are more equitably distributed (26.7 percent in urban areas versus 26.4 percent in rural areas), while nonmonetary transfers are slightly higher in rural areas (52.1 percent versus 50.1 percent in urban areas). Monetary transfers are often larger in value, meaning that their contribution to total income (an average of 24.5 percent in the country) is larger than that of in-kind gifts (12.2 percent).

Households headed by unemployed or inactive individuals or by women are much more likely to receive private transfers. Remittances from migrant relatives can be an important source of insurance against labor market and other shocks. Conditional on a set of observable characteristics, a household with a head who is unemployed or inactive is 10 percent more likely to receive remittances and 11–18 percent more likely to receive domestic private transfers. Woman-headed households are also 8–9 percent more likely to receive private monetary transfers.

While both the poor and the nonpoor have equal access to transfers originating in Haiti, the nonpoor have more than twice as much access to foreign remittances. A little more than a quarter of both poor and nonpoor households receive remittances originating in the country. However, more than a third of nonpoor households receive remittances from abroad, while fewer than a third of the poor have access to such remittances. Nonpoor household remittances are also more likely to be regular, and to become available more than once a year. Not only are remittances more frequent, but they are also larger among the nonpoor, more than double the average received by poor households (table 2.14).

82 The remainder of the income is derived from imputed rents, which reach about 13 percent of total household income (see chapter 1).

Table 2.14. Remittances and other income
percent unless otherwise indicated

Indicator	*All rural*	*Poor*	*Nonpoor*	*T-test*
Transfers				
Private transfers from Haiti	59.9	60.7	58.5	1.2
Remittances from abroad	26.3	18.2	37.9	−19.7***
Private transfers, local and foreign are regular	39.0	35.2	45.9	−10.6***
Average remittance, HTG	7,548.3	5,181.6	11,820.2	−6,638.6***
Other income sources				
Pension and other welfare	0.3	0.3	0.3	0.0
Real estate	2.9	1.9	5.2	−3.3**
Other	5.9	5.1	7.7	−2.6*

*** p <0.01 ** p <0.05 * p <0.1

Transfers are most commonly used for food and then to pay for education (tables 2.15 and 2.16). Among both poor and nonpoor households, the main allocation of transfers is for food. Among almost two-thirds of the recipients, private transfers support food purchases. While the share is greater among poor households, remittances among the nonpoor aid in covering food expenses in more than 60 percent of cases. There are no substantial differences between the poor and the nonpoor in the shares of transfers allocated to education expenses.

Table 2.15. Uses of transfers in rural areas
Percent

Use	*All rural*	*Poor*	*Nonpoor*	*T-test*
Food	56.6	68.2	60.8	7.4**
Rent	0.1	0.1	0.1	−0.1
Education	15.1	15.0	15.4	−0.4
Health	6.0	5.3	7.2	−1.8
Construction or repairs to housing	2.1	1.9	2.3	−0.4
Family events (deaths, weddings, and so on)	2.2	2.0	2.4	−0.4
Economic activity (buying tools, raw materials, and so on)	2.1	1.9	2.6	−0.7
Other	27.4	22.7	35.7	−13.0***

*** p <0.01 ** p <0.05

Table 2.16. Uses of transfers in urban areas
Percent

Use	*All urban*	*Poor*	*Nonpoor*
Food	48.6	54.4	46.3
Rent	2.1	1.1	2.5
Education	15.9	18.3	15.0
Health	4.6	5.8	4.1
Construction or repairs to housing	0.3	0.7	0.1
Family events (deaths, weddings, and so on)	1.7	0.7	2.1
Economic activity (buying tools, raw materials, and so on)	1.2	0.7	1.4
Other	25.4	18.2	28.3

Private transfers reduce poverty and inequality. Because over 60 percent of poor and extreme poor households rely on some sort of transfer, private transfers have a sizable effect on poverty headcounts.[83] Without transfers, extreme poverty would increase from 23.8 percent to 28.9 percent, whereas moderate poverty would rise to 63.0 percent from 58.5 percent. Poor households have less access to remittances, and, thus, by excluding these, international transfers would raise extreme poverty to 25.5 percent and moderate poverty to 60.7 percent.[84] In line with evidence on the region, without remittances, the Gini coefficient measuring income inequality would rise to 0.614, and it would rise to 0.618 if all private transfers were excluded.[85]

Treating migration and remittances as another income generation strategy could contribute to a more productive debate and improve income opportunities among households. Because money is fungible, it makes more sense to focus on how to expand the opportunities for income generation, rather on what households can do with their remittances. Thus, regardless of the source of remittances, the more productive focus is on how to improve the capacity of households to invest their scarce resources. At the same time, this helps clarify the reverse question: how can households obtain more resources. Analysts point out that temporary migration agreements offer a smart opportunity. Box 2.5 expands on the issue.

Box 2.5. Remittances as a return on investment

It is difficult to overstate the importance of migration and remittances to the income of the poor in developing countries. Remittances going to the developing world totaled $401 billion in 2012 and are projected to reach $515 billion by 2015. Likewise, a 20 percent increase in the stock of remittance-sending migrants would lead to an increase of $20 billion in the new resources flowing to developing countries, more than the entire G-7 gave in bilateral aid in 2011. However, there are differing perspectives on how migration should be addressed in development economics and policy. Clemens and Ogden (2013) argue that, rather than windfall income, such as lottery winnings, development economics should focus on migration and remittances as part of a productive investment portfolio

83 Official poverty rates are based on consumption, not income. The exercise above consists in subtracting transfers from total consumption and recalculating poverty rates, thus relying on the assumption that households consume all of the income they receive, but only that income and no savings.

84 Acosta et al. (2006) use the ECVH 2001 to estimate the effect of remittances on poverty. Using an income-based welfare measure and the international poverty lines of $1 and $2 a day for extreme and moderate poverty (at the time), respectively, they find that excluding remittances increased extreme poverty from 53 to 60 percent and moderate poverty from 71 to 76 percent.

85 Acosta et al. (2006) show that, for most countries surveyed in the region, nonremittance income is more unequally distributed than total income. Using the ECVH 2001, they estimate that the Gini coefficient would increase from 0.669 to 0.670, the smallest increase in their sample (apart from Nicaragua and Peru, where inequality actually decreases). Our result of a 1.2 percent rise in the Gini is in line with what is recorded in countries such as the Dominican Republic (2004), Ecuador (2004), Guatemala (2000), and Paraguay (2003).

for poor families. Moving to a city or a foreign country is one of the few investments households can make that has a potential return in the hundreds of percent and that can boost income far more than less-productive economic activities that would be available were migrants to stay home.

If migration is treated as a return on investment, more productive questions can then be asked, and more productive public policy be pursued. In general, there is not a significant difference between the investment by poor families of their income from remittances and their income in general, indicating that they tend to view the remittances (and migration) as another part of their investment portfolio, rather than as exogenous income. Thus, instead of examining the barriers to the investment of income from remittances, policy makers might reformulate the question and address the significant barriers to investment in migration, potentially the most profitable part of a household financial portfolio.

In the context of Haiti, a massive barrier to migration is the lack of U.S. temporary worker visas among Haitians. Clemens (2011) calculates that, were such visas available, each worker admitted through the program would, on average, raise their average income by $10,000 a year. Of this amount, 30-40 percent would be sent back to Haiti, and the multiplier effect[86] of investment would mean that each dollar sent back would expand the Haitian economy by $3 or more. Currently, there is virtually no legal path for Haitians to enter the United States for employment, thus representing a significant barrier to such investment. Even unskilled agricultural work is a massively profitable return on investment for Haitian households, but access to the labor market in the United States is generally unavailable for those households that do not already have family in the United States or that cannot claim asylum.

5. Key messages

Haiti's population is equally split: half lives in rural areas, and half lives in urban areas. A sustainable reduction of poverty and inequality needs to be built on strengthening the capacity of rural and urban populations to generate income in a reliable form. In this regard, priority zero in terms of the implications for policy to boost income generation is to reach a path of consistent economic growth. While important, this is common knowledge without examining a living conditions survey. This chapter shows that, given the macroeconomic situation, certain microeconomic determinants are critical in fostering inclusive income generation able to propel poverty reduction. Four priorities can thus be distilled for the attention of policy makers, as follows:

86 The size of remittance multiplier effects is still little understood in the research literature and this topic would deserve further study.

A focus on subsistence farmers and the self-employed will be an essential driver of poverty reduction in Haiti going forward

Priority 1: Boost agricultural productivity. Because 75 percent of the rural population is living in poverty and because the vast majority relies heavily on agriculture, it is imperative find ways to raise productivity in the agricultural sector.

a. *Access to basic inputs (fertilizer, pesticides, seeds, knowledge) is at the top of the list.* The evidence presented in this chapter shows that households in Haiti are restricted in their access to productive inputs and that this is a particular constraint on poorer households. Past experience suggests that distribution systems inefficiencies are among the major constraints to inputs availability. Addressing potential market failures in the provision of these inputs, for instance by engaging more with the private sector, represent a key first step to a more reliable and food-secure farming sector. Increasing the knowledge of farmers through trainings adapted to their context is also critical.

b. *Improving the links to output markets is crucial.* Because less than 40 percent of total production now goes to the market, a next phase in agricultural development after the consolidation of production through quality and reliability enhancements is to integrate the sector with markets, improve value chains, explore export opportunities, and exploit geographical location advantages. As Haiti's food system transitions from its current subsistence orientation to become more market-oriented, food quality and safety will become increasingly important, as well as infrastructure investments, mostly in roads, to facilitate access to markets and decrease losses during transport. This report can motivate future research that uses the agricultural census to inject more granularity and depth into responses to issues of productivity, inputs, and market integration.[87]

c. *Promoting diversification of agricultural production into cash crops can contribute to raise incomes and food security.* This chapter shows that, relative to poor households, non-poor, food secure households are more likely to cultivate cash crops. Given the benefits of diversification, households that rely on agriculture as a major livelihood source should be encouraged to diversify out of food crops.

d. *Fostering the sustainable use of natural resources is essential.* Over the longer term, the welfare of rural households in Haiti will be linked to the quality of the natural resource base on which agriculture depends. Stark population pressure, combined with the unregulated exploitation of natural resources and unsustainable farming practices, has exacted a heavy toll, leaving vast areas of the country with little or no forest cover, heavily eroded landscapes, and severely depleted soils. Great effort is needed to repair the damage of decades of mismanagement by reversing land degradation, restoring soil fertility, reestablishing the vegetative cover, and conserving and protecting increasingly scarce water resources. The obvious place to begin would be through the promotion of more environmentally friendly agricultural production practices, combined with regulations (and enforcement) to control the exploitation of common-pool resources, especially trees.

87 More detailed and concrete policy actions are also suggested in "Rural Development in Haiti: Challenges and Opportunities" (2014), background paper, Haiti Poverty Assessment, World Bank, Washington, DC.

e. Priority 2: Facilitate the off-farm jobs option for rural workers. The availability of nonfarm income sources has made a difference among rural households. Such jobs can be related to agriculture on the upstream (input suppliers) or on the downstream (value-adding and processing) or be separate to the sector (such as small retail). Productive investments, training and other actions to promote labor and physical mobility and diversify rural incomes are needed.

Priority 3: Invest in skills. In urban areas, labor markets, even in the constrained environment of Haiti, reward skills and education significantly. Workers with greater educational attainment can attain substantially better results than others. Among new cohorts of students, there is gender parity. Among older cohorts, however, women are at a stark disadvantage.

a. *Ensuring coverage and enhancing the quality of education are key* (see chapter 3). Education is a key asset for better performance in the labor market. Disseminate an entrepreneurial culture among young people could also help them navigate a difficult job market.

b. *Consider improvements in technical and vocational training.* For the adult population, the avenues for the accumulation of human capital pass through job training (rather than going back to school). The supply of job training centers has increased exponentially in recent years. The Institut National de Formation Professionnelle can play a role in more effectively regulating and monitoring the surge in informal and uncertified training options. Moreover, better coordination with the private sector on the type of skills that are in short supply for current and future demand will aid in job creation.

c. *Harness international migration.* While the more highly skilled are more likely to migrate overseas, the investment in their skills is not lost because they remit transfers that play an important role in the capacity of households to stay out of poverty. A better local business environment will enable remittances to be turned into productive uses (which leads to the next priority).

Priority 4: Invest in basic infrastructure and work toward a more enabling business environment. For both employers and the self-employed, having better access to basic inputs, such as electricity, is important in promoting growth, elevating productivity, and creating jobs. While one- or two-person businesses in trade and commerce are typical in Haiti's market, a share of firms are currently providing wage employment to a minority segment of the workforce, thereby helping wage workers achieve the better labor outcomes to which many other workers aspire. Self-employment is an entry point to the labor market used mainly by youth and women, two groups facing relatively higher barriers to wage-paying jobs. A large share of the self-employed are self-employed by necessity rather than because of entrepreneurial ability. There is scope for boosting the performance of both employers and the self-employed by undertaking complementary investments in basic infrastructure, for example, electricity, and removing the constraints on access to inputs, including credit and skills. Future research could explore the extent to which the self-employed are able to grow into small businesses or exit self-employment by obtaining wage jobs in larger firms. Analysis of this dynamic could help in reaching an understanding of the process of job generation within the context and given the constraints in Haiti.

Chapter 3: Challenges to human capital accumulation

Health and education outcomes and service utilization have improved in Haiti[88]. However, they have been relatively inadequate, especially among the poor. There are clear signs of the intergenerational transmission of poverty in Haiti, a trend that could be broken through improvements in educational attainment. Indeed, education positively influences health outcomes and is a strong determinant of labor earnings. It should therefore be prioritized in the effort to reduce chronic poverty and vulnerability. Cutting the costs and raising service supply in education and health care will be key to enhancing service utilization and outcomes, particularly in rural areas. More sustainable sources of financing are needed to avoid overburdening households, particularly in education and health care.

1. Introduction

The diagnostic provided in chapter 1 highlights that human capital accumulation in Haiti is key to improving well-being in monetary and nonmonetary terms, but still presents important challenges that need to be addressed to reduce poverty. Low educations levels, food insecurity, and poor access to basic services are associated with chronic poverty in Haiti, particularly in rural areas. This chapter aims to provide an in-depth description of the current state of human capital accumulation in Haiti and how it has evolved in terms of access to and, to the extent the data allow, the quality of health care and education services.

Education and health care are critical to building labor productivity and advancing the welfare of individuals. On average, an additional year of education generates a 10 percent increase in earnings, and this effect tends to be stronger in developing countries.[89] In addition to boosting the earnings of individuals, education can contribute to economic development. One of the most robust correlates of GDP growth across countries is average scores on international standardized tests taken by secondary-school students (Hanushek and Woessmann 2009). Likewise, an improvement in life expectancy and child health can create tremendous returns in economic development and poverty reduction.[90] Undernutrition,

88 This chapter is based on Adelman et. al. (2014) and Cross et al. (2014), two background papers of the study by the World Bank and Observatoire National de la Pauvreté et de l'Exclusion Sociale (ONPES). 2014. Investing in People to Fight Poverty in Haiti, Reflections for Evidence-based Policy Making. Washington, DC: World Bank.

89 Barro and Lee (2012) and Montenegro and Patrinos (2012) highlight the correlations. However, several studies have estimated the causal effect of greater educational attainment on earnings and find effects that are of the same order of magnitude as the correlations (see Card 1999; Duflo 2001; Psacharopoulos and Patrinos 2010).

90 Each 10 percent improvement in life expectancy at birth is associated with a rise in economic growth of at least 0.3 to 0.4 percentage points per year, holding other growth factors constant (Sachs 2001). Another study using a panel of countries observed from 1960 to 1990 found that a one-year improvement in a population's life expectancy contributed to an increase by 4 percent in

which affects mainly poor households, also pushes up the incidence and severity of disease and is an associated factor in over 50 percent of all child mortality (OECD and WHO 2003). Sickness and disease generate economic losses estimated at between 17.4 and 35.0 percent of GDP.[91]

In Haiti, the better educated are better off (figure 3.1). Among households in which the heads have never attended school, 78 percent are living in poverty; this is 4.5 times the poverty rate among households in which the heads have completed upper-secondary school or above (see chapter 1).[92] In urban areas, labor income is, on average, 28 percent higher among individuals who have completed primary education than among uneducated individuals. Adults who have completed primary school are about 30 percent more likely than adults with no education to be living outside their department of birth, thereby accessing better economic opportunities:[93] Among all internal migrants, 65 percent moved to the department of Ouest, the center of economic activity and education in the country. Haitians who migrated to the United States are substantially better educated than those remaining in Haiti. Education is linked with lower fertility rates: the fertility rate is high in Haiti, at 3.2 children per woman, against 2.1 in the region; however, better educated adults are more likely to be married and to have fewer children. Among household heads, women who have completed at least upper-secondary school have, on average, half as many children as women with no formal schooling.[94]

Improved access to and quality of basic services can have a huge impact, not only the current generation, but the next one as well

economic output after controlling for other structural factors and other human capital factors, such as education and work experience (Bloom 2003). Sachs (2001) also reports that poor countries with an infant mortality rate between 50 and 100 deaths per 1,000 live births enjoyed an annual growth of 3.7 percent a year, whereas similar poor countries with rates above 150 showed average growth of only 0.1 percent a year. Such results are confirmed by the "Global Health 2035" report, which finds that a decrease in mortality accounted for about 11 percent of recent economic growth in low-income and middle-income countries as measured by national income (Jamison et al. 2013). However, although various studies have shown an association between health and economic development (see Barro 1996; Bhargava 2001; Bloom 2003; Bloom and Sachs 1998), the positive effect of health on economic growth is not yet conclusive. After controlling for exogenous factors such as new chemicals and drugs, international health campaigns, and main diseases, Acemoglu (2007) demonstrates that there is no evidence that an increase in life expectancy leads to more rapid growth in income per capita.

91 The economic losses associated with disease are calculated by converting disease-induced losses into dollar terms. Using disability-adjusted life years, economists have estimated that the loss in income because of malaria in Sub-Saharan Africa represented 17.4 percent of gross national product in 1999, while the economic loss because of AIDS was 35.1 percent of gross national product.

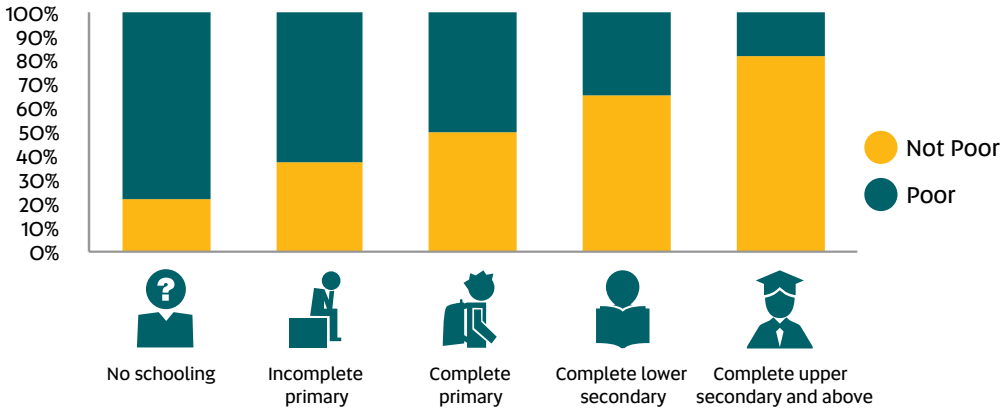
92 Throughout this chapter, primary is used to refer to the first two basic cycles of the Haitian education system; lower-secondary school is the third basic cycle; and upper-secondary school is the equivalent of secondary school.

93 Individuals or their families may migrate to take advantage of educational or economic opportunities. Thus, education may be a cause as well as a consequence of migration.

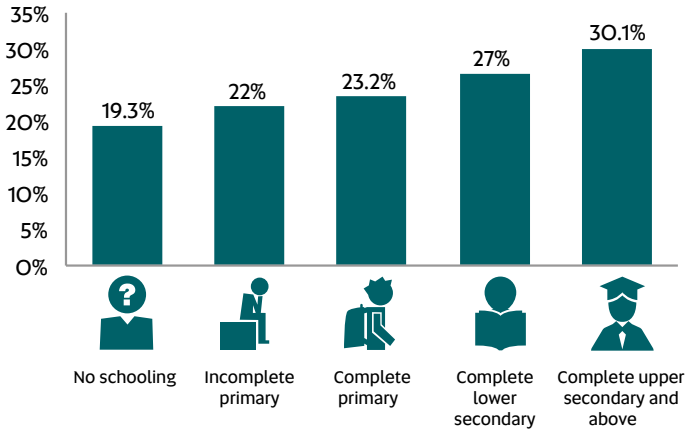
94 Global evidence shows that women's education and fertility are significantly negatively correlated after one has controlled for other relevant factors, such as wealth and urban status, suggesting that education is a cause of lower fertility (Bongaarts 2003).

Figure 3.1. Welfare and educational level in Haiti, 2012

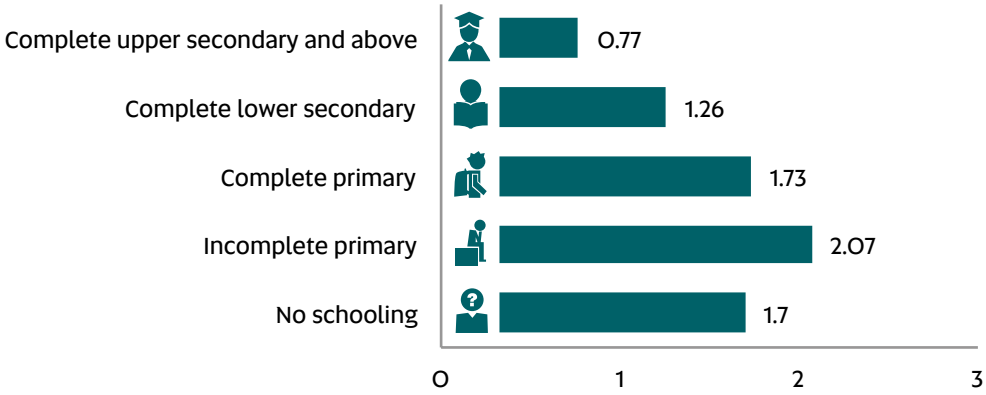
a. Household poverty status by educational attainment of head, %



b. Adults (15+) living outside the department of birth, by educational attainment, %



c. 0- to 18-year-olds, by educational attainment of woman household head, number



Source: *ECVMAS 2012; World Bank and ONPES calculations. Note: The incomplete primary category includes individuals who attended preschool.*

Health outcomes in Haiti are below the regional average. In Haiti, life expectancy at birth is 62 years, which is aligned with other low-income countries, but well below both the regional and the world average.[95] The adult mortality rate is also high relative to the rest of Latin America, particularly among women (227 in Haiti against 89 in Latin America) (table 3.1). Food insecurity is substantial, particularly in rural areas (34 percent), among the poor, and among households with children, which explains the high rates of malnutrition and stunting among children. This may impair the development of children and may help perpetuate poverty. Sickness-related shocks have been identified among the most common and most severe shocks in economic terms (see below).

Table 3.1. Basic health indicators

Indicator	*Gender*	*Haiti*	*Regional average*	*Global average*
Total fertility rate per woman		3.2	2.1	2.5
Life expectancy at birth, years	Both	62	76	70
Life expectancy at age 60, years	Both	17	22	20
Health life expectancy at birth, years	Both	52	67	62
Under-5 mortality rate per 1,000 live births	Both	76	15	48
Adult mortality rate	Men	268	161	187
	Women	227	89	124
MMR per 100,000 live births		380	68	210
HIV prevalence per 100,000 population		1,435	315	511
Tuberculosis prevalence per 100,000 population		296	40	169

a. The adult mortality rate represents the probability of dying between 15 and 60 years of age per 1,000 population.

This chapter examines human capital accumulation and related trends in Haiti in terms of access to health care and education services. The analysis builds on the poverty profiles presented in chapter 1 and, therefore, on the data from the recent postearthquake living conditions survey (ECVMAS 2012). Additional data sources include the government and the DHS series, which allow more meaningful comparisons over time.

2. Access to education

Haiti has made substantial progress in expanding educational attainment over the last two decades. Younger Haitians have more education, on average, relative to older Haitians, suggesting that attainment has been increasing (box 3.1). However, the relationship between age and educational attainment may derive in part from selective international migration (see above). Figure 3.2 shows that, among young adults aged 15–19, educational attainment and literacy have been improving steadily. In 1994, 13–14 percent of men and women had never attended school; by 2012, the share had dropped to 3 percent. Among these same cohorts, a growing portion are reaching lower-secondary school or above.

95 See "Haiti: Country Profiles," GHO (Global Health Observatory) (database), World Health Organization, Geneva, http://www.who.int/gho/en/.

Box 3.1. The intergenerational persistence of education: educational gap analysis

How persistent is educational attainment across generations? The answer is important to understanding the extent to which education offers all Haitian children an opportunity to build their human capital and improve their welfare. While data are not available on the educational attainment of adults and their parents, ECVMAS includes data on adult educational attainment and the current grades attended by their children (age 10 and older). This allows one to calculate the educational gap, that is, the difference between a child's potential and actual educational attainment. For example, because formal schooling legally begins at age 6, the potential educational attainment of a 10-year-old would be four years. If that child had never attended school, the gap would equal 4, and, if the child was in grade 2, the gap would equal 2.[a]

Results show that the average educational gap among children aged 10–14 is largest among children in the poorest households, at over 2.5 years, reflecting the lower rates of school enrollment and higher rates of overage for grade among this population segment (figure B3.1.1). The average across quintiles, at nearly 2.0 years, is substantially above the gaps elsewhere in the region, where the average gap among 15-year-olds was about 1.5 years in 2009 (Ferreira et al. 2013).

Figure B3.1.1. Educational gap among children 10-14 by per capita consumption quintile

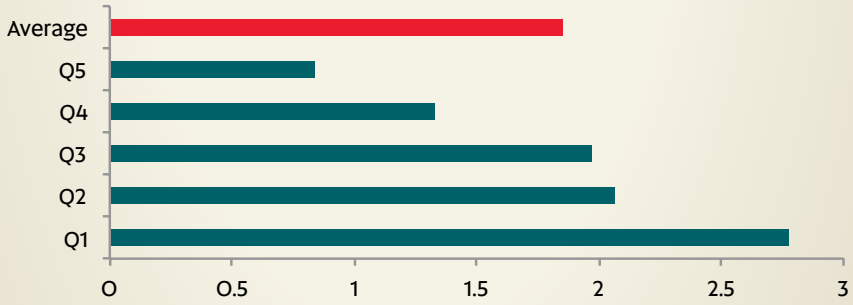
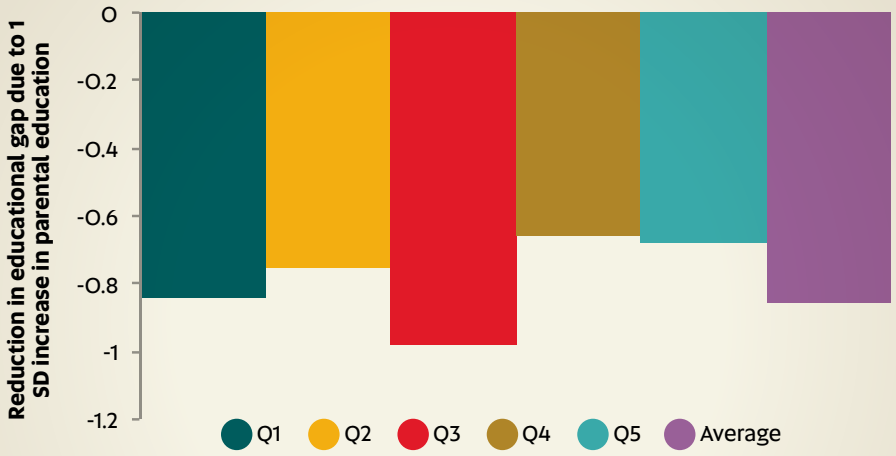


Figure B3.1.2 shows that parental education has a significant effect: even within consumption quintiles, children (10- to 14-year-olds) of better educated parents show lower educational gaps. A one standard deviation increase in parental attainment is associated with a decrease in the educational gap of 0.84 years in the poorest quintile and 0.68 years in the top quintile. On average across quintiles, the effect is 0.86 years, substantially higher than the regional averages, which are 0.3 years among 10-year-olds and 0.6 years among 15-year-olds (Ferreira et al. 2013). This suggests that the persistence of educational attainment is particularly strong in Haiti.

Figure B3.1.2. Average reduction in education gap given a standard-deviation increase in parent educational level, by per capita consumption quintile

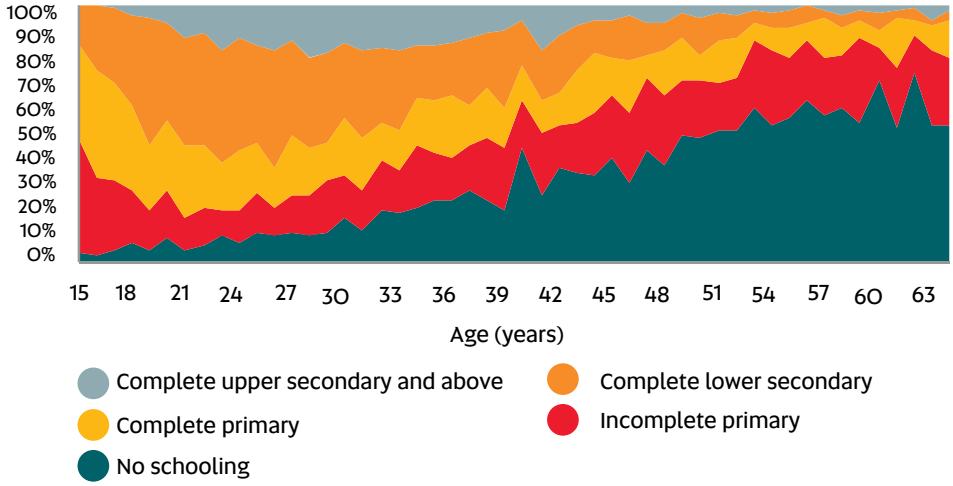


Note: Each bar represents the average reduction in the educational gap associated with a one standard deviation increase in parental educational attainment by household per capita consumption quintile. Other covariates included in the regression are the child's gender, department-fixed effects, and an indicator for living in an urban area. Only children living in a household where the head is one of their parents are included in this analysis. a. This measure approximates years of educational attainment by grade because the actual years spent in school are not known. Therefore, a year repeating a grade is treated as 0 years of educational attainment.

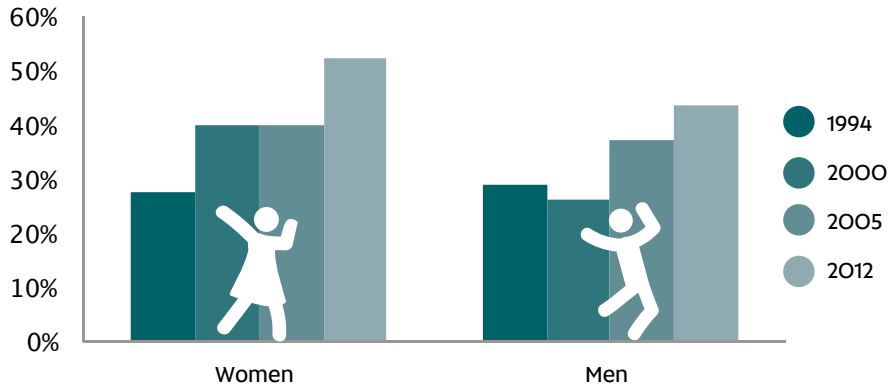
a. This measure approximates years of educational attainment by grade because the actual years spent in school are not known. Therefore, a year repeating a grade is treated as 0 years of educational attainment.

Figure 3.2. Educational level of adults and young adults

a. Adult educational attainment



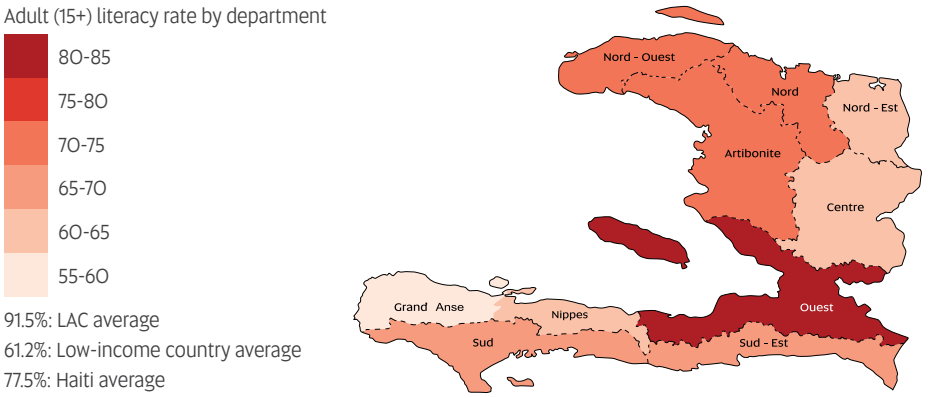
b. Attainment among 15- to 19-year-olds



Sources: *Chart a: ECVMAS 2012; World Bank and ONPES calculations; chart b: DHS final reports.*

Despite this progress, educational attainment among adults is still only relatively modest, which affects earning capacity. Compared with its Latin American and Caribbean neighbors, Haiti has the highest share of adults with no education. Literacy rates in all departments, including Ouest, are lower than the regional average and, in several departments, are close to the global average among low-income countries (map 3.1). Nationally, the adult literacy rate is about 77 percent, midway between the average in low-income countries and the average in the region. While the average number of years of education among young men and women is the same, adult men (24–64) have an average of almost two years more education than adult women. In the region, the trend is opposite: adult women are, on average, better educated than men. One of the determinants of unemployment and underemployment is the low level of education, particularly in urban areas, where unemployment is associated with poverty and vulnerability. The completion of primary education by an adult living in an urban area results in an increase of 25 percent in labor earnings. Therefore, investing in adult education, including basic literacy and numeracy skills as well as the technical skills demanded in the labor market, seems to be key to reducing poverty in Haiti.

Map 3.1. Literacy rate in Haiti, 2012



Sources: ECVMAS 2012; World Bank and ONPES calculations; WDI (World Development Indicators) (database), World Bank, Washington, DC, http://data.worldbank.org/data-catalog/world-development-indicators. Note: Data on literacy in countries other than Haiti are taken from various sources. Methodological differences may therefore affect the comparisons between Haiti and other countries.

Youth face additional challenges in the labor market, despite their higher literacy levels, which suggests that higher-quality education and some professional training might help. Although the level of educational attainment is higher among better educated young adults relative to older cohorts, it still lags behind the corresponding levels in the rest of the region (see map 3.1). This penalizes young adults on the labor market, particularly in urban areas (see chapter 2). Indeed, people between the ages of 15 and 24 in urban areas have not only the lowest rates of labor participation and employment, but also the highest rates of unemployment and informal employment. This suggests that the average quality of education they have received is low (see below). Youth who have completed primary school may therefore still lack basic skills, in addition to needing more job-relevant training. A wide range of market failures likely contributes to the situation (failures in the labor market, the credit market, and the market for education, including information scarcity). Investing in youth training alone may thus be insufficient to improve youth employability.

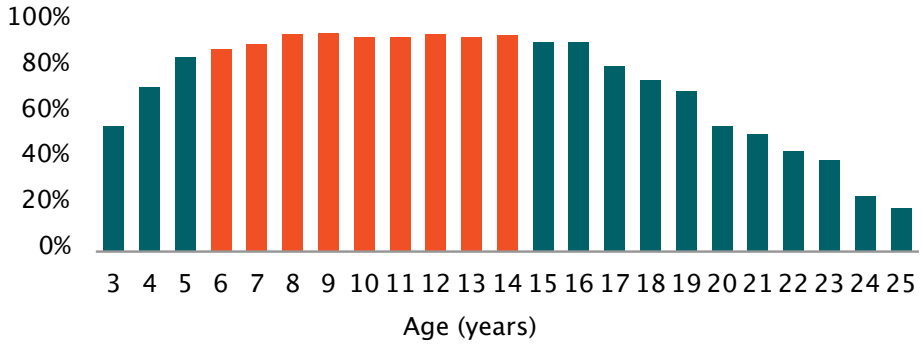
School participation among children and progress in school and in learning

Despite advances in recent decades, about 10 percent of 6- to 14-year-olds are not in school. Figure 3.3 shows that the majority of preschool-age children and 90 percent of children of official primary-school age (6–11) are in school. (Box 3.2 offers a picture of the structure of the education system.) This represents progress: in 2001, participation rates among the same age cohort were around 78 percent. Within the Latin America and Caribbean region, however, enrollment rates are below 95 percent among this age-group only in Nicaragua (88 percent), Guatemala (92 percent), and Honduras (94 percent).[96] School enrollment begins to drop off around age 15 in Haiti, but 73

96 Data in SEDLAC (Socio-Economic Database for Latin America and the Caribbean), Center for Distributive, Labor, and Social Studies, Facultad de Ciencias Económicas, Universidad Nacional de La Plata, La Plata, Argentina; Equity Lab, Team for Statistical Development, World Bank, Washington, DC, http://sedlac.econo.unlp.edu.ar/eng/statistics.php.

percent of 18-year-olds report they are still in school (ECVMAS 2012). The numbers indicate that about 200,000 children aged 6–14 are currently out of school.[97]

Figure 3.3. School enrollment for children in Haiti, 2012



Source: ECVMAS 2012; World Bank and ONPES calculations. Note: Children in preschool are considered enrolled in school. Enrollment is based on answers to the survey question asking if children are currently in school, rather than on administrative enrollment records.

Box 3.2. The education system in Haiti

Formal education in Haiti is structured across four levels: preschool, basic education, secondary school, and higher education (figure B3.2.1). Preschool is meant to serve children from age 2 to 5, and is considered to have four levels based on these ages: poupons, petits, moyens, and grands. However, this structure is not formally mandated by public policy. The first two cycles—grades 1–6 for children aged 6–11—are considered primary education. Thereafter, children may enter into vocational programs or continue to the third basic cycle (lower-secondary school), which consists of three grades for children aged 12–14. Similarly, vocational programs are available after lower secondary, or children may continue on to secondary (upper-secondary) education, which consists of three or four grades depending on the model followed by the school. Higher (tertiary) education includes a range of university, technical, and vocational programs.

Figure B3.2.1. The formal education system

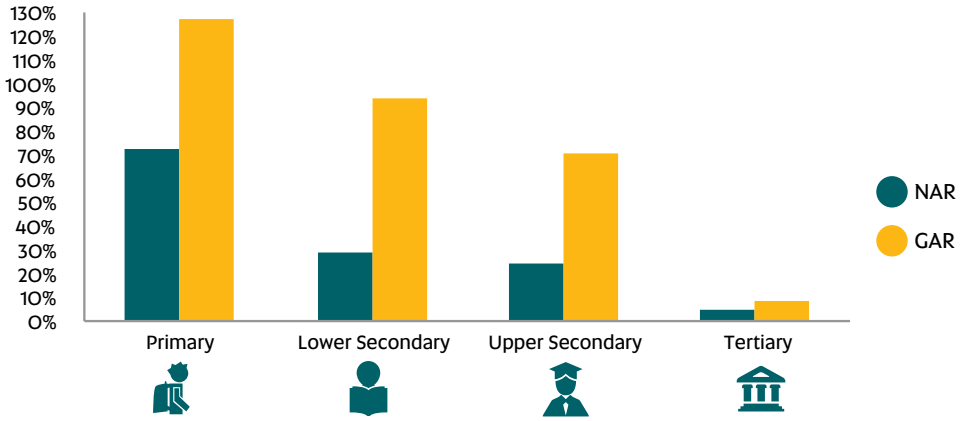
Preschool	Fundamental		Secondary	Superior
No formal structure mandated by Government	Cycles 1 and 2 Primary	Cycles 3:Lower Secondary	Upper Secondary	Tertiary
Ages: 4-5	Ages: 6-11	Ages: 12-14	Ages: 15-17 or 18	Ages: 18+
	Grades 1-6	Grades 7-9	Grades 10-12-13	

Sources: Data of the Ministry of Education and Vocational Training; World Bank estimates.

97 Estimates based on ECVMAS (2012), enrollment rates, and population projections in IHSI (2007).

Most children are overage for grade because of a late start and slow progression. Figure 3.4 shows attendance rates in primary, secondary, and tertiary education. In 2001, the national net enrollment ratio for primary school stood at about 60 percent and, by 2012, had risen to 72 percent. Similarly, the overall secondary (lower and upper) net enrollment ratio rose from 22 to 47 percent. These increases reflect progress in raising the share of children in school and improving school progression according to the appropriate age for grade. However, substantial distortions between age and grade remain, leading to large differences between the net enrollment rate and the gross enrollment ratio at every level, until participation drops off steeply at the tertiary level. These distortions are driven by the widespread practice of starting primary school late and by the high rates of grade repetition and dropout.

Figure 3.4. Enrollment rates in primary, secondary, and tertiary education



Source: ECVMAS 2012; World Bank and ONPES calculations. Note: Net enrollment rate (NER) = enrollments at a given level of education among the age-group that officially corresponds to that level expressed as a share of the same age-group in the population. Gross enrollment ratio (GER) = the number of children who are attending school at that level regardless of age, divided by the number of children in the age-group that officially corresponds to that level.

Children start primary school an average of two years late and progress slowly, such that fewer than 60 percent will reach the last grade of primary. While the official age for beginning primary school is 6, the average child enters first grade at 7.8 years, after spending two or more years in some form of preschool. This distortion grows over time because about 10 percent of children repeat, and 2–6 percent drop out of each grade of primary, such that there is a three- to four-year gap between the average age of students and the prescribed age from second grade onwards (table 3.2). Using a simulated cohort approach, these rates imply that only about 58 percent of children in first grade will arrive at sixth grade, and only 29 percent will reach the final year of upper secondary. Therefore, identifying and addressing the drivers behind late primary-school starts as well as the high repetition and drop-out rates are critical to boosting educational attainment. The available data allow some analysis of the individual and household characteristics correlated with overage-for-grade status, but additional research is needed into the systemic causes.

Table 3.2. The average students completes primary school at nearly 16 years of age

	Grade	Average age	Prescribed age	% expected to repeat	% expected to drop out
Primary	1	8.1	6	12	2
	2	9.9	7	10	1
	3	11.5	8	11	2
	4	12.8	9	9	3
	5	13.8	10	7	3
	6	15.3	11	11	5
Lower secondary	7	15.9	12	6	3
	8	16.8	13	3	4
	9	17.8	14	10	5
Upper secondary	3	18.5	15	4	4
	2	19.6	16	4	7
	Rheto	20.6	17	29	13
	Philo	20.8	18	9	30

Source: World Bank estimates based on data in DHS 2012. Note: Rheto = grade six. Philo = grade seven.

Children in poor rural households are much less likely to be in school or to be in the appropriate grade for age (figure 3.5).[98] Among all poor households, 88 percent of children aged 6–14 are in school, compared with 96 percent of children in nonpoor households. Similarly, among poor households, 62 percent of children aged 10–14 are overage for their grade (70 percent in rural areas), against 38 percent among the nonpoor. These results suggest that poverty is an important barrier to school enrollment. If other characteristics are held equal, evidence shows that, for a G 1,000 increase in annual household per capita consumption (worth about 4 percent of the national poverty line), the probability of school enrollment rises by 0.2 percentage points, while the probability of being overage for grade declines by 3 percentage points. Many factors drive the correlation between poverty, enrollment, and overage status, including the cost of schooling, which may delay school enrollment or cause children to drop out temporarily. Indeed, about one-third of children aged 10–14 who are not in school are working, and only 60 percent of the children in the lowest welfare quintile are in school, but not working. Many children continue to serve as restavecs, which can affect their enrollment and progression in school.[99] The costs associated with education are the primary reason children are not in school in 83 percent of cases. Other factors associated with poverty, such as malnutrition, poor health (see below), and lack of stimula-

98 To examine the effects of several household characteristics within the same framework, we have carried out a probit regression of school enrollment and overage status characteristics among individuals (Xi), households (Hi), and area of residence (Zi), as follows: in school $i = \alpha + \beta 1Xi + \beta 2Hi + \beta 3Zi + \varepsilon i$ (3.1) The results are presented in appendix K.

99 Restavecs (reste avec in French means stays with) are children in poor, usually rural households who are sent at an early age to live with wealthier families, usually relatives, in urban areas, in the hope of a better life. Frequently, these children are used as servants by the host families, who typically disrespect the children's most basic human rights. Restavec children are difficult to identify in household survey data. In ECVMAS (2012), only 91 observations include household members identified as "domestique = restavèk." Yet, some studies have found that the problem is significant. For instance, a 2009 study by the Pan American Development Foundation found that there may be as many as 225,000 restavecs in Haiti (Pierre et al. 2009).

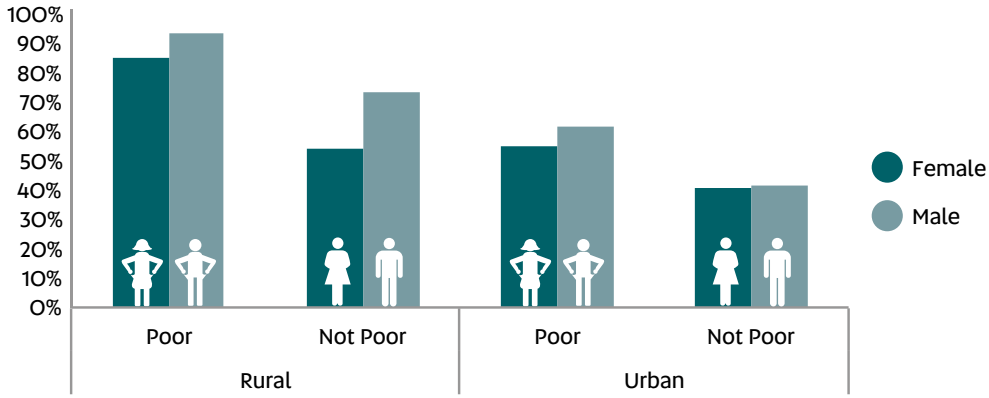
Girls start dropping out of school at the age of 14, earlier than boys, exposing themselves to longer terms consequences such as early marriage and illiteracy

tion, can have lasting effects on children's cognitive development. If they do not receive adequate stimulation in early childhood, children may enter school ill prepared and be more likely to perform poorly, to repeat grades, and to drop out of school relative to children whose cognitive skills and overall school readiness are more suited for entry into primary school.[100]

Figure 3.5. School enrollment by area of residence, poverty status, and gender, %

a. Enrollment rates overage for grade

b. Share of 10- to 14-year-olds



Source: ECVMAS 2012; World Bank and ONPES calculations. Note: Children aged 6–14 are included in chart a (gender differences are not statistically significant, but the differences poor/nonpoor are). Data limitations prevent grade-specific overage analysis on children under age 10. Children are classified as overage if they are at least two years older than the prescribed age for their grade. Gender is not statistically significant for enrollment, but is so for students who are overage for grade.

The presence of parents in the household and their education level, the area of residence, and disability are correlated with enrollment and regular progression in school. Compared with their peers in school, children who are not in school are much less likely to be the son or daughter of the household head and much more likely to be disabled. They are also more likely to be in households in rural areas and

100 For example, see Currie and Thomas (1999); Feinstein (2003); Heckman and Masterov (2007); Pianta and McCoy (1997); Reynolds et al. (2001).

in households in which the heads have little education. Among children in school, those who are overage are much more likely to be boys and much less likely to be the children of the household head. As with out-of-school children, they are also more likely to be living in rural areas and in households in which the heads have little education. While boys are more likely to be overage, girls start dropping out of school sooner than boys, at around age 14.

Many students learn little, particularly in poor communities. According to assessments administered in early grades in selected schools, basic skills are acquired slowly or not at all, particularly in schools in poor communities. For example, assessments conducted in schools in Artibonite and Nippes found that the average third grader could only read 23 words per minute, well below the estimated speed of 35–60 words per minute required for comprehension of a basic text (RTI International 2010; USAID 2012). Weak learning outcomes are not surprising because instructional quality and the provision of learning materials are generally believed to be limited (MENFP 2013). For example, in French-language and mathematics assessments of primary-school teachers in the Central Plateau, where the questions were drawn from teacher training institute examinations, only 10 percent (French) and 22 percent (mathematics) of teachers were able to answer at least half of the questions correctly (Gallié and Marcellus 2013).[101]

National examinations are first administered at the completion of grade six and have been criticized for archaic content and a reliance on memorization. Students sitting for the examinations are a relatively select group, considering that many children do not reach beyond sixth grade and that sitting for the first two examinations requires the payment of a fee (G 250 in sixth grade; G 350 in ninth grade). Passing rates were about 75 percent in grades six and nine in 2013; they were 29 percent in Rheto (grade six) and 38 percent in Philo (grade seven). These rates vary by department, as does the share of students actually sitting for the examinations. Given the weaknesses in basic skills suggested by small-scale studies, nationally representative learning assessments are needed to understand the challenges faced by the majority of Haitian students.

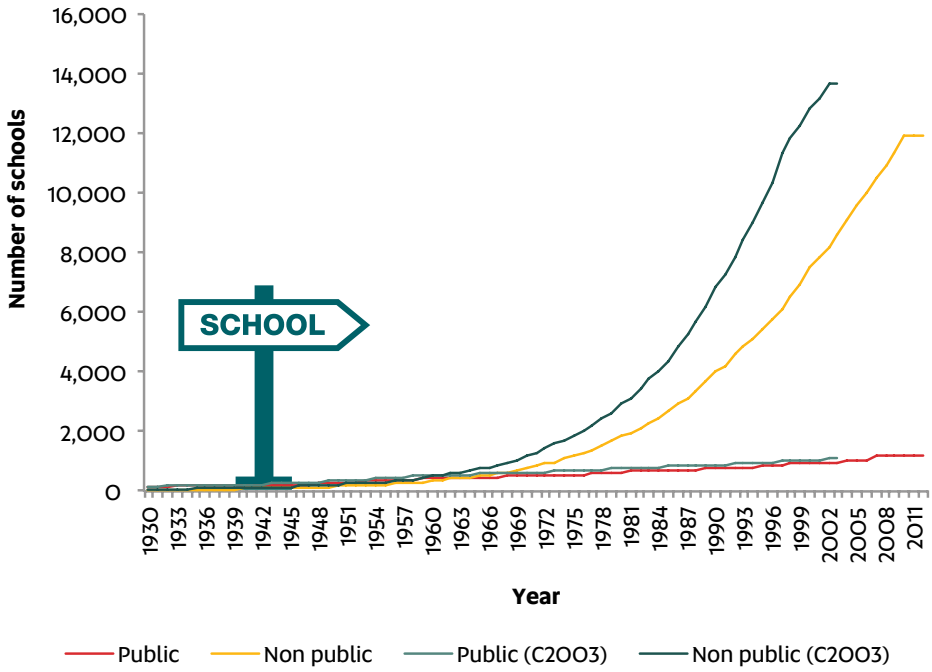
Household expenditures and the supply of education

The supply of public schools in Haiti is limited. According to data of the 2010/11 school census, only 12 percent of the 17,076 schools in Haiti are public, and they host 22 percent of primary pupils and 27 percent of secondary students. While the majority of children are in nonpublic schools, 61 percent of children living in poor households attend nonpublic schools, compared with 78 percent of nonpoor children. Among poor children attending nonpublic schools, over 70 percent attend either community schools or private schools that are not religiously or community affiliated. The offer of nonpublic primary schools has increased exponentially in re-

101 In both cases, the communities involved were targeted by the government and its international partners for assistance because of their poverty and vulnerability. Therefore, conclusions about learning in Haitian schools more broadly cannot be drawn from these selected examples.

cent years (figure 3.6). Slightly fewer than half of nonpublic primary schools are religiously affiliated; Protestant-affiliated schools make up the majority of these. Few data on nonpublic schools are systematically collected beyond the basic information voluntarily provided in the annual school census.[102] Over half of all primary schools are not yet officially recognized by the government, which is currently developing a decentralized licensing system with multiple levels of official recognition.

Figure 3.6. Number of public and non-public schools, by year

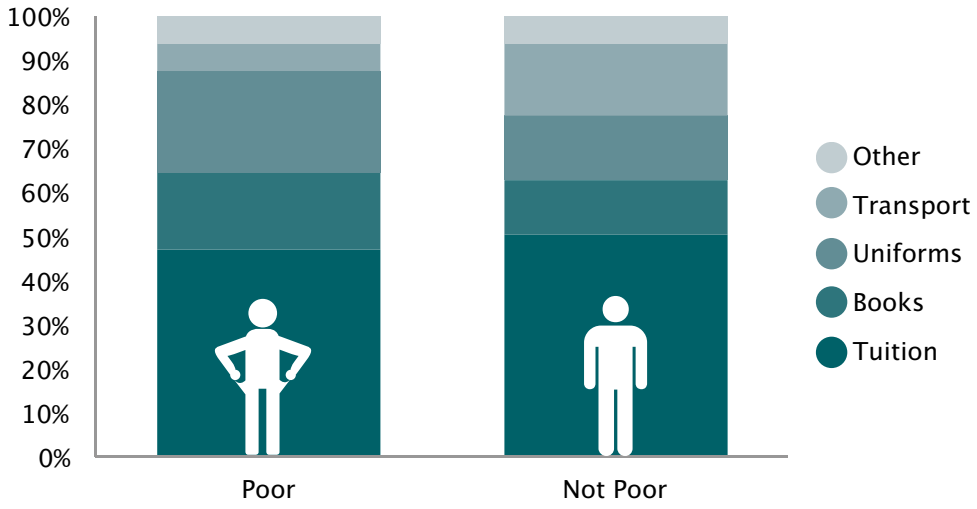


Source: *School census 2002/03, 2010/11.*

Despite the weak progression through grades and the poor learning outcomes, households spend a substantial amount to send children to school. Among all households with children aged 6–14 in school, 93 percent report positive education expenditures. These expenditures are substantial on average, and households reported spending 10 percent of total annual household consumption on education (for all children) during the 2011/12 school year. This share is uniform across poor and nonpoor households. The cost is about 50 percent higher in nonpublic schools relative to public schools. The higher cost is driven by higher tuition fees (figure 3.7). According to the 2002/03 school census, fees are positively correlated with school infrastructure (latrines, electricity), smaller class sizes, and more teaching materials (Demombynes, Holland, and Leon 2010).

102 In some schools, such as those participating in the government's Education pour Tous (Education for All) tuition waiver program, additional data on enrollments, school materials, and other characteristics are periodically collected.

Figure 3.7. Educational expenditures by category, children aged 6 to 14 years



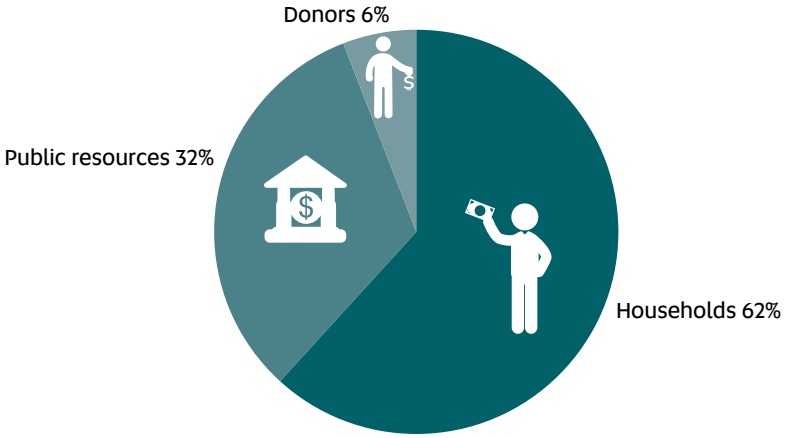
Source: ECVMAS 2012; World Bank and ONPES calculations.

Regardless of the type of school their children attend, households also spend substantial amounts on uniforms, books, and transportation. These expenditures represent a particular burden for poor households, and cost is cited as the primary reason if households are asked why children are out of school. Because poor households have more school-age children and lower total consumption, they spend less than half as much per child compared with nonpoor households, G 3,600 compared with G 11,400 per child per year. Overall, estimates based on 2012 data show that households spend more than G 21 billion ($500,000) per year on education.

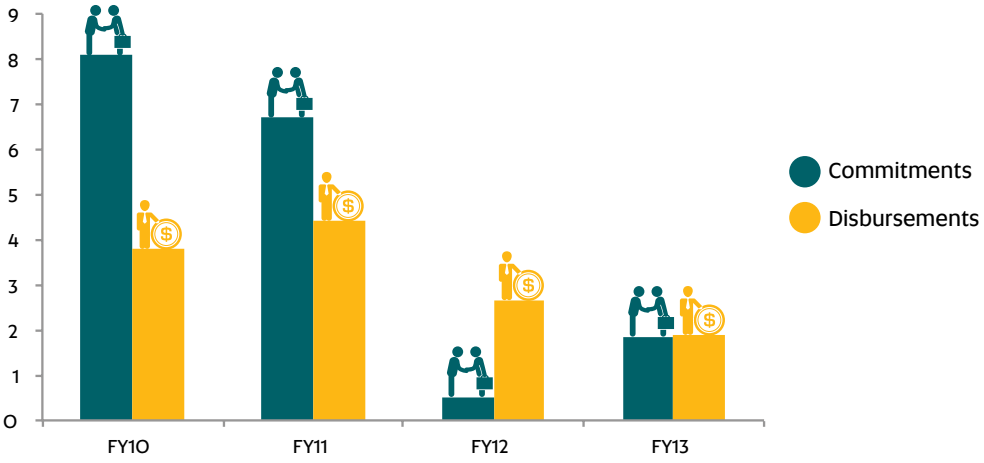
Households bear most of the cost of education; they are sometimes helped by private transfers because public expenditure on education is low. Households cover 64 percent of the total cost of education, while, according to the Ministry of Economy and Finance, the government only covers 30 percent, equal to 3.5 percent of GDP. Donors only cover 6 percent of the total cost, and their contribution is declining (figure 3.8). There is evidence that private transfers help cover education costs. Only 4 percent of poor households and 3 percent of nonpoor households with children aged 6–14 report they receive transfers specified for schooling. However, among all households that receive private transfers, the average amount received is over G 45,000, substantially more than total average educational expenditures across households. These households also report spending much more on education relative to other households in the same consumption quintiles. Because money is fungible, transfers not specified for schooling may still provide resources that go toward educational expenditures.

Figure 3.8. Financing sources for education

a. Source of annual education financing



b. Donor contributions for education, in billion HTG



Source: ECVMAS 2012; World Bank and ONPES calculations.

Recognizing that education costs represent a barrier to access and a substantial burden on households, the government has taken on greater financing responsibility for primary education. Since 2007, it has provided tuition waivers to nonpublic schools with the assistance of development partners. These waivers have allowed hundreds of thousands of children to attend school without paying tuition. More recently, the Martelly-Lamothe administration initiated the Programme de Scolarisation Universelle Gratuite et Obligatoire (free and compulsory universal education program, PSUGO), which is intended to finance primary education for hundreds of thousands of additional students. These efforts have provided relief to households burdened by education expenses and may also draw in children who have been kept out of school because of costs. However, given that 50 percent of household education expenditure does not go for tuition, some children are likely to continue to be kept out of school if these costs are not reduced as well.

Complementary social protection initiatives such as conditional cash transfers may help families meet these nontuition costs. If they are well targeted and well designed, evidence points to the positive impact of such transfers on school attendance and the reduction of child labor in a wide range of countries (Ribe, Robalino, and Walker 2010).

The Ministry of Education and Vocational Training's current strategic plan recognizes that, in addition to poverty, there are many obstacles to school enrollment. The strong correlation of school enrollment with individual and household factors, particularly disability and living in a household not headed by one's parents, points to important barriers besides costs. While vulnerable groups are currently served primarily by nongovernmental organizations (NGOs), the government is expected to carry out studies to understand the needs of these groups and to provide public support for their education (MENFP 2013). The government also intends to build new classrooms and schools in areas lacking capacity.

The ministry's plan includes initiatives to improve progression through school and to increase learning, but little is planned for early childhood development. The majority of children start primary school late, and the gap between the appropriate and the actual age for grade is growing. To address this problem, the government is developing accelerated programs for overage students and studying ways to encourage parents to send children to primary school at age 6. Investments in teacher training, learning materials, and other steps are also anticipated to address the poor learning outcomes (MENFP 2013). The ministry is leading in the establishment of an early childhood development policy, but the initiative has been delayed, and a timeline for completion and implementation has not been fixed.

3. Access to health care

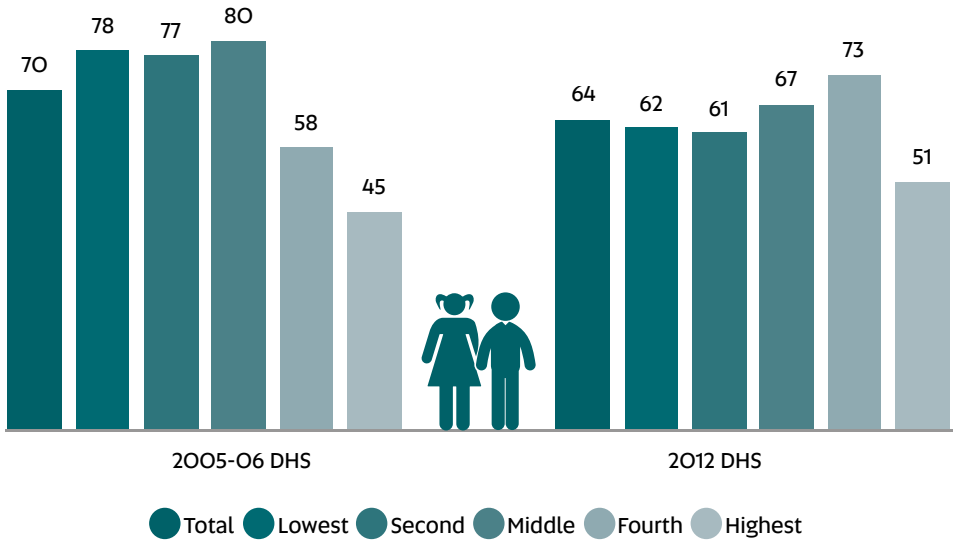
Health outcomes and service utilization

Health outcomes have improved during the past decade. Despite the devastating earthquake in 2010, key maternal and child health outcomes have shown progress. The infant mortality rate decreased by 9 percent, from 70 deaths per 1,000 live births in 2005–06 to 64 deaths per 1,000 in 2012, and the under-5 mortality rate dropped by 10 percent (figure 3.9). The number of underweight and stunted children fell by 35 and 24 percent, respectively (table 3.3). Despite improvement in many child health outcomes, the prevalence rate of acute respiratory infections (ARIs) went up by 56 percent between 2005–06 and 2012. The 2010 earthquake could explain this sudden rise because the incidence of ARIs usually goes up during crises (Bellos et al. 2010).

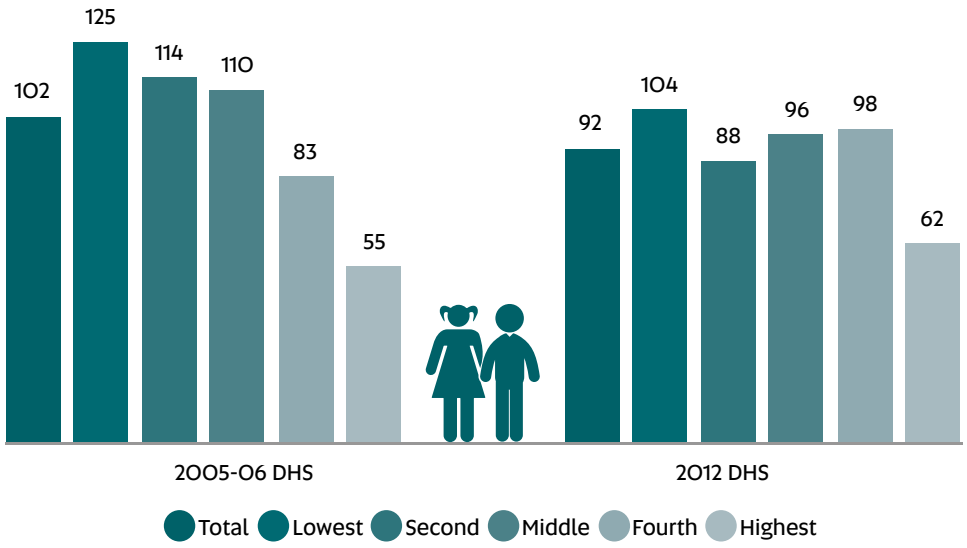
Figure 3.9. Infant and under-5 mortality rates, by wealth quintile index.

Number of deaths per 1,000 live births

a. Infant mortality rates



b. Under-5 mortality rates



Source: *Data in STATcompiler (DHS Program STATcompiler) (database), ICF International, Rockville, MD, http://www.statcompiler.com/.*

Table 3.3. Health outcomes among children, by wealth quintile index, 2005–06 and 2012

Indicator	*Q1*	*Q2*	*Q3*	*Q4*	*Q5*	*Total*
DHS 2005–06						
Stunted	41	37	34	18	8	29
Underweight	22	23	21	13	7	18
Prevalence rate of Diarrhea	25	25	24	24	18	24
ARI prevalence rate	10	11	9	7	5	9
DHS 2012						
Stunted	31	27	21	16	7	22
Underweight	18	11	12	8	4	11
Prevalence rate of diarrhea	18	24	23	22	16	21
ARI prevalence rate	14	14	16	15	13	14

Sources: DHS 2005–06, 2012 from STATcompiler (DHS Program STATcompiler) (database), ICF International, Rockville, MD, http://www.statcompiler.com/. Note: Data for stunting and underweight rates for 2005–06 were taken from the STATcompiler database, where the data take into account the new World Health Organization methodology for calculating these rates.

Similarly, health care service utilization improved between 2005–06 and 2012. The coverage of cost-efficient health interventions such as oral rehydration therapy, which is used to treat diarrhea (the most important cause of mortality among children), improved by 32 percent between 2005–06 and 2012, and vaccination coverage increased by 10 percent. Although still low, there was also an improvement by 9 percent in the number of children treated against ARIs.

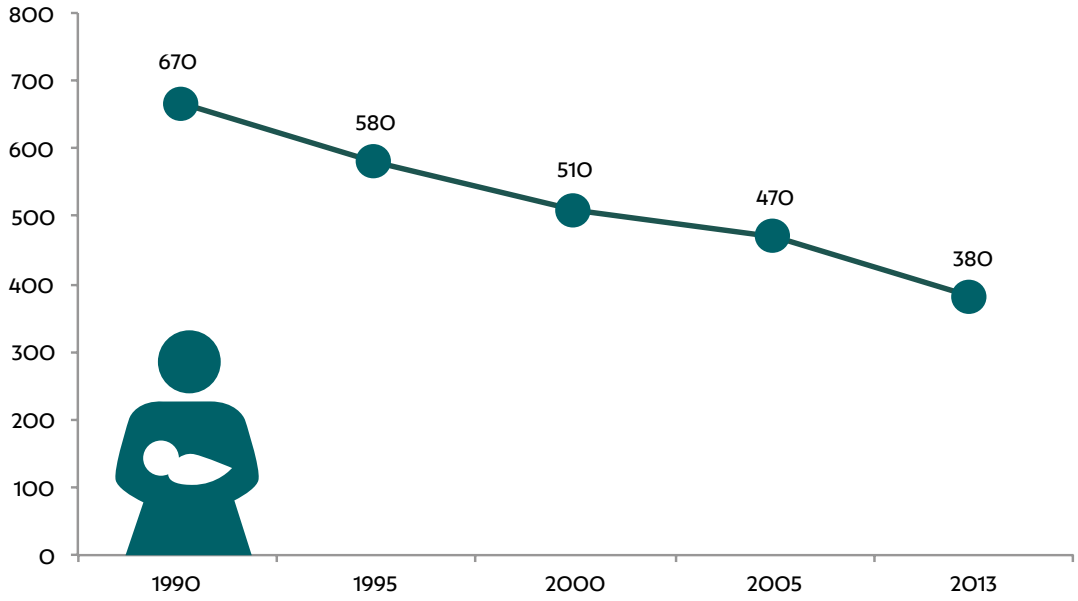
Despite some improvements, maternal outcomes and maternal health service utilization rates in Haiti are among the worst in the region. The MMR fell by 43 percent between 1990 and 2013, from 670 deaths per 100,000 live births in 1990 to 380 deaths per 100,000[103] in 2013 (figure 3.10). Although national estimations provide a much lower rate (157 per 100,000 according to MSPP), the MMR in Haiti remains much higher than the regional average of 68 per 100,000 (WHO 2014a). Progress occurred in maternal health service utilization. There was a 64 percent increase in assisted births in institutions between 2005–06 and 2012. The number of deliveries assisted by staff skilled in obstetrics, such as doctors, midwives, and nurses, rose by 42 percent, and the share of women who received at least four antenatal visits rose by 24 percent (table 3.4). However, the prevalence of health facility delivery, deliveries attended by skilled staff, and skilled antenatal care visits is much lower in Haiti relative to all lower-middle-income Central and South American countries (figure 3.11).[104]

103 However, these MMR figures are not as reliable as figures that are based on household survey data (such as the figures on infant mortality and other indicators) because the MMR figures are based on estimates from the World Health Organization and others. Survey data—which are much more reliable—cannot be used to capture the trend in the MMR because the MMR has not been measured in recent household surveys in Haiti.

104 Trained matrones, a type of traditional birth attendant in Haiti, are not considered skilled in obstetrics (DHS 2012), which may not be the case in lower-middle-income countries in the region.

Figure 3.10. The maternal mortality ratio, 1990–2013

Number of deaths per 100,000 live births



Source: *WHO 2014b.*

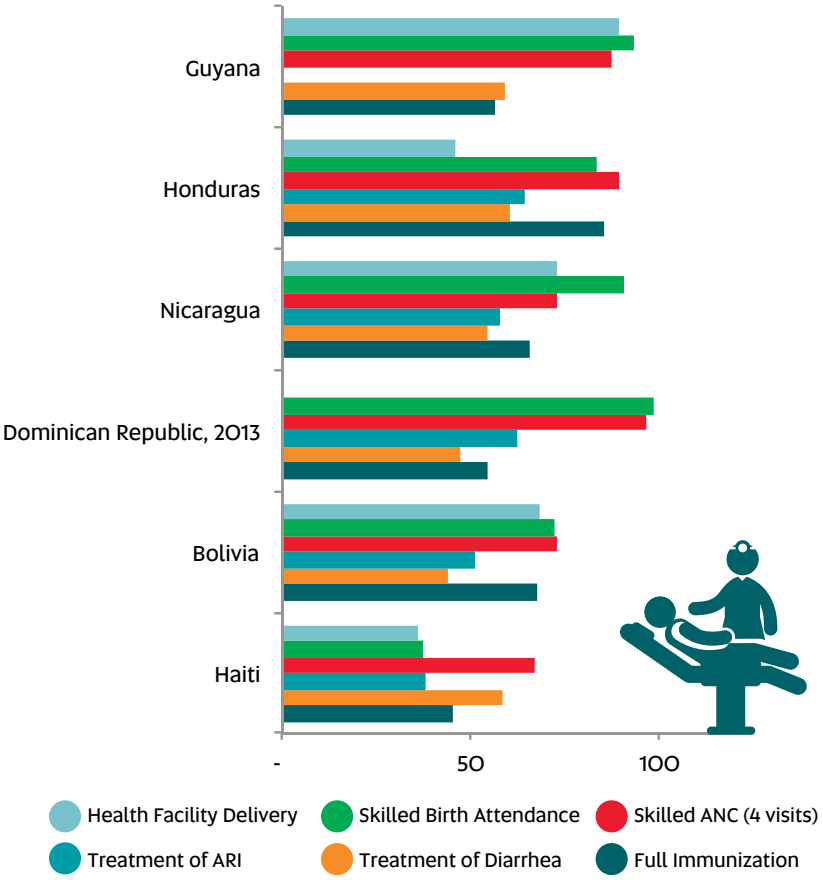
Table 3.4. Maternal and child health service utilization, by wealth quintile index, 2005–06 and 2012

Indicator	*Q1*	*Q2*	*Q3*	*Q4*	*Q5*	*Total*
DHS 2005–06						
Immunization	34	40	45	37	56	41
ARI treatment	27	31	41	40	40	35
Diarrhea treatment	34	38	47	54	54	44
Skilled birth	—	—	—	—	—	54
Skilled attendant	—	—	—	—	—	26
Health facility delivery	5	8	17	35	58	22
DHS 2012						
Immunization	43	46	52	42	41	45
ARI treatment	23	32	36	52	52	38
Diarrhea treatment	57	52	59	61	62	58
Skilled birth	—	—	—	—	—	67
Skilled attendant	—	—	—	—	—	37
Health facility delivery	9	20	38	51	76	36

Sources: DHS 2005–06, 2012 from STATcompiler (DHS Program STATcompiler) (database), ICF International, Rockville, MD, http://www.statcompiler.com/. Note: — = not available.

Figure 3.11. Health care service use, Haiti and selected lower-middle-income Latin American countries.

Percent



Sources: Data on Bolivia (DHS 2008), Guyana (DHS 2009), Haiti (DHS 2012), Honduras (DHS 2011–12), and Nicaragua (DHS 2001) taken from STATcompiler (DHS Program STATcompiler) (database), ICF International, Rockville, MD, http://www.statcompiler.com/.

Child health outcomes are also a concern. The under-5 mortality rate is nearly six times the regional average of 16 (WHO 2010). While the prevalence rate of children with ARIs in Haiti (14 percent) is lower than the corresponding rates in most Latin American countries, the latter have greater immunization coverage and better treatment of children with ARIs. Child health service coverage indicators are much lower in Haiti than in other lower-middle-income Latin American countries.

The poorest exhibit systematically worse health outcomes and health service utilization rates. Despite improvements among the lower wealth quintiles since 2005–06, large inequalities persist: the poorest quintiles do worse in health outcomes and service utilization.[105] For instance, child mortality in the highest income

105 Wealth quintiles here refer to the wealth indicator computed using DHS data, not to consumption quintiles.

quintile was 62 deaths per 1,000 live births, while it was 104 among the lowest income quintile (see figure 3.9). Compared with the highest quintile, the number of stunted children was four times greater in the lowest quintile in 2012 (see table 3.3). Among children who had ARIs, 52 percent in the highest wealth quintile were given treatment versus 23 percent in the lowest wealth quintile (see table 3.4). The share of assisted births in institutions was eight times greater among the highest wealth quintile (76 percent) than among the lowest wealth quintile (9 percent) in 2012, which highlights that the poorest have limited access to maternal health services.

Health outcomes among children are influenced by the level of education of their mothers. In 2012, 34 percent of children whose mothers had no education were stunted versus 12 percent of children whose mothers had attained secondary or higher education (table 3.5). Women with no education have three times more children who are underweight compared with women with a secondary or higher education. Similarly, 33 percent of children whose mothers have no education are vaccinated versus 51 percent of children whose mothers have a secondary or higher education, and 59 percent of women with secondary or higher education deliver at health facilities compared with only 13 percent of women who have no education, a difference of 354 percent.

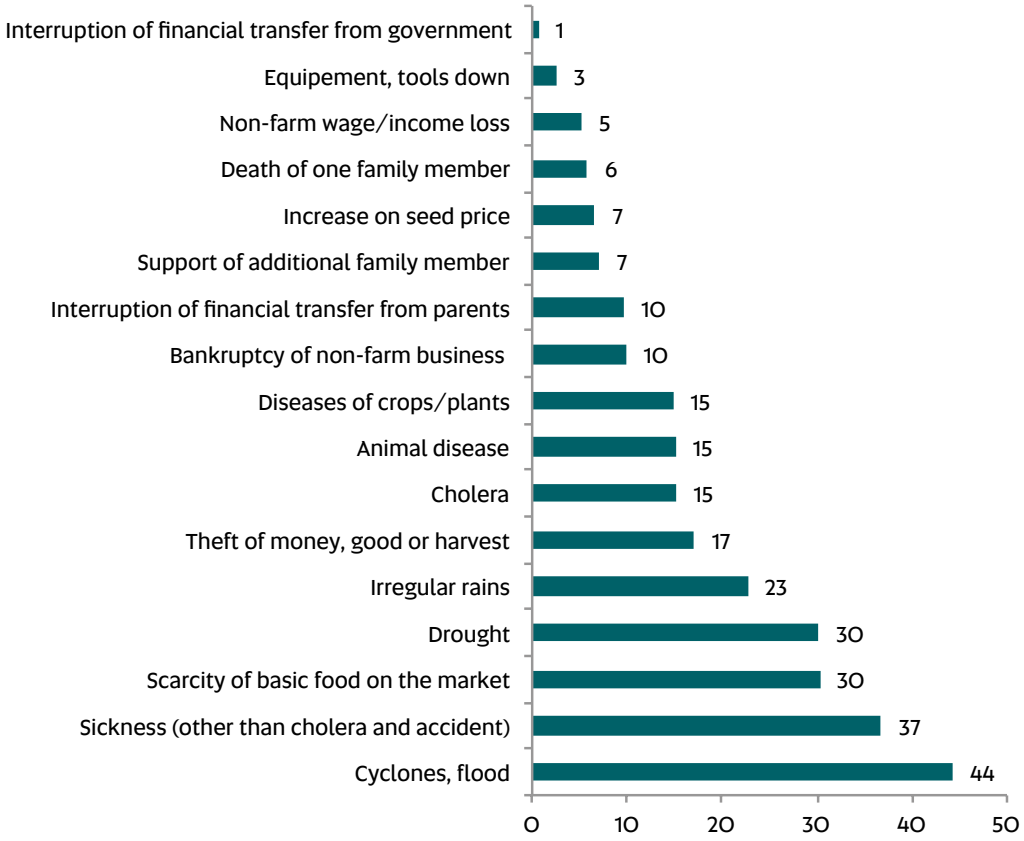
Table 3.5. Children's health outcomes and service utilization, by educational attainment of the mothers

Education of the mother	*Stunted*	*Underweight*	*Vaccination*	*ARI treatment*	*Diarrhea treatment*	*Health delivery*
None	34	18	33	23	52	13
Primary	22	13	46	32	58	28
Secondary or higher	12	6	51	51	60	59
Total	*22*	*11*	*45*	*38*	*58*	*36*

Source: DHS 2012.

Sickness is one of the most important shocks experienced by the Haitian population, affecting their earning capacity. Over a calendar year, 37 percent of households suffer from health-related problems (excluding cholera), and, for 28 percent, these are the most severe shocks experienced during the year (figures 3.12 and 3.13). Overall, health shocks are the second most common shock experienced by households, after hurricanes and floods, but the most severe. The cholera epidemic, which has been devastating parts of the country since 2011, is among the first 10 shocks in terms of incidence and the fourth in terms of severity (box 3.3). The high level of job informality and the low access to social security suggest that such shocks may have a direct impact on the ability to generate income in the household (see chapter 5).

Figure 3.12. Share of households encountering problems over the previous 12 months, 2012

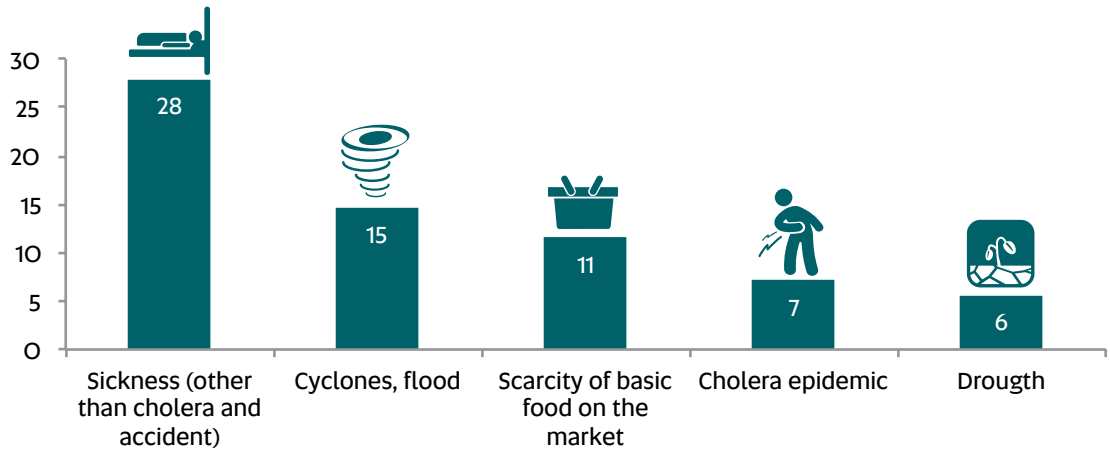


Sources: *ECVMAS 2012; World Bank and ONPES calculations*

Only 53% and 31 % of the population have access to safe water and improved sanitation respectively: improvement in access will contribute to better health outcomes, including eradicating the cholera epidemic

Figure 3.13. The five most severe shocks among Haitian households, 2012.

Percent



Source: *ECVMAS 2012; World Bank and ONPES calculations*

Box 3.3. Cholera epidemiological evolution and current policy actions

Despite a reduction in the incidence rate of cholera since 2010, cholera still poses a significant challenge. The current cholera outbreak in Haiti began 10 months after the devastating earthquake of January 12, 2010. Over 705,207 cases and 8,559 deaths were recorded over the next three and a half years (table B3.3.1). Since the outbreak, concerted national and international efforts have cut the number of new cases and deaths considerably each year. The number of cases declined from a monthly average of 29,336 in the first full year of the epidemic (2011), to 1,240 through 2013. The number of deaths decreased correspondingly, from 4,101 in 2010 to an expected 64 in 2014. The incidence rate is the lowest since the beginning of the epidemic and below the 1 percent target rate set by the World Health Organization.[a] Yet, Haiti is still dealing with cholera. Eliminating the disease will require sustained action from the government and development partners.

Table B3.3.1. Epidemiological evolution of cholera in Haiti, 2010–14

Year	*Oct-Dec 2010*	*2011*	*2012*	*2013*	*June 2014*	*Total*
Cases	185,351	352,033	101,722	58,650	7,451	705,207
Deaths	4,101	2,927	927	572	32	8,559
Fatality Rate	2.2%	0.8%	0.9%	1.0%	0.4%	1.2%

Source: Data of the Ministry of Public Health and Population.

An enduring solution will require substantial investments to boost access to water and sanitation and improve hygiene. Access to water and sanitation is low in Haiti: only 53.2 percent of the population has access to an improved water source, while 31.3 percent have access to improved sanitation facilities.[b] However, these figures hide the divide between urban and rural areas. Thus, improved water sources are available to 55.0 and 51.7 percent of the population, respectively, in urban and rural areas, while access to improved sanitation is at 47.9 and 15.9 percent, respectively. Cholera cannot be sustainably eliminated without addressing the primary vectors in the spread of the disease, such as the lack of a safe water supply and inadequate waste management and sanitation.

Gains in health care and in water and sanitation will also help prevent other illnesses and increase general preparedness and resilience in the face of other diseases and disasters. Boosting capacity in addressing these issues establishes a stronger platform for disaster preparedness (including epidemics) and ultimately contributes to reducing poverty and enhancing the lives of the poor.

a. ECVMAS 2012 for the data. For context, see WHO (2014c). **b.** "At a Glance: Haiti," United Nations Children's Fund, New York, http://www.unicef.org/infobycountry/haiti_statistics.html.

The most vulnerable to health shocks are the elderly and children because of their more vulnerable health status and their reliance on support from their families. The main risks among the elderly are associated with the limited coverage pensions (contributory or noncontributory schemes), the lack of access to health care, and the need to depend on family or charity for survival. Indeed, the elderly do not usually live alone in Haiti. Overall, more than 85 percent of the elderly live in households with nonelderly people, and this share is more than 10 percentage points higher among the poor elderly (92 compared with 81 percent among the nonpoor). This is an indication that the elderly must rely on the support of younger generations to a much larger extent in Haiti than in other countries, which may constitute a source of vulnerability. The share of people aged 60 and above living with nonelderly people in Haiti is one of the highest in Latin America and the Caribbean, 88.6 percent compared with the regional average of about 71.0 percent.[106]

While health shocks affect similarly the poor and nonpoor, cholera disproportionally affects the poor in rural areas. Among households that experience health problems, 55 percent are nonpoor and 53 percent are in urban areas. Meanwhile, cholera mostly affects the extreme poor, but also households in rural areas (table 3.6). The latter are almost twice as affected by cholera relative to households in urban areas, which is not surprising given that cholera is a waterborne disease arising because of poor sewage and poor sanitation and mainly caught by vulnerable populations that do not have regular access to a protected source of drinkable water: access to improved sanitation in rural areas is at 15.9 percent, and over 46.0 percent of the rural population drink water from unsafe sources (see chapter 1).

Table 3.6. Proportion of households that consider sickness and cholera the most severe problems, by poverty line, residence, and gender.

Percent

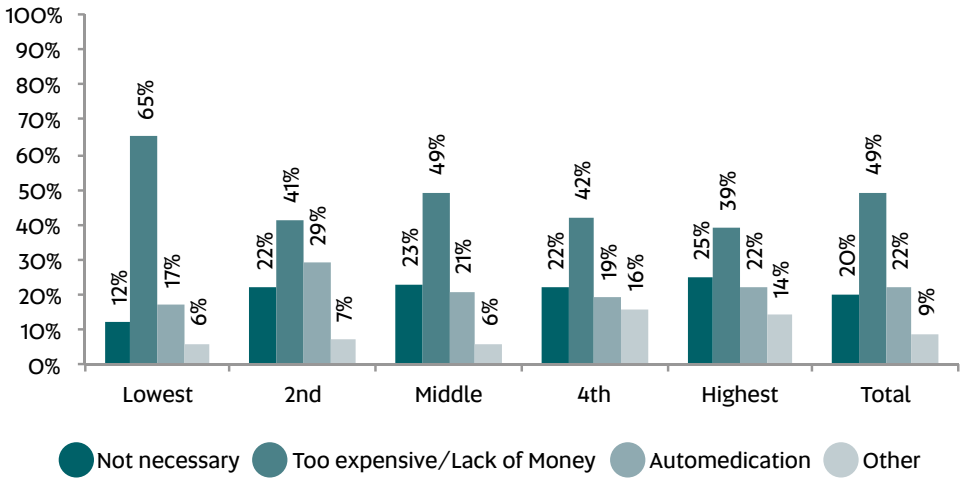
Indicator	*Sickness*	*Cholera epidemic*
Poverty line		
Nonpoor	55	31
Moderate poor	16	26
Extreme poor	29	42
Area of residence		
Rural	47	62
Urban	53	38
Gender		
Women	56	55
Men	44	45
Total	*28*	*7*

Source: ECVMAS 2012; World Bank and ONPES calculations.
Note: Sickness does not include cholera or accidental injury or death.

106 This is a simple average based on ASPIRE environmental indicators; see "ASPIRE: The Atlas of Social Protection, Indicators of Resilience and Equity," World Bank, Washington, DC, http://datatopics.worldbank.org/aspire/.

Limited supply and lack of financial resources are the two most common reasons the poorest do not use health services. In 2013, at the national level, the top reason for not seeking care among the entire population suffering from a health problem was lack of money (49 percent). The poorest suffer even more from the financial constraint: 65 percent did not consult a health provider because of lack of money, against 39 percent among the top quintile (figure 3.14). The problem of financial barriers to access was equally prevalent across all departments (between 78 and 84 percent). Between 2005-6 and 2013, the situation did not change, and cost and distance remain the main reasons people do not seek medical treatment (figure 3.15).

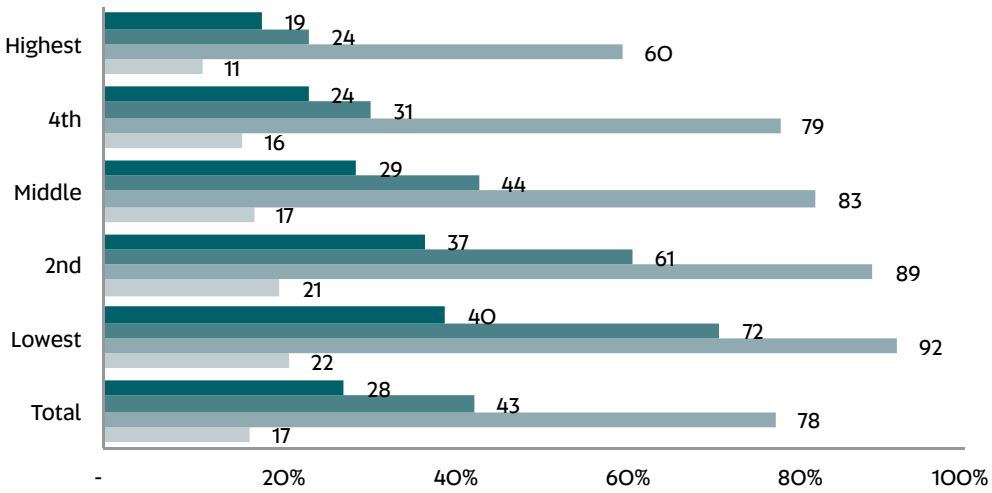
Figure 3.14. Causes of non-access to health services, by per capita consumption quintile, 2013



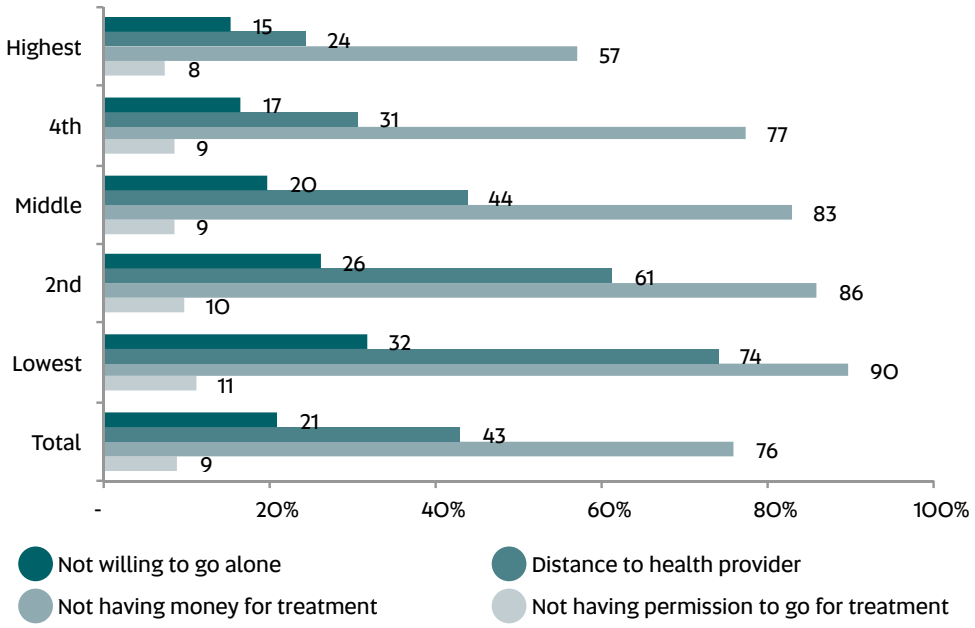
Source: World Bank and ONPES calculations based on ECVMAS 2, 2013

Figure 3.15. Obstacles in access to health care services, by wealth quintile index

a. 2005–06



b. 2012



Source: World Bank and ONPES calculations based on DHS 2005–06, 2012.

The supply of health services and household expenditure

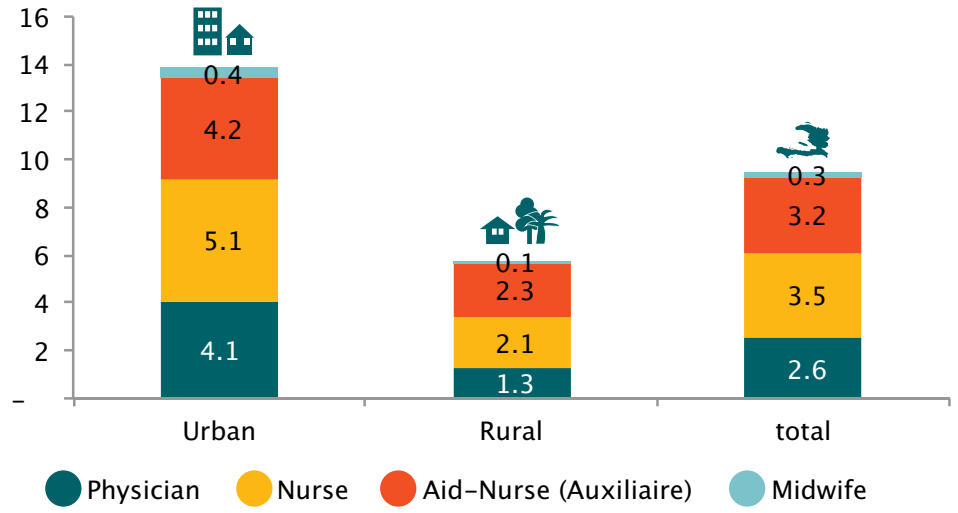
The number of medical staff has increased recently and the density of both medical staff and hospital beds is high relative to low-income countries in Africa.[107] Currently, 17,736 medical and paramedical personnel as well as community health workers work in Haiti; that is 16.75 medical staff for every 10,000 people. (There are 9.5 doctors [generalists and specialists], nurses, aid-nurses, and midwives per 10,000 inhabitants [figure 3.16, chart a].) The number of medical personnel rose in absolute terms between 2011 and 2013.[108] The coverage of medical staff is higher in Haiti than in most low-income countries in Africa. The density of medical personnel in Benin, Burkina-Faso, and Mali is, respectively, 8.3, 6.2, and 5.1 medical personnel per 10,000 inhabitants (WHO 2013a). (Box 3.4 provides an overview of the health care system in Haiti.) Additionally, Haiti has 7 beds per 10,000 inhabitants, which is also higher than many low-income African countries: Benin, Burkina-Faso, and Mali have respectively 5, 4, and 1 beds per 10,000 inhabitants (WHO 2013a). Haiti has the same bed density level as Honduras, but less than that of other lower-middle-income Latin American countries (WHO 2013a).

107 World Bank estimates based on IHE and ICF International (2014).

108 World Bank estimates based on IHE and ICF International (2014) and MSPP (2011). There may be methodology differences between the World Bank and MSPP estimates because the latter do not provide a definition of staff categories. Physicians include both generalists and specialists in the World Bank estimates, but this may not be the case in the MSPP data. The results should therefore be interpreted carefully.

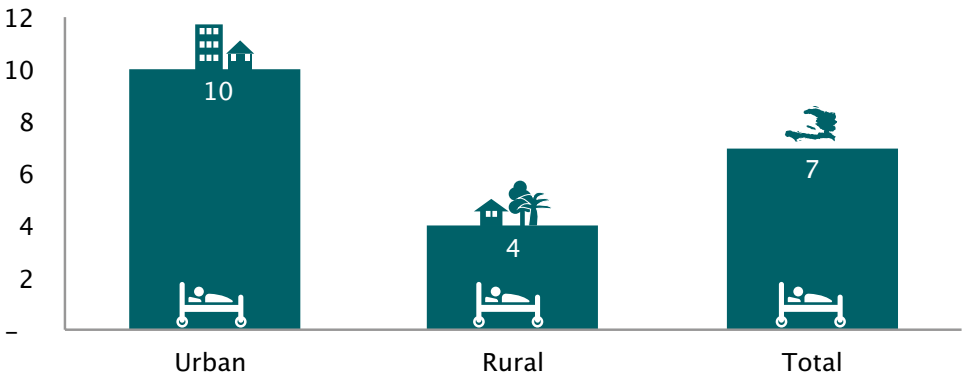
Figure 3.16. Coverage of health services

a. Density of medical staff per 10,000 inhabitants



Source: World Bank estimates based on IHE and ICF International 2014.

b. Density of beds per 10,000 inhabitants



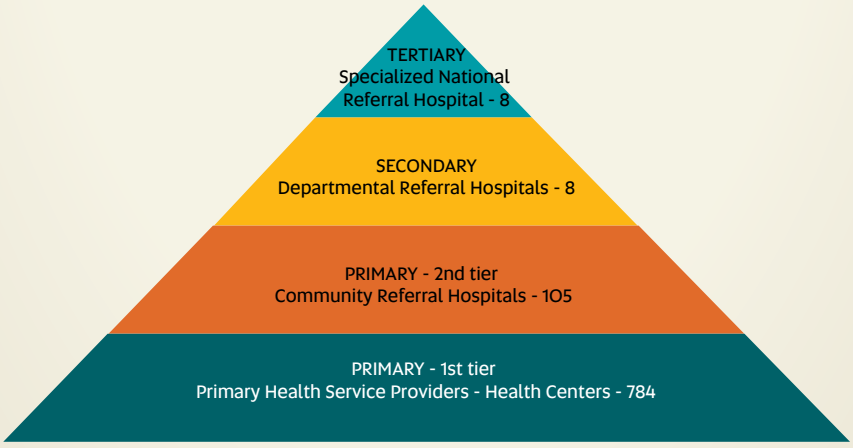
Box 3.4. The health care system in Haiti

Health system governance includes units and directorates at the central level of the Ministry of Public Health and Population, 10 departmental health directorates, and 42 arrondissement health units. Services are provided at various levels of the health care system, which includes 907 facilities. The formal health service delivery system includes (1) a first level of 784 health centers and dispensaries—129 health centers with beds, 298 health centers without beds, and 359 dispensaries providing primary care in the communes and municipalities—and 105 community referral hospitals in the arrondissements; (2) a second level consisting of 8 departmental

hospitals providing secondary health care; and (3) a third level made up of 8 national referral or teaching hospitals providing tertiary health care (IHE and ICF International 2014).

Primary care is organized into two tiers linked in a referral system between primary health service providers and the community referral hospitals (figure B3.4.1). At the community level, the first tier includes basic health care institutions delivering a basic package of services, including health promotion, disease prevention, and curative care. The package covers child, adolescent, and women's health, emergency medical and surgical care, communicable disease control, health education, and the provision of essential drugs. The secondary tier in the health service pyramid network includes the community referral hospitals, which offer four basic services, namely, medicine, pediatrics, obstetrics, and surgery. At the secondary level are the departmental referral hospitals, which offer additional specialized services, including ophthalmology, orthopedics, urology, and dermatology. Since the cholera outbreak, some facilities at the primary and secondary levels have put in place cholera treatment centers or related units (depending on the number of beds), which are generally located in tents. However, because the funding for cholera prevention and the funding for treatment are separate, parallel emergency response systems have been established in an unstructured manner. The Ministry of Public Health and Population is now seeking to integrate these emergency responses to treat all acute diarrheal diseases. To this end, it has launched the Cholera Elimination Plan, with the support of the Regional Coalition for Water and Sanitation to Eliminate Cholera Transmission in the Island of Hispaniola. At the top of the health service delivery pyramid is the most specialized national referral hospital, the Hospital of the State University of Haiti.

Figure B3.4.1. The health service delivery pyramid



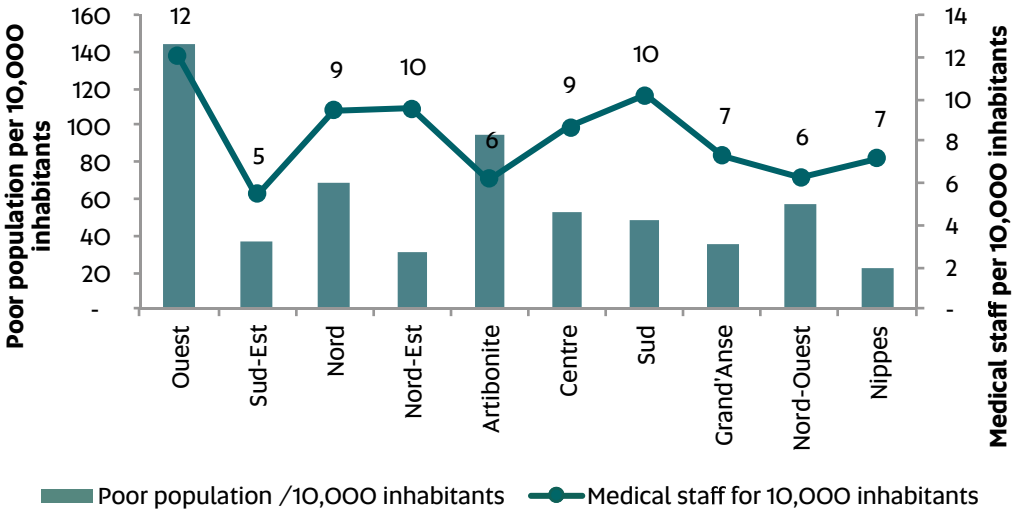
At the community level, rally posts, mobile clinics, community agents, and local birth attendants provide health services. Although not all communities have such services, physical access to health care is improved considerably where they exist. For example, a dispensary and a health center are, on average, two hours away, while a rally post is 20 minutes away; a health agent, 40 minutes away; and a mobile clinic, an hour away. However, the services provided do not include all the basic health services necessary for the community. Services also include oral rehydration points established in remote areas to address mild cases of cholera and refer more complicated cases to the cholera treatment centers or units.

Sources: *IHE and ICF International 2014; World Bank 2013b.*

The density of medical staff and beds per 10,000 inhabitants across departments and areas of residence is unequal, thereby compromising access and quality of health care service delivery in some areas, especially to the poorest.[109] The density coverage of medical staff in five departments is narrower than the national average. These departments include the second-most populated and least poor (Artibonite), the least populated and the third-least poor (Nippes), and two sparsely populated departments that are also the poorest (Grand'Anse and Nord-Ouest). Consistently, the highest density coverage is in the department of Ouest, which has the highest population density and the highest number of poor in the country. Additionally, the density of medical staff has limited correlation with the density of the poor per 10,000 inhabitants (0.47) at the departmental level, highlighting the inadequate health service coverage among the poor (figure 3.17). The coverage of medical and paramedical staff is 2.5 and 2.0 times lower in rural areas than in urban areas. Although the density coverage of community agents is higher in rural areas (4.7 agents per 10,000 inhabitants versus 3.8 in urban areas) because they typically work in inaccessible areas, the number of agents seems inadequate and illustrates the access problems experienced in rural areas. While medical infrastructure is more or less well distributed across departments based on population shares, medical infrastructures, particularly secondary health care facilities, still fail to reach the rural population, especially the poorest, who are often living in the remotest areas. Indeed, the density of beds is 4 per 10,000 inhabitants in rural areas; two times lower than in urban areas (see figure 3.16, chart b).

109 The World Bank estimates the density of medical personnel and number of beds per 10,000 inhabitants based on IHE and ICF International (2014) and the latest population figures from the IHSI (2014). The density of medical personnel and beds is estimated for all 907 health facilities in Haiti.

Figure 3.17. . The density of medical staff: ratio medical staff/poor population



Source: *World Bank and ONPES calculations based on IHE and ICF International 2014; IHSI 2014.*

The government manages one-third of the health facilities, but donors and households bear much of the financial burden of health services. The Ministry of Public Health and Population manages 38 percent of health facilities, while the nonprofit sector manages 18 percent, the mixed sector 20 percent (both the ministry and nonprofits), and the private sector 24 percent. Yet, donors and households bear much of the financial burden of health services. In 2011–12, 64 percent of total health expenditures were funded by donors, 29 percent by households, and 7 percent by the government. Additionally, contributions from donors decreased by 161 percent between 2012/13 and 2013/14, while the state budget increased slightly, thereby imposing sustainability risks for financing in the health sector.

The majority of Haitians, including the poor, consult public health care providers, and only a minority, concentrated in rural areas, turn to traditional medicine (table 3.7). In case of illness, 46 percent of the poor and 41 percent of the nonpoor consult public health care providers. Similarly, the nonpoor are three times more likely than the extreme poor and twice as likely as the poor to consult private health care providers. Only 5 percent of the population consult with traditional healers; however, the prevalence is higher in rural areas (8 percent) and among the moderate poor (7 percent) and extreme poor (6 percent). Poorer population segments tend to use self-treatment more often than do the nonpoor: 8 percent of the moderate poor and 10 percent of the extreme poor buy medicines from street medicine sellers, while 5 percent of the nonpoor do so.

Table 3.7. Health care providers, by the location and poverty level of the population served.

Percent

Provider	Location			Poverty level			Total
	Metropolitan	Urban	Rural	Nonpoor	Moderate poor	Extreme poor	
Public providers	51	45	43	41	46	46	45
Community health workers	2	1	6	2	3	8	4
Mobile clinic	1	1	2	1	1	4	1
Traditional healer	0	4	8	3	7	6	6
Private providers	36	33	23	41	26	16	28
Pharmacy, laboratory	7	4	3	3	5	1	4
Street medicine seller	2	7	9	5	8	10	7
Traditional birth attendant	1	0	1	0	0	1	0
Other	0	5	6	4	4	8	5
Total	*100*	*100*	*100*	*100*	*100*	*100*	*100*

Source: World Bank and ONPES calculations based on ECVMAS 2, 2013.

The burden of health expenditure is higher among the extreme poor. On average, individuals spend 1.7 percent of their budgets on health (table 3.8). In terms of shares of their total budget, the extreme poor spend 5.5 and 11.7 percent more than the moderate poor and the nonpoor, respectively. In terms of absolute value, though, the extreme poor spend slightly less than a fifth of the amounts spent by the nonpoor.

Table 3.8. Per capita annual out-of-pocket health expenditures, by poverty line.

Percent of the per capita consumption aggregate

Measure	Overall, N = 23,555	Nonpoor, n = 10,000	Extreme poor, n = 5,646	Moderate poor, n = 7,909
Consumption aggregate, %	1.7	1.8	1.9	1.7
Average, HTG	664	1,166	213	379
Average, $	16	28	5	9

Source: ECVMAS 2012; World Bank and ONPES calculations Note: Out-of-pocket health payments cover consultation, examination, medicines, treatment material, hospitalization, and expenses for spectacles and prostheses. Expenditure is estimated based on the total number of individuals (N = 23,555). The per capita annual average expenditure is estimated based on the total number of individuals, whether or not they have all made health care expenditures.

Health expenditures are significantly higher in urban areas, reflecting the better supply of health care services there (table 3.9). Urban residents spend two times more than rural residents on health care. Most health care facilities in rural areas are dispensaries, which do not offer laboratory or x-ray equipment. Health service supply is greater in urban areas (see figure 3.16, chart b and table 3.7), with a higher density of medical staff and beds per 10,000 inhabitants, thereby offering more incentive for urban residents to spend on health care services.

Table 3.9. Per capita out-of-pocket health expenditures, by gender and location

Characteristic	*Average, HTG*	*Average, $*
Gender		
Men	623	15
Women	703	17
Location		
Rural	465	11
Urban	880	21
Mean	664	16

Source: ECVMAS 2012; World Bank and ONPES calculations Note: Out-of-pocket payments for health cover consultation, examination, medicines, treatment material, hospitalization, and expenses for spectacles and prostheses.

Medicine is the main driver of out-of-pocket expenditures. Households spend, on average, G 3,175 ($75) per year on health care services, of which 60 percent (G 1,891 or $45) is spent on medicines (table 3.10). Consultations represent the second driver of health expenditure (G 484 or $12), followed by hospitalization (G 386 or $9). In other countries in the region, medicine is one of the highest health expenditure items. Between 30 and 60 percent of health expenditures in Latin America go for medicines (UNECLAC 2009).

Table 3.10. Household out-of-pocket health expenditures, by service type. (N = 4,929)

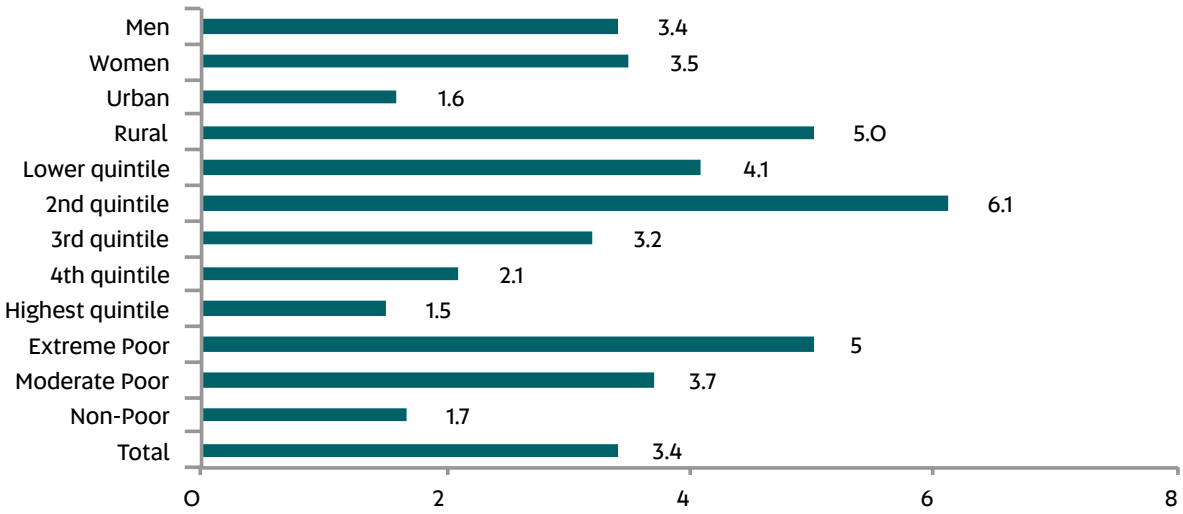
Item	*Amount, G*	*Amount, $*	*Share, %*
Hospitalization	386	9	12
Consultation	484	12	15
Exam	305	7	10
Prosthesis and glasses	88	2	3
Treatment material	19	0.40	1
Medicines	1,891	45	60
Total	*3,175*	*75*	*100*

Source: ECVMAS 2012; World Bank and ONPES calculations

The incidence of catastrophic health expenditure is greater among the extreme poor. Catastrophic health expenditure represents one way to assess the financial hardship caused by sickness. Health spending is considered catastrophic when households spend a certain threshold of their incomes or nonfood consumption on health. There are various methodologies to measure the threshold. There seems to be some agreement on the use of the 25 percent threshold of nonfood consumption to measure the necessary level of financial protection (WHO and World Bank 2013). In Haiti, 3.4 percent of households encounter catastrophic health expenditures (figure 3.18). Poorer and rural households incur such expenditures more often. The incidence is 3.7 percent among the moderate poor,

5.0 percent among the extreme poor, and 1.7 percent among the nonpoor. The incidence is three times higher in rural areas (5.0 percent) than in urban areas (1.6 percent), suggesting that the poor and households in rural areas are more vulnerable to health shocks relative to the nonpoor and households in urban areas.

Figure 3.18. Incidence of catastrophic health expenditure in Haiti, 2012



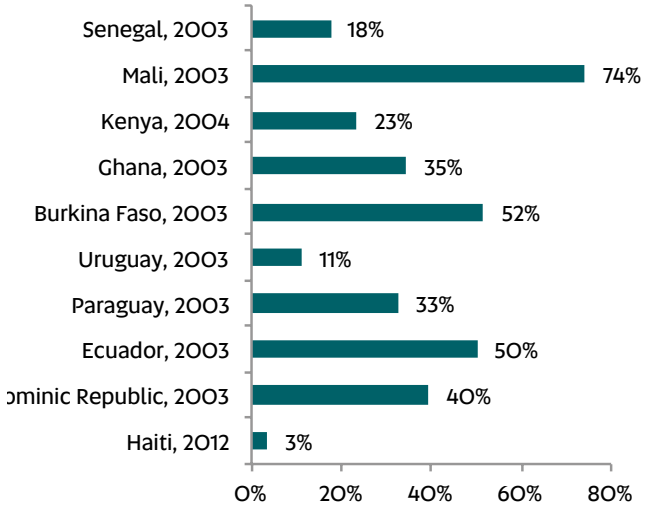
Health expenditures of households are considered catastrophic when households spend a certain threshold of their income or of their non-food consumption on health. The level of catastrophic health expenditure allows health policy makers to measure the level of financial protection against health risks. There are different methods to measure the level of catastrophic health expenditures. There is a growing consensus to use 25% as threshold of non-food consumption, hence, the methodology chosen by the WB to estimate the level of catastrophic health expenditures in Haiti.

Source: *ECVMAS 2012; World Bank and ONPES calculations*

Haiti has a low incidence of catastrophic health expenditure compared with other African and Latin American countries (figure 3.19). Haiti has one of the lowest incidences of such expenditure, at 3.4 percent. The incidence is above 30 percent among low-income countries of Africa. Half the population incurs the expenditure in Burkina Faso (51.1 percent), and two-thirds in Mali (74.2 percent). The expenditures are lower in Ghana (34.5 percent), Kenya (23.4 percent), and Senegal (17.5 percent), but are still high relative to Haiti. Other Latin American upper-middle-income countries (the Dominican Republic, Ecuador, and Paraguay) also have a high incidence (above 30 percent). However, it is difficult to compare the incidence in Haiti and in these countries. Indeed, the data used to estimate the expenditure in countries presented in the Poverty Assessment are from the World Health Survey 2002–04, but Haiti's analysis is based on ECVMAS 2012.[110] Researchers have noticed that the World Health Survey provides higher estimates of health payments, but lower estimates of total consumption, leading to overestimates of catastrophic health expenditure compared with other surveys (Moreno-Serra 2013).

110 WHO World Health Survey (database), World Health Organization, Geneva, http://www.who.int/health-info/survey/en/.

Figure 3.19. The incidence of catastrophic health expenditures in Africa and Latin America



Source: *World Bank 2012.*

Further research should be conducted to clarify the causes of the lower incidence of catastrophic health expenditure in Haiti relative to low- and lower-middle-income countries. One hypothesis is that the low levels of catastrophic health expenditure arise because of the limited utilization of many types of health services in Haiti compared with low- and lower-middle-income countries in Africa and Latin America (see figure 3.19). Indeed, the incidence of health expenditures is mainly driven by the cost of medicine in Haiti, which may imply a high degree of self-treatment. The significant levels of external funding may also contribute to the lower incidence of such expenditures in Haiti. However, it is not clear whether donor funding is efficiently and equitably distributed among the 10 departments, and research should be conducted on this issue. Furthermore, the low quality of local health services because of factors such as shortages of drugs and medical supplies may deter patients from consulting health facilities, as demonstrated by a recent study conducted in three departments (IHE and ICF International 2014). In some cases, patients must buy drugs and medical supplies on their own to receive care, which may impede more frequent reliance on health facilities. The extremely high poverty headcount is certainly another key explanation for the low incidence of catastrophic health expenditure. Households may be too poor and therefore unwilling to face the financial hardships caused by reliance on health services. Indeed, the DHS shows that lack of money is the key reason people do not visit health facilities. The use of savings and borrowing money from friends or relatives for health care are not accounted for in estimating catastrophic health expenditure; neither are expenditures for traditional healers, thereby underestimating the incidence of such expenditure. Indeed, most households facing health and cholera shocks use savings or borrow money from friends or relatives (see appendix K).

4. Key messages

Asset accumulation in health care and education are essential to building human capital and are instrumental in increasing economic opportunity and improving welfare in Haiti as elsewhere in the world.

Education and health service utilization and health and education outcomes have improved in Haiti; however, both are relatively limited, especially among the poor. Adult literacy and enrollment among school-age children are significantly lower among poor households. A number of factors could explain this. A large number of poor children have to work while attending school, raising the probability of dropping out or becoming overage for grade. Similarly, poor households spend substantially less on school fees, which are associated with the quality of the service and the infrastructure provided by the school. Child and maternal mortality indicators show a similar pattern: child mortality and malnutrition as well as maternal mortality are more prevalent among the poorest, suggesting the lower utilization of health services and the higher impact of health shocks on poor households. In particular, the low levels of both outcomes and service utilization among women are a serious concern.

There are strong signs of the intergenerational transmission of poverty in Haiti, which could be curtailed by boosting educational attainment. The average educational gap among 10- to 14-year-olds is largest among the children in the poorest households, at over 2.5 years. The better educated the parents, the narrower the gap, and the more likely the children are in school and at the appropriate age for grade. Moreover, the children of better educated parents face less risk of being undernourished or stunted, both of which affect cognitive and physical development and future prospects. The children of better educated parents thus have more chances to perform well in school, thereby increasing their future earning capacity and their chance to escape poverty. Based on this diagnostic, this study offers a set of suggestions for policy priorities and suggested actions in education and health care are listed below.

Education

Priority 1: Sustain and expand the access to primary education. While primary-school enrollment rates have increased substantially in recent decades, enrollment is still not close to universal, particularly among the most disadvantaged children, including the poorest, those living without their parents, and those with disabilities. At the same time, declining donor financing and a recent decision[111] by the Ministry of Education and Vocational Training to stop funding tuition waivers for new cohorts of first graders in nonpublic schools are threatening the gains in access made in recent years. Achieving universal

111 The Ministry of Education and Training announced on August 8, 2012 a number of measures (12), including the number 7, on the interruption of tuition waivers funding for new cohorts the first grade of primary school. http://lenouvelliste.com/lenouvelliste/article/134312/Les-12-mesures-de-Manigat.html

primary enrollment will therefore require several critical actions by the government and its development partners (taking into account the different needs and service access in rural and urban areas), including the following:

a. *Produce and implement a short- to medium-term financing plan for primary education*, increasing the resources available for the sector. Through the donor-financed Tuition Waiver Program, PSUGO, and the national school feeding program (Program National de Cantines Scolaires), the financial burden of tuition and nutrition at school has shifted substantially from households to the government and contributed to increases in enrollment and attainment. These gains are now threatened due to a lack of financing. The Tuition Waiver Program has stopped taking on new cohorts in the first grade because donor financing through the sixth grade cannot be guaranteed. At the same time, ongoing funding for school meals has not been secured from donors. The creation of the *Fonds National d'Education* (national education fund), which is financed through international phone communications and transfer taxes, provides a new funding stream for education and has been used to support PSUGO. However, the receipts of the fund do not appear to be sufficient to back tuition waivers, school meals, and PSUGO. Additional resources are therefore required so that the government can eventually assume full financing responsibility over primary education. National policies and medium-term financing plans focusing on tuition waivers and school feeding are therefore urgently needed.

b. *In coordination with social protection programs, determine medium- to long-term strategic plans for service delivery by type of provider at all levels of education, starting with primary education.* The majority of schools at all levels in Haiti are nonpublic and operate with little oversight or accountability. The government has built several new public primary schools in recent years and has decided to strengthen public service provision in primary education by no longer funding tuition waivers in nonpublic schools. Starting in the 2014/15 school year, PSUGO will only fund new first grade cohorts in public schools. While a medium- to long-term shift in financing from nonpublic to public schools is feasible, this shift threatens the access of hundreds of thousands of students who live too far from a public school or who may be unable to enroll because of limited capacity. In addition, preprimary, secondary, and postsecondary education are also largely nonpublic, and strategies for increasing access to these levels within the government's fiscal constraints are also needed. Because finances are cited as the main reason children are out of school, targeted cash transfer programs can serve as an incentive to send poor children to school and can help poor families meet the associated expenses (see chapter 5).

c. *Establish a robust information system of beneficiaries, including a targeting mechanism.* Although instruments exist at the program level to identify beneficiary schools for the various programs offered by the Ministry of Education and Vocational Training (including the Tuition Waiver Program or PSUGO), no system integrating all programs is currently in place, nor one identifying beneficiary students. A robust information system is needed to avoid the duplication of

efforts and to strengthen the supervision capacity of the ministry. Such a system would also contribute to monitoring the new measures adopted by the government in issuing teaching licenses and school certifications. An information system that facilitates the identification of geographical areas and schools in need of resources and that utilizes poverty data and data from social protection programs would allow the government to allocate more effectively its limited resources where they are most necessary.

Priority 2: Improve learning and the quality of service delivery in education to avoid school abandonment. As presented in chapter 3, early assessments suggest that learning is limited in primary schools, particularly in poor and rural communities. Other indicators of the quality of education, including teacher knowledge and learning materials available in schools, suggest that many children, but particularly poor children, are receiving low-quality primary education. This contributes to high repetition and dropout rates, and ultimately to low educational attainment because children with weak basic skills are unable to complete primary education and continue to secondary education or otherwise gain little from school. Raising quality will require several key steps, including the following:

a. *Build up the educational information system and collect better data on learning, school progression, and other outcomes in education.* Haiti lacks a national learning assessment system, limiting the government's ability to identify and address the barriers to basic skill acquisition. Assessments of learning based on representative samples beginning in the early grades would provide a foundation for planning interventions and measuring their success. Such information would also facilitate the tracking of inequalities across areas of the country, which existing data suggest are substantial. Furthermore, it would allow elucidating some of the outstanding critical questions, such as the importance of the language used for teaching in primary school for student learning (Creole versus French). Plans to pilot early grade reading and mathematics assessments on nationally representative samples, as well as recently announced plans by the Ministry of Education and Vocational Training to develop national examinations prior to the first one now taken at grade six, represent productive steps toward accomplishing this goal. Among other measures, these data would help the government to design efficient policies against school abandonment.

b. *Increase public oversight through targeted and well-implemented measures and systematic data collection to hold schools accountable.* Several reform measures announced by the ministry in August 2014 hold the promise of increasing public oversight in primary schools. These include plans to phase in a mandatory teaching license based on demonstrated competencies; an in-service training program for teachers; a mandatory school identity card, leading to eventual certification; and ministry supervision of schools with low passing rates in national examinations. Data from learning assessments, as well as from other sources such as the school census, could also be used to inform parents about the quality of schools, as a basis for creating contract incentive systems between the government and schools, and to hold schools accountable for outcomes

(leveraging PSUGO, which is effectively unconditional financing, as a starting point).[112] These measures, if implemented effectively, would contribute to increased quality, learning, and, ultimately, educational attainment. Given the breadth of these activities and the ministry's limited capacity, careful prioritization and planning, followed by vigorous implementation, will be critical to making these measures effective.

c. *Address preprimary education to give children a solid foundation for skill building.* Investing in children, particularly poor children, before they reach primary school is critical because malnutrition, lack of stimulation, and other deprivations are common (see chapter 5). As a result, children enter primary school two years late, on average, putting them at a substantial disadvantage in learning and educational attainment. In Haiti, preprimary education is provided mainly by the nonpublic sector and, like other levels of education, is largely unregulated. Yet, the majority of children attend at least one year of preprimary education prior to entering first grade, creating an opportunity for the government to help lay the foundation for human capital accumulation. The efforts in preprimary education should ideally be carried out in coordination with a broader government strategy for early childhood development that includes health care, social protection, and other sectors.

Health care

Priority 1: Expand the coverage, utilization, and quality of health care services. Maternal mortality and child mortality have decreased significantly since 2000. This is significant given the devastation of the 2010 earthquake. This progress is mirrored by the better coverage of key interventions (for example, diarrhea treatment and antenatal care). Yet, mortality indicators remain unacceptably high, which can be attributed to persistently limited service utilization and inadequacies in the coverage of basic interventions such as assisted births in health care facilities and treatment of ARIs. The shortcomings in coverage and service utilization are still accompanied by important inequalities linked to poverty, area of residence, and gender. Improvements in both areas will therefore require several critical actions by the government and its development partners, including the following:

a. *As in education, establish an information system for a unified beneficiary targeting mechanism.* Exempting particular population groups from the payment of health care fees and eliminating the fees for certain services are likely to boost access, especially among the poor. Because external financing is expected to decrease substantially in coming years, effective targeting is even more critical. The development of appropriate targeting tools, including a deprivation and vulnerability index, is critical. Several actors in the social protection sector (FAES, the Ministry of Social Affairs and Labor, and others) are involved in the development of these tools, which will be used to reach vulnerable populations.

112 The power of school-level data was recently demonstrated when school year 2013/14 national examination results were released for the first time among schools. The low performance in some schools created a public outcry and helped spur the ministry to announce several reform measures in August 2014.

b. *Focus on programs with a proven record in enhancing the utilization of health care services, especially in primary health care and within communities.* The relevant interventions can focus on a number of fronts. Thus, by paying providers according to the quantity and quality of maternal and child health services they deliver, results-based financing has the potential to improve efficiency in service delivery and the quality of care, which may encourage patients to use health care facilities. Building on existing experience, the Ministry of Public Health and Population is currently working with the U.S. Agency for International Development and the World Bank to develop a national results-based financing model for Haiti.[113] This model will contract public and nonpublic providers through a results-based financing mechanism to provide to the population a minimum package of services with a strong emphasis on preventative services. Focusing on communities is likely to expand the utilization of primary health care services among the poor (including preventive health services) and, hence, reduce the risk faced by the poor of incurring catastrophic health expenditures linked to hospitalization and expensive medicines. The World Bank–supported Kore Fanmi Program addresses demand- and supply-side barriers to service utilization to help improve maternal and child health outcomes, particularly among the poor. To address social determinants, a network of community agents (Kore Fanmi) will deliver certain basic preventative services, promote behavior change, and link households to services and opportunities.

c. *Fill knowledge gaps to understand the low-usage, low-spending conundrum.* Two remarkable features of Haiti's health care system are the limited utilization and out-of-pocket spending. In facing a health problem, 55 percent of the population does not rely on public services, and households spend only 1.7 percent of their budgets on health. Catastrophic health expenditure is experienced by only 3.4 percent of households in Haiti, a 10th of the levels in comparable countries in Africa and Latin America. More research is needed to clarify these findings. The low-usage, low-spending patterns raise the key question of whether the cost of the services is too high relative to the perceived quality, but the extent to which this is true needs to be understood. Among the possible determinants of low service utilization are the influence of culture on health service usage and the low quality of the services provided. Both issues are worthy of further study.[114]

Priority 2: Develop innovative donor coordination mechanisms. Budget allocations from external sources declined by 62 percent between 2012/2013 and 2013/2014, and this trend is likely to continue in the near future. It is thus imperative to develop much better mechanisms to coordinate the plethora of external donors in the sector and to find meaningful ways to enhance efficiency and reduce

113 The U.S. Agency for International Development Result-Santé pour le Développement et la Stabilité d'Haïti Program, which has certain features of results-based financing and covers selected health facilities in all the departments, has shown some dramatic improvements in child and maternal health utilization through the payment of incentives to nongovernmental and public facilities (Zeng et al. 2012).

114 There is anecdotal evidence that cultural factors play a major role in the high share of birth deliveries in Haiti— 65 percent—that take place outside health facilities.

overlaps, at the same time ensuring that the government's priorities for inter**vention are systematically taken into account** [115]. Without this, there is a severe risk that quality in health service delivery and health utilization service levels may fall even further. Possible mechanisms to enhance donor coordination include establishing a well-staffed subunit devoted to donor coordination and harmonization of the relevant initiatives, adopting a sector-wide approach, and gradually shifting to pooled funding mechanisms.

115 A framework for donor coordination already exists within the MPCE: the Coordination of External Development Assistance (CAED). This mechanism coordinates the activities of donors through the joint program of aid effectiveness (PCEA).

Chapter 4: Shocks and vulnerability

Haiti is prone to shocks of various kinds, from covariate weather-related and economic shocks to idiosyncratic economic and health shocks[116]. The country's vulnerability to these shocks is increased by institutional weaknesses and resource shortages that hamper efforts to prepare for, mitigate, or cope with the shocks at the macro and micro levels. Poor households are more likely to experience shocks: 95 percent of households in extreme poverty experience at least one economically damaging shock each year. Rural households are more likely to be impacted by climatic shocks, which are often compounded by agricultural setbacks, while urban households are more likely to be affected by nonagricultural economic shocks. The poor are less able to cope with shocks, and their coping strategies are more likely to impede future economic activities or human capital accumulation because the poor generally cope by selling assets, taking on more debt, or reducing food intake. In the case of cholera or weather-related shocks, which are far more prevalent among the poor, the most common coping strategy involves doing nothing, suggesting that the poor possess few means to protect their livelihoods from shocks.

1. Introduction

Risk is inevitable and has important consequences in the lives and decision processes of people exposed to it, particularly in poor countries, which have neither the financial nor institutional means to respond to shocks. Individuals, households, communities, and countries are all exposed to risks that depend on factors such as geographical location and geological environment, but, like individuals, they have different capabilities to prepare for and deal with shocks. The shocks may involve covariate or systemic risks, such as a financial or political crisis, a natural disaster, crime, an epidemic episode, or idiosyncratic risks such as the loss of employment among individuals. According to the *World Development Report 2014* (World Bank 2013a), the majority of households in developing countries are confronted by at least one shock each year, and some are exposed to more than one.

Although some individuals may be able to protect themselves from the potentially catastrophic effects of shocks, the majority of the world's poor have limited access to formal insurance.[117] This is because of a lack of collateral and high information

116 This chapter is based on ONPES (2014) and Raeza-Sanchez, Fuchs and Matera (2014), background papers for the study by the World Bank and Observatoire National de la Pauvreté et de l'Exclusion Sociale (ONPES). 2014. Investing in People to Fight Poverty in Haiti, Reflections for Evidence-based Policy Making. Washington, DC: World Bank.

117 Formal mechanisms work through the market, such as purchasing insurance. Informal mechanisms are arrangements within and between households, including using savings, selling assets, receiving monetary or other aid from family and friends, altering the consumption pattern by purchasing less expensive items, or taking on additional employment. Both mechanisms can be adopted ex ante to protect the household, that is, purchasing insurance or diversifying employment, or ex post as a response to the shock, such as obtaining credit or selling assets. If the totality of formal and informal mechanisms is not sufficient to maintain the household at the same level of consumption as before the shock, the household will have to reduce its consumption temporarily, or, if the shock is sever enough, the effects may be persistent (Dercon 2004).

and administrative costs, often resulting in sudden drops in consumption in the face of shocks.[118] This is exacerbated in rural settings, where livelihoods depend on rainfall and good temperature and humidity, as well as fertilizer quality, control of crop diseases and personal illnesses, a healthy political situation, favorable trade policy, and many other factors.

Small islands and extremely poor countries such as Haiti face a combination of extensive and intensive risks, inadequate resources, and low institutional capacity to prepare for and cope with shocks and are thus especially vulnerable.[119] Preparedness, in particular, plays a key role in mitigating the impact of shocks, particularly if systemic. In the event of such crises, responses often need to be managed through formal public instruments, because the systemic impact generates important market failures and the disruption of informal mechanisms of risk sharing, resulting in widespread inadequacy of self-insurance, particularly among the poor and extreme poor. While NGOs and partner countries can provide financial and logistical support, the role of national governments in crisis management remains preeminent in ensuring preparedness and mitigation (Marzo and Hidecki 2012). While Haiti's 2010 7-point Richter-scale earthquake killed 230,000 people, a much larger earthquake in Chile (8.8 on the Richter scale) was destructive, but there were far fewer fatalities, only 525.

Haitians are subject to frequent covariate and idiosyncratic shocks. At the macro level, covariate shocks are often related to natural disasters, which are common because of the geographical position of the country (earthquakes, hurricanes, and floods) and the effects of which are exacerbated by widespread deforestation and land degradation. These shocks have a large impact on economic and agricultural activity: in 2012 alone, the country was hit by two hurricanes (Isaac and Sandy) and one drought, leading to negative growth of 1.3 percent in national agricultural production.[120] Economic shocks are also common in Haiti because the country has an open economy and suffers from international fluctuations, arising mainly from increases in import prices, declines in export prices, and the volatility of remittances (for instance, because of a shock in a destination country, such as the Dominican Republic or the United States). Political instability, linked to the institutional fragility that characterizes the country, can also influence the welfare of households if it results in an interruption or slowdown in economic activity or official development assistance, such as in the early 1990s or early in the first decade of the 2000s. **Haitians must also address considerable idiosyncratic shocks such as death,**

118 The cost of acquiring the information needed to assess risk, monitor borrower performance, and enforce contractual obligations is high.

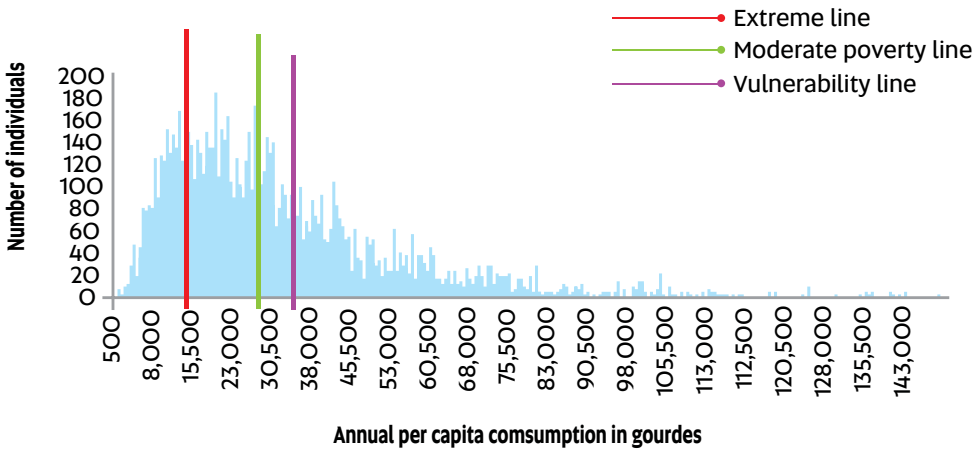
119 Intensive risks stem from low-probability, higher-impact events, whereas extensive risks are associated with high-probability, lower-impact events. Examples of the former are major earthquakes, hurricanes, or epidemics, while examples of the latter are localized flooding, disease among individuals, or unemployment. Extensive risks also include idiosyncratic risks. Another useful distinction is the fact that intensive risks are typically associated with large metropolitan areas, where highly concentrated economic activities are exposed and vulnerable to catastrophic hazards. In contrast, extensive risks can be associated with rural areas and periurban areas and with the poor living in these areas.

120 These are only the last of yearly natural disasters: among the recent ones preceding the earthquake of 2010, one may list the floods of Fonds-Verrettes and Mapou and the Jeanne Cyclone in 2004, and the hurricanes Fay, Gustav, Hanna, and Ike in 2008 (ONPES, forthcoming).

illness, job loss, and lower wages. Because market and institutional mechanisms are not available to them, the consequences of shocks can be considerable in terms of income losses, despite the existence of informal mechanisms such as support from family and friends. Indeed, studies suggest that, in determining vulnerability to poverty in Haiti, idiosyncratic shocks and shocks at the local level are more important than covariate shocks affecting larger regions (Échevin 2013; Jadotte 2010).

Poverty is significant in Haiti, but so is the vulnerability to poverty, and shocks can drive an additional million Haitians into poverty. This is illustrated in figure 4.1, representing the distribution of wealth across the population. The high histograms around the poverty lines indicate that most of the population lives on budgets that are close to the poverty threshold.[121] Thus, the figure shows the substantial vulnerability of the population to poverty, given that the households close to the line are most likely to transit in and out of poverty as a consequence of a shock. Such a shock could push 1 million people into poverty and 2.5 million into extreme poverty.[122] The consumption level of only 2 percent of the population exceeds $10 a day, which is the region's income threshold for joining the middle class.

Figure 4.1. Vulnerability to poverty in Haiti, 2012



Sources: ECVMAS 2012; World Bank and ONPES calculations.

121 In the absence of panel or synthetic panel data, the vulnerable are defined as individuals living on budgets representing 120 percent of the poverty line. According to this definition, almost 10 percent of the population would be vulnerable, and, together, the poor and the vulnerable would represent two-thirds of the population. An alternative definition of vulnerability used by the World Bank in the case of Latin America is tied to economic stability and the probability of falling into poverty. The threshold corresponding to this probability is $10 a day (in PPP U.S. dollars), a sum that is therefore used to identify the middle class in the region, while the vulnerable are defined as individuals living on between $4 and $10 PPP a day (López-Calva 2013). If we were to use this definition, the share of the poor and vulnerable would be 98 percent because only 2 percent of the population is living on budgets of more than $10 a day.

122 These numbers are obtained by measuring the effect of a 20 percent reduction in household consumption, thereby simulating the impact of a shock such as a natural disaster.

The purpose of this chapter is to describe and shed light on the relationship between shocks and poverty in Haiti. In particular, the correlation between poverty incidence and shocks are analyzed. The coping mechanisms of Haitian households faced with shocks (such as using savings, receiving aid from friends, changing nutritional inputs, or taking children out of school) and the links with human capital accumulation and economic opportunities (the next section) are also examined. In consideration of the prominence and severity of natural disasters, a section is dedicated to a discussion of vulnerability to this kind of shock, with a focus on the impact of the earthquake of 2010.[123]

2. Shocks, impacts, and household coping mechanisms

75 percent of Haitians experiences at least one economically damaging shock per year; nearly 1 million people are vulnerable to falling into poverty following such a shock

Prevalence of shocks

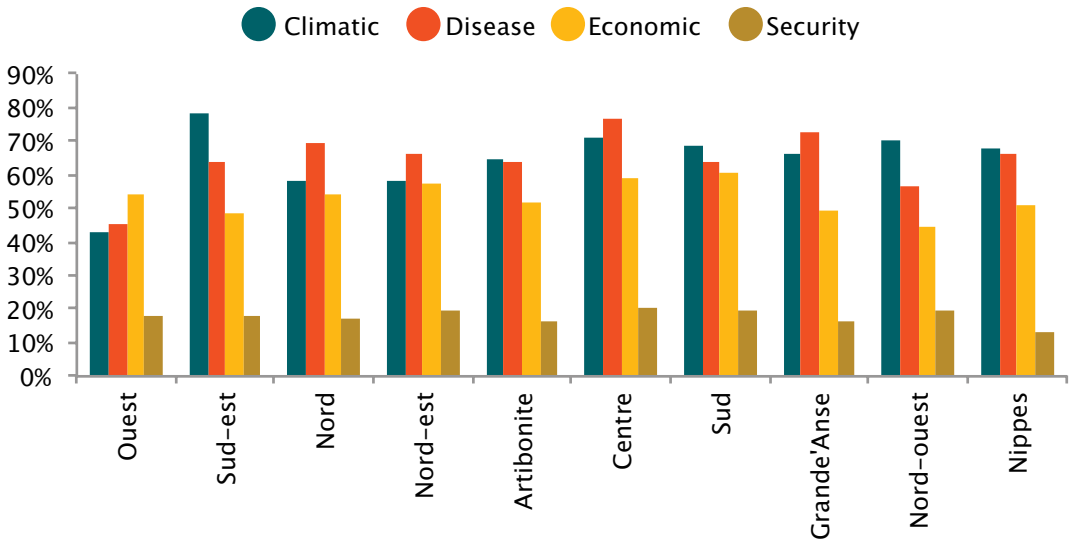
Shock incidence is high in Haiti and is similar across departments.[124] A typical Haitian household faces multiple shocks annually; 78 percent of households in Port-au-Prince, 89 percent of households in other urban areas, and 94 percent of rural households experienced at least one shock. In 2012, between two-thirds and three-quarters of the population of 7 of the 10 departments were affected by a climatic shock. There was some geographical variation: 43 percent of the population in the department of Ouest, and 78 percent of the population in the department of Sud-Est were affected (figure 4.2). The impact of diseases seems to be more evenly distributed across the country. From 64 to 67 percent of the population were affected in half the departments. Disease-affected population shares above 70 percent were found in three departments: Centre, Grand'Anse, and Nord. Economic shocks were more generalized: near or above half of the populations in

123 Worldwide between 1975 and 2008, only 23 mega-events led to almost 1.8 million lost lives, and 0.26 percent of all the events during the period accounted for nearly 80 percent of disaster-linked mortality (United Nations 2009). The events were concentrated in time and space: at least half of the deadliest disasters took place between 2003 and 2008, and 84 percent of the deaths and 75 percent of the destroyed housing were associated with only 0.7 percent of the loss reports (United Nations 2009). These types of events represent an intensive risk because of their low-probability of occurrence, but their high impact when they do occur, in contrast to the more common high-probability, lower-impact events that represent a more extensive risk. However, the magnitude of the impacts that intensive-risk events entail masks the extensive risks to which millions of people around the world are exposed each year: in a sample of 12 countries between 1970 and 2007, the United Nations (2009) finds that over 99 percent of local governments reported that 16 percent of the deaths and 51 percent of the damaged housing were associated with such events.

124 We rely on data of the first round of ECVMAS 2012 collected in the fourth quarter of 2012. The survey included a module on the shocks experienced by households and on the coping mechanisms, if any, employed in response to the shocks. Information on 18 separate shocks was collected. For the purpose of the analysis, shocks were grouped into three broad categories: idiosyncratic economic shocks, covariate community-wide economic shocks, and covariate weather-climatic shocks. The idiosyncratic economic shocks were disaggregated into six categories: health, household composition, agricultural setbacks, loss in nonagricultural economic activity, decrease in outside help, and crime. (See appendix L for a list of the specific shocks in each category.) The respondents were also asked to identify the three shocks that most affected their households economically and the principal coping mechanism they used when faced with the problem. A total of 35 strategies were accounted for, including no strategy. We have grouped these into 12 groups of coping mechanisms. (See appendix M for a list of the groups and the component strategies.)

almost every department was affected by economic downturns. Economic shocks are the most prevalent in the department of Ouest. Crime has become a serious concern: between 16 and 20 percent of the population has been affected by insecurity across the country. Compared with other low-income economies, these percentages are high. Heltberg, Oviedo and Talukdar (2013) report a lower prevalence of shocks in Afghanistan (16.4 percent among urban households and 49.0 percent among rural households), Bangladesh (14.0 percent among urban households and 15.9 percent among rural households), Malawi (40.0 percent among urban households and 66.8 percent among rural households), Tanzania (83.4 percent among urban households and 83.3 percent among rural households), and Uganda (29.7 percent among urban households and 56.2 percent among rural households).[125]

Figure 4.2. Population shares affected by shocks, by department



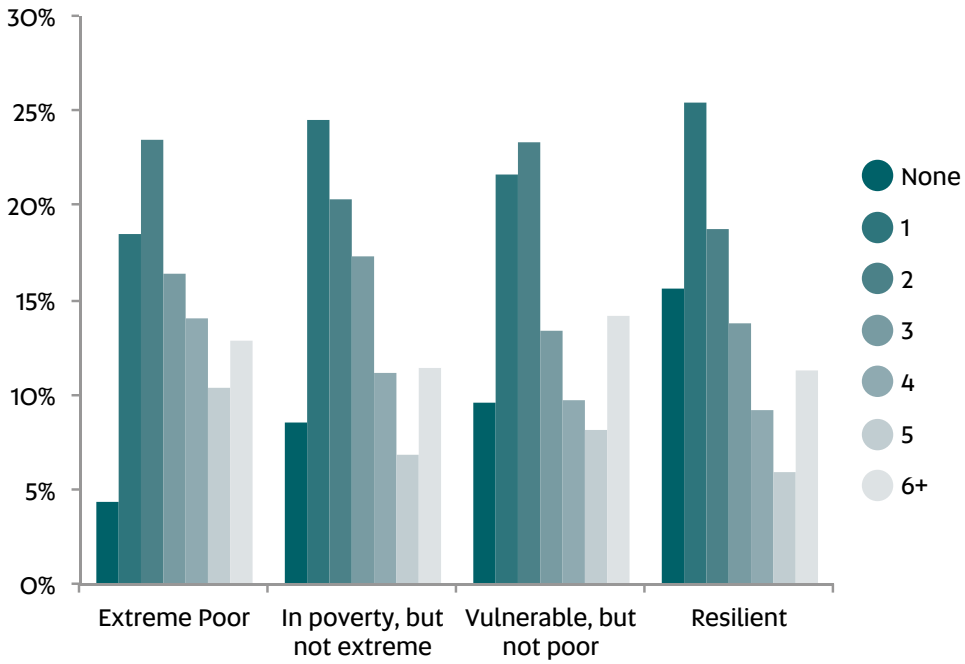
Source: ECVMAS 2012; World Bank and ONPES calculations. Note: The survey question was "during the last 12 months, has your household been affected by one of the following problems?" Climatic shock = hurricanes, floods, droughts, or irregular rainfall. Disease shock = disease other than cholera, cholera epidemic diseases, animal diseases, or crop and plant diseases. Economic shock = death of a household member; hosting new members supported by the household; food scarcity; market price increase for seeds, fertilizer, or equipment; broken tools; bankruptcy of a nonfarm household; household lost wages or other income; loss of transfers from parents; loss of transfers from the government. Security shock = theft of money, goods, or harvest.

125 By construction, the percentages for Tanzania are higher. The survey in Tanzania reports shocks experienced in the past five years, instead of the past 12 months as in ECVMAS and the other country surveys.

While all households in Haiti face multiple economic shocks annually, the poor are more likely to be hit.[126] Households in extreme poverty experienced an average of nearly three shocks per year, whereas resilient households only experienced 2.54 shocks (figure 4.3).[127] Only 4 percent of extreme poor households are unaffected by shocks, against 16 percent among resilient households. Several factors may explain this result. Households in extreme poverty may be more likely to perceive events as shocks because they have fewer means to cope. Alternatively, households in extreme poverty could be more prone to shocks given their locational and occupational decisions.

Figure 4.3. Number of shocks by welfare levels

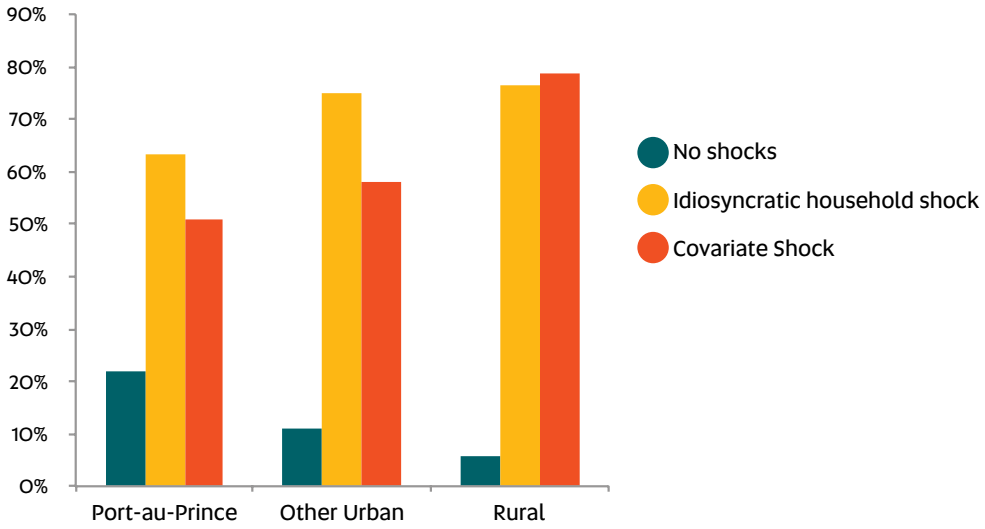
a. % of households facing shocks, by household poverty status



126 The poor are those households in which per capita expenditures are above the extreme poverty line, but below the poverty line. Vulnerable households are those that are above the poverty line, but in which per capita expenditures are less than 20 percent above the line. Resilient households are those in which per capita expenditures are more than 20 percent above the poverty line (that is, the nonpoor). Under these definitions, 29 percent of a sample of 4,930 households are among the extreme poverty; 19 percent are among the poor; 10 percent are vulnerable; and 42 percent are resilient.

127 Total shocks may be slightly underestimated because the survey did not collect information on the number of times a particular type of shock was experienced.

b. % of households facing shocks, by household location



Source: *ECVMAS 2012; World Bank and ONPES calculations.*

Rural households are significantly more likely to be hit by a shock relative to urban households. Rural households experience almost twice the number of shocks experienced by households in Port-au-Prince, 3.29 and 1.85 shocks, respectively. In general, households in the metropolitan area of Port-au-Prince are two times less likely to experience a shock of any kind compared with households in other urban areas and three times less likely than rural households.

Health shocks are the most common shocks hitting the Haitian population, followed by weather-climate and economic covariate shocks. Two-thirds of the Haitian population is regularly hit by idiosyncratic shocks, poor and nonpoor alike. Health-related shocks are the most common. However, 50 percent of the poor and vulnerable face health-related shocks, against 43 percent among the resilient. The most common covariate shocks are weather-climate related. While households in Port-au-Prince report a similar prevalence of climatic shocks as in other low-income countries, shares are much higher in other urban areas and in rural areas, at 44 percent and 73 percent, respectively.[128] Economic or agricultural setbacks affecting the community are the third-most common shocks.

The poor in rural areas are more likely to be hit by agricultural and climatic shocks, while, in urban areas, economic shocks affecting labor incomes and private transfers are more common. The poor are much more likely to be hit by agricultural setbacks (33 percent among the extreme poor, against 18 percent among resilient households) and climatic shocks (73 percent among the extreme poor, against 46 percent among the resilient) (table 4.1). Climatic-weather shocks are likely to be associated with agricultural setbacks (a correlation coefficient of

128 Although the pattern is similar to what is found in other low-income countries, the actual prevalence of weather shocks is generally higher in Haiti than in the other five low-income economies (Heltberg, Oviedo, and Talukdar 2013). The comparison economies report climatic shocks among between 32 and 39 percent of the total population.

0.3) and to be more prevalent among the rural population: 73 percent of rural households have been economically affected by such shocks.[129] The relatively low incidence and impact of climatic shocks among the resilient is most probably linked to the fact that most of these households are in urban areas (68 percent), against only 18 percent of the extreme poor. The shocks associated with an incidence that increases as welfare is enhanced are those shocks affecting economic activity or involving crime, which is more common in urban areas. Idiosyncratic economic shocks (19 percent)—such as failure of a nonagricultural business or wage losses not caused by illness—and economic shocks caused by a decrease in the transfers received from family, friends, or the government (15 percent) are more common in urban areas, reflecting the higher reliance of urban households on labor income and private transfers.

Table 4.1. The prevalence of types of shocks faced by households, by poverty status

Type of shock	*In extreme poverty*	*In poverty, but not extreme*	*Vulnerable, but not poor*	*Resilient*
No shocks	4%	9%	10%	16%
Idiosyncratic household shocks	78%	72%	77%	70%
Health	50%	44%	49%	43%
Household composition	15%	11%	12%	12%
Agricultural	33%	26%	29%	18%
Economic activity	9%	12%	18%	16%
Decrease in outside help	7%	10%	10%	12%
Crime	13%	16%	16%	21%
Covariate shocks	79%	70%	68%	59%
Economic shock affecting community	30%	32%	33%	34%
Weather-climatic shock	73%	60%	57%	46%
Number of observations	920	1,483	456	2,062

Source: *ECVMAS 2012; World Bank and ONPES calculations*

Man-headed households with children are more likely to be hit by shocks. Households with children are more likely to be affected by a health shock, a household composition shock, an agricultural setback, a loss in economic activity, or a covariate economic shock than households without children (table 4.2). Woman-headed households are less likely to experience a shock than man-headed households. Because man-headed households are prevalent in rural areas (61 percent of rural households are headed by men), only 16 percent of woman-headed households overall experience agricultural setbacks, whereas 31 percent of man-headed households experience such shocks; likewise, 62 percent of man-headed households are affected by a weather-climatic shock, compared with only 49 percent of woman-headed households. This evidence may reflect the fact that most of the women are employed in nonfarm activities (see chapter 2) even in rural areas; so, they are less vulnerable to climatic or agricultural shocks.

129 These differences do not imply that a weather-climatic event is necessarily more likely in rural areas, but that such events are more likely to be felt economically by rural households versus urban ones.

Table 4.2. The prevalence of types of shocks, by household type

Type of shock	*With children*	*Without children*	*Man-headed*	*Woman-headed*
No shocks	10%	13%**	9%	13%***
Idiosyncratic household shocks	74%	69%***	73%	72%
Health	47%	41%**	45%	46%
Household composition	14%	9%**	12%	13%
Agricultural	25%	21%**	31%	16%***
Economic activity	15%	10%***	14%	14%
Decrease in outside help	10%	11%	8%	13%***
Crime	17%	18%	18%	16%
Covariate shocks	68%	63%**	72%	61%***
Economic shock affecting community	34%	29%**	33%	32%
Weather-climatic shock	57%	54%	62%	49%***
Number of observations	3,579	1,342	2,782	2,139

Source: *ECVMAS 2012; World Bank and ONPES calculations *** p <0.01 ** p <0.05*

The impact of shocks

Households, especially resilient households, perceive idiosyncratic shocks as more severe than covariate shocks.[130] For more than 60 percent of the households, idiosyncratic health shocks are the most severe shocks experienced in economic terms. The second- and third-most severe shocks are covariate: weather- or climate-related shocks and economic shocks or agricultural setbacks affecting the community, respectively. Among resilient households, 60 percent perceive idiosyncratic shocks as the most severe, against only 25 percent for covariate shocks because of the relatively infrequent incidence of weather-climate shocks among this category of households.

Contractions in income or assets or in food consumption are the main economic consequences of shocks.[131] Health, weather-climatic, and economic shocks all lead to a reduction in incomes, which is perceived as their biggest consequence by all households, but particularly by the vulnerable. Income losses are followed in importance by reductions in assets and in food purchases. For the main shock (which is, most often, health related), 53 percent of households in extreme poverty suffered from reductions in food production, against 34 percent among resilient households, reflecting the greater significance of production for home consumption among the poor (table 4.3). Among the extreme poor, reductions in food production are the second-most severe impact after income losses in the case of the second and third shocks in order of severity (weather-climate and economic shocks).[132]

130 Idiosyncratic shocks are the most important ones for 60 percent of the population. If a second shock occurs, it is as likely to be an idiosyncratic as a covariate shock, and, if a third shock occurs, it is more likely to be covariate. The pattern holds even if the sample is limited to those households that have experienced both kinds of shocks at least once.

131 The survey explored the types of economic impacts that the three main shocks had on households. The potential self-reported economic impacts of shocks are categorized as a reduction in (a) income, (b) assets, (c) food production, (d) food stocks, and (e) food purchases.

132 The shocks are organized according to their importance to the household, not chronological order.

Table 4.3. The economic impact of shocks, by household poverty status.

Percent reductions among households in each category unless indicated otherwise

Indicator	*All*	*In extreme poverty*	*In poverty, but not extreme*	*Vulnerable, but not poor*	*Resilient*
Main shock, observations	4,326	874	1,358	402	1,692
Income	74	72	74	82	74
Assets	61	61	60	59	62
Food production	43	53	45	44	35
Food stock	42	44	42	46	40
Food purchase	63	62	63	66	63
Second shock, observations	3,190	708	1,004	305	1,172
Income	70	69	75	69	68
Assets	60	60	56	62	63
Food production	51	63	55	47	41
Food stock	47	48	47	47	47
Food purchase	63	60	61	68	67
Third shock, observations	2,139	487	668	204	781
Income	69	69	72	71	64
Assets	59	58	59	64	58
Food production	54	61	58	57	45
Food stock	50	49	48	53	53
Food purchase	64	63	62	67	67

Source: *ECVMAS 2012; World Bank and ONPES calculations*

Coping mechanisms

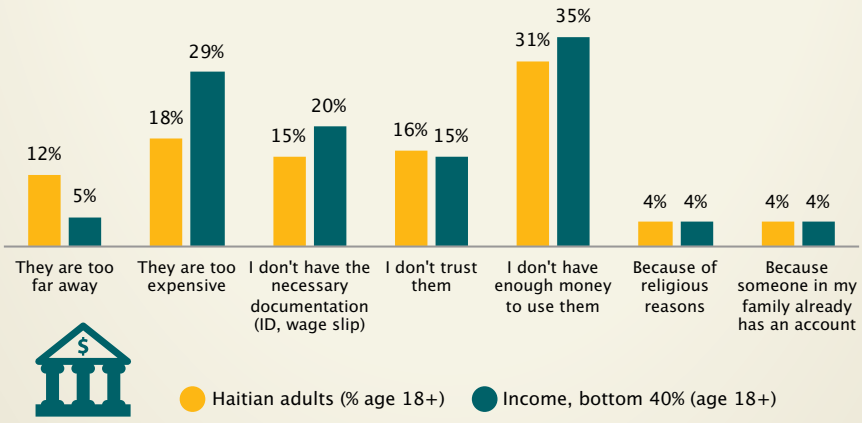
The solidarity of friends and family and reductions in food intake are the main coping strategies adopted by households faced with shocks. The most common mechanisms for coping with the most important shocks are monetary help from others (27 percent), changing nutritional inputs (16 percent), and doing nothing (15 percent). Changes in nutritional inputs are especially important for coping with covariate economic (48 percent) and weather-related shocks (24 percent), which most probably affect agricultural production or labor incomes. Thus, for the most part, households are able to cope with idiosyncratic shocks without resorting to changing their nutritional inputs; however, nutritional inputs are less well protected if a household experiences a covariate economic or weather shock. The most common strategy for coping with idiosyncratic shocks is monetary help from outside the household or not using any coping strategy at all (box 4.1). Among households that experience health shocks, 41 percent resort to asking for monetary help from others.

Box 4.1. Formal and informal mechanisms for risk management: financial inclusion

Formal financial services can be important instruments for poor people to cope with shocks; however, the overall access to and usage of them is relatively limited in Haiti. According to Global Findex data, based on a survey conducted in 2011 on 504 individuals, only 27 percent of Haitian adults (age 18 and older) have an account in a formal financial institution, compared with 45 percent in Latin America and the Caribbean, and 29 percent in other low-income countries. Among the entire population, only 11 percent have medical or health insurance. Only 24 percent of Haitians (and 8 percent of the poor) reported having saved formally in the previous year. The population in the bottom 40, those with low levels of formal education, and youth reported the lowest levels of usage of formal financial services.

Lack of resources and access are among the main reasons households do not use formal financial services. The scarcity of resources (to make use of bank accounts or to open and maintain them) is the main reason reported by the Haitian population for not using formal financial institutions (figure B4.1.1). The second-most important reason is the lack of a carte d'identification nationale (national identity card, CIN) or necessary documentation, reflecting partly the high level of informality in the economy and the weakness of institutions. Despite the limited coverage of banks and cooperatives in the territory (currently only 273 branches exist in the country, most of which are located in Port-au-Prince and a few other major urban areas), physical access does not seem to be among the main constraints facing Haitians in opening formal accounts.

Figure B4.1.1. Reasons for not having an account at a financial institution



Despite the limited access to formal financial institutions, Haitians do need money to invest in the future and cope with risk and often use informal institutions to access it. Among the Haitian adult population, 67 percent (and 55 percent of the poor) reported they had taken out a loan in the year preceding the survey, reflecting a significantly higher usage of loans than in other low-income countries. Only 10 percent of the respondents cited institutional lenders as their source of credit because most loans were provided by family or friends (at a significantly higher rate than in other Latin American or low-income countries), followed by private money lenders, whose services are reportedly expensive. In Haiti, lending is particularly important for coping with health issues and emergencies and to pay school fees: 27 percent of Haitians over 15 years of age reported they had taken out a loan to cope with health issues or emergencies, and 28 percent said they had done so to pay school fees (compared with 16 and 7 percent, respectively, among all low-income countries).

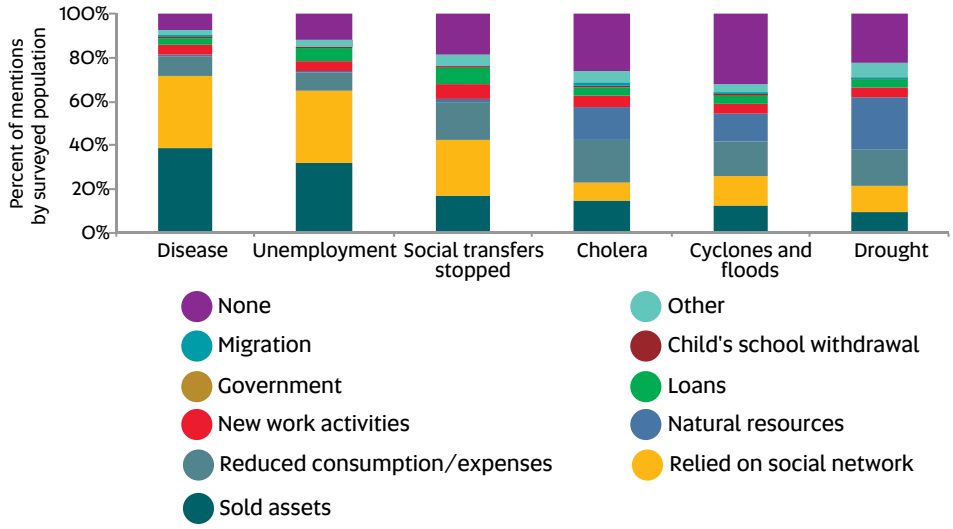
To facilitate the access of the poor to financial services and to improve the quality of these services, the government of Haiti has engaged with the private sector in launching several initiatives. These initiatives aim at facilitating access to financial services through digital wallets and cell phones, at increasing the number of points of service through nonbank agents, and at piloting innovative schemes, such as the delivery of conditional cash transfers (for example, the payments in the Ti Manman Cheri scheme) through mobile phones and remittance agents. Efforts are also under way to define a more comprehensive strategy for financial inclusion to would help address, in an integral manner, a wide range of issues that hamper the supply and use of financial services by the poor and by micro, small, and medium enterprises, such as the absence of a proper consumer protection framework; deficiencies in the legal and supervisory framework that governs financial cooperatives, microfinance institutions, and insurance companies, or the difficulties that many poor people face in gaining access to financial services because they do not have proper identification.

Shocks are more likely to impede the future economic activities of households in extreme poverty, while resilient households largely rely on private transfers. Households in extreme poverty are two times more likely than resilient households to sell assets to cope with shocks, at 10 and 4 percent, respectively. They are also marginally more likely to take on debt: 16 percent of households in extreme poverty use debt as their main coping strategy, against 12 percent of resilient households. Meanwhile, resilient households are two times more likely than households in extreme poverty to rely on (nonloan) monetary help from outsiders, at 38 and 16 percent, respectively. In particular, 54 percent of resilient households tap into monetary help from others to counter the effects of health shocks, whereas only 26 percent of households in extreme poverty are able to do so.

Shocks can generate important losses in human capital, especially among the poor. Changes in household composition (the death or birth of a household member) or a drop-off in monetary help from outside the household are the two events that are more likely to lead to the removal of a child from school. The use of this mechanism of removing a child from school is prevalent among households in extreme poverty. Households in extreme poverty are also two times more likely than economically resilient households to change their nutritional inputs, at 23 and 10 percent, respectively. If a covariate economic shock strikes a community, 58 percent of households in extreme poverty change their nutritional profile as opposed to 36 percent of resilient households. Not only are households in extreme poverty more likely to change their nutritional intake, but households in extreme poverty report a higher incidence of covariate shocks (see table 4.1).

Haitians are less able to cope with intensive-risk disasters than with extensive-risk events. Extensive-risk shocks such as idiosyncratic health or economic shocks are usually high-probability, lower-impact events that Haitians have learned to address primarily by selling assets or by relying on their extended social network for loans or on transfers from family, friends, or NGOs (figure 4.4). Over two-thirds of households affected by idiosyncratic unemployment shocks and over 70 percent of households that reported they were affected by idiosyncratic diseases were able to cope by selling assets or by relying on their friend and family networks. However, if an intensive shock occurs, such as a climatic event (for example, hurricanes, floods, or droughts) or an epidemic (such as cholera), the ability to sell assets plummets to around 10 percent of these households, and not much more is gained through the networks of these households. It is plausible that, because assets are damaged in some climatic events, they lose their market value, and, because an entire region can be affected by a climatic or health shock, households are less able to rely on networks. Government aid plays almost no role in helping Haitians cope with a shock; a strategy to prepare for, mitigate, and respond to disasters is therefore needed.

Figure 4.4. Coping strategies, by type of shock



Source: ECVMAS 2012; World Bank and ONPES calculations. Note: Cholera, hurricanes, floods, droughts, disease, unemployment, and a termination of social transfers are shocks that can be considered intensive-risk events.

In the face of shocks, households often make costly trade-offs that sacrifice long-term welfare for immediate benefit: 56 percent of households in extreme poverty change their food consumption, which can lead to malnutrition, stunting or anemia.

Multivariate analysis

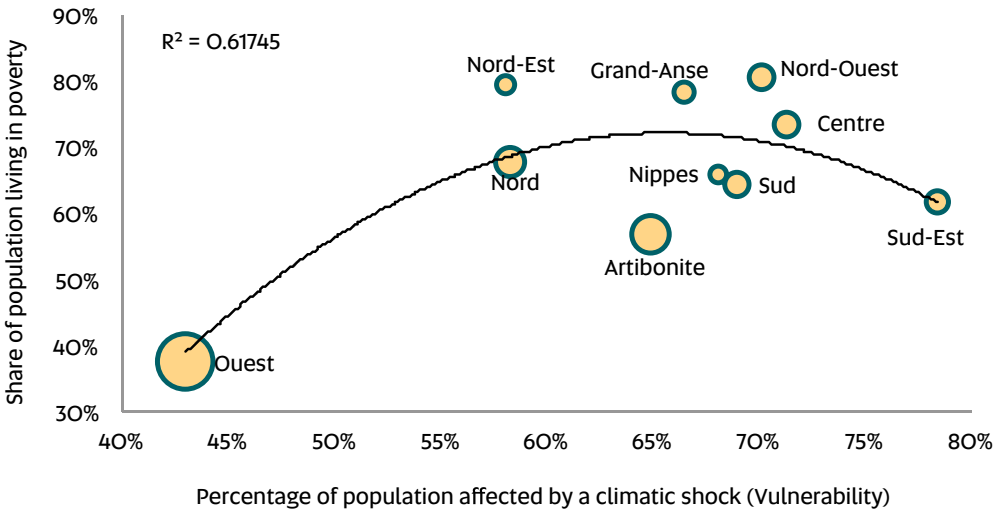
Covariate weather-climate and economic shocks have a negative impact on welfare. The cross-sectional analysis determines the extent to which income groups resort to various coping strategies depending on the type of shock and after one controls for household characteristics. The results confirm that covariate shocks are associated with lower per capita expenditures across the population (see appendix N). Covariate economic shocks are associated with about 12 percent less per capita expenditures, and covariate weather shocks are associated with about 15 percent less per capita expenditures. Furthermore, households that resort to changing nutritional inputs to counter the effects of a shock spend significantly less per capita than households that have not experienced a shock: 24 percent less in the case of covariate economic shocks, 30 percent less in the case of covariate weather shocks, and 25 percent less in the case of idiosyncratic shocks. Households that take on debt or use another strategy besides the five main strategies to cope with a weather-related shock spend less per capita than households that have not experienced a shock.

3. Vulnerability to natural disasters

The poverty-disaster vulnerability relationship

In most regions in Haiti, the poor are more likely to be affected by a climatic shock, which is reflection of the incidence of poverty. The share of people affected by a natural shock varies considerably from one department to another. Nonetheless, in all departments, the poor are disproportionately affected. Indeed, in the poorest departments (Grand'Anse, Nord-Est, and Nord-Ouest), between 78 and 82 percent of the affected population is poor. In contrast, Ouest is the least vulnerable: only 43 percent of the population is affected by shocks; of these people, only 19 percent are poor, while 23 percent are nonpoor (figure 4.5).

Figure 4.5. Climatic shocks and poverty, by department, 2009

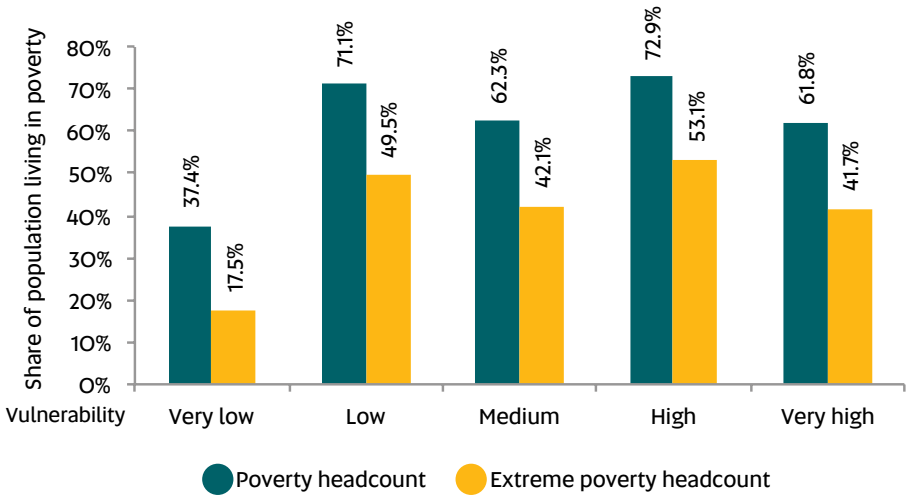


Source: ECVMAS 2012; World Bank and ONPES calculations. Note: Climatic shock = hurricanes, floods, droughts, and irregular rainfall. The poverty line is set at G 29,909.87. Departments are classified by level of vulnerability. Vulnerability levels are set according to the share of people affected by a climatic shock. The size of the bubbles in the figure refers to the relative size of the relevant population in 2009.

There is a direct relationship between a department's vulnerability to natural disasters and the level of poverty among the population. The poorer an individual is in Haiti, the more vulnerable is the individual to natural disasters (figure 4.6). People may be vulnerable to disaster because they live in places susceptible to one or more natural hazards or because their behaviors and local and national regulations are inadequate to reduce risk. A proxy for vulnerability to natural disasters is the number of people in a department who are affected by a given event. The use of ECVMAS to calculate a poverty headcount for every department and to determine the degree to which the department is vulnerable to natural disasters according to the share of the population affected by natural shocks makes it possible to show that there is a direct relationship between vulnerability and poverty.

Figure 4.6. Poverty and vulnerability in Haiti.

Population in poverty by vulnerability zones



Source: ECVMAS 2012; World Bank and ONPES calculations. Note: The poverty line is set at G 29,909.87. The extreme poverty line is set at G 15,240.03. Departments are classified according to their vulnerability. Vulnerability levels are based on the share of the total population affected by a climatic shock. The categories were (1) very low (Ouest), (2) low (Nord and Nord-Est), (3i) medium (Artibonite, Grand'Anse, and Nippes), (4) high (Centre, Sud, and Nord-Ouest), and (5) very high (Sud-Est).

Haiti's hazards

Haiti is one of the countries most exposed to hazards in the world, making it particularly vulnerable to the associated economic losses. Over 93 percent of Haiti's surface and more than 96 percent of its population are at risk of exposure to two or more hazards. According to these measures, Haiti ranks fifth in the world in exposure to risk to two or more hazards (World Bank 2005). With every event, whether hurricane, flood, earthquake, landslide, or drought, there is an economic consequence: 56 percent of the GDP of Haiti is linked to areas exposed to risk stemming from two or more hazards.

While Haiti's vulnerability derives in part from its geographical location, part also derives from internal or institutional factors. The comparison between the Dominican Republic and Haiti, which share the island of Hispaniola, highlights three key differences (table 4.4). First, the number of weather events from 1980 to 2010 was 63 percent higher in Haiti than in the Dominican Republic, suggesting that the greater vulnerability of the former causes particular hazards to become disaster events more easily. Second, although both countries experienced similar numbers of storms, Haiti had more than twice as many floods as a consequence of the storms (figure 4.7). Floods are one of the most common weather-related events that affect Haiti and partly arise because of the severe deforestation that has weakened and impoverished the land, unlike the Dominican Republic.[133] Third, Haiti's greater

133 In 2009, forest coverage was 3 percent in Haiti, against 47 percent in the Dominican Republic (see ONPES forthcoming, based on Collier [2009]).

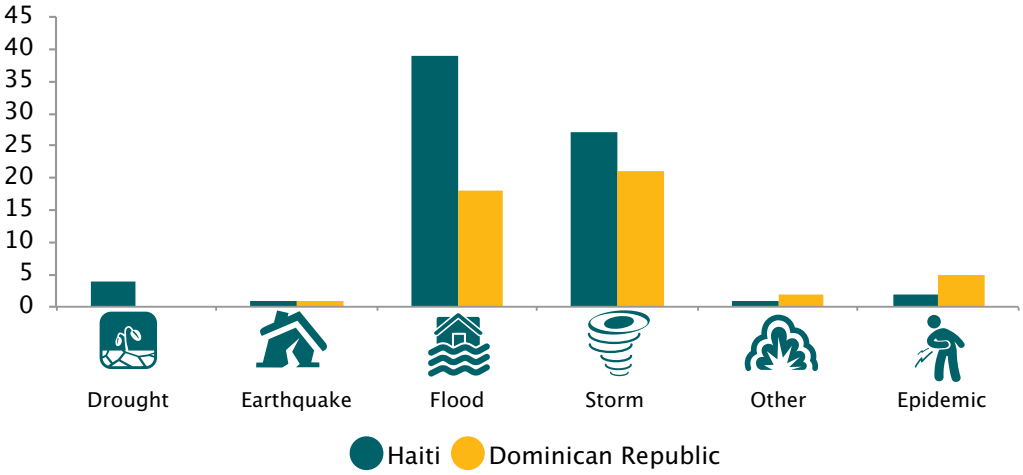
vulnerability is reflected in the consequences of these events in terms of human and economic losses, which reflect also chaotic migration from rural to urban areas, the consequent inadequacy of buildings and building codes, and lack of diversification in sources of income.[134] While the events occurring in Haiti since 1980 resulted in over 230,000 deaths and nearly $9 billion in damage, the Dominican Republic had fewer than 1,500 deaths and $2.6 billion in damage. At an annual average of over $284 million, Haiti's costs are more than three times higher than the costs of its neighbor.

Table 4.4. Disasters in the Dominican Republic and Haiti compared, 1980–2010

Disaster	*Haiti*	*Dominican Republic*
Events, number	74	47
People killed	233,919	1,486
Average per year	7,546	48
People affected	9,952,766	2,720,493
Average per year	321,057	87,758
Economic damage, $ billions	8.8	2.6
Average cost per year, $ 1,000s	284,642	84,178

Source: EM-DAT (OFDA/CRED International Disaster Database), Centre for Research on the Epidemiology of Disasters, Université Catholique de Louvain, Brussels (data version: v11.08), http://www.emdat.be/database. Note: The 2010 earthquake in Haiti was responsible for 95 percent of the deaths and over 90 percent of the economic damage during the period. Excluding the 2010 earthquake from the table would yield a different picture in terms of economic consequences: the Dominican Republic would become more susceptible than Haiti to economic loss. One possible interpretation of this is the greater asset exposure of the Dominican Republic relative to Haiti. However, the number of deaths is still 2.6 times higher in Haiti than in the Dominican Republic.

Figure 4.7. Number of disaster events, by type, Dominican Republic and Haiti, 1980–2010



Source: EM-DAT (OFDA/CRED International Disaster Database), Centre for Research on the Epidemiology of Disasters, Université Catholique de Louvain, Brussels (data version: v11.08), http://www.emdat.be/database.

134 The population of Port-au-Prince rose from 400,000 to 3 million over the last 40 years (ONPES forthcoming).

Coastal areas and Port-au-Prince are the most vulnerable to weather and other natural events. The most common extreme weather events in Haiti are storms, floods, draughts, earthquakes, and landslides. All such events are common across the country, but particularly in coastal areas and Port-au-Prince. Storms, floods, and droughts are all caused by a lack of watershed protection and deficiencies in irrigation (World Bank 2013b). Urban areas and rural populations in coastal areas are particularly vulnerable because the forces favoring urbanization and market pressures to seize land for agriculture usually remove vegetation and thereby destroy buffer zones, which increases the vulnerability of these areas.

Both urban and rural areas suffer the consequences of these shocks. Urbanization patterns account for part of the economic losses caused by these events because of the damage to housing and infrastructure, the disruption in logistics and transportation chains, and loss of life. Rural areas bear a larger share of the costs in terms of losses in agricultural produce, which have an impact on food security and livelihoods.

Haiti's hazards have larger consequences not only because of the country's geological, geographical, and developmental challenges, but also because of institutional weaknesses, including inadequate planning and lack of regulatory enforcement. Hazards can be divided in Haiti into natural and anthropic hazards. The former includes earthquakes, floods, and torrential floods, and the latter includes fires and accidents during the transport of dangerous materials. Historically, the deadliest hazard in Haiti is seismic activity, of which the triggers are still being researched. However, the consequences of seismic activity are significantly related to human decisions on how and where to build. Building codes, deficient urban planning, and other institutional weaknesses amplify these consequences (table 4.5; box 4.2). Similarly, urban planning and building codes are also amplifying factors in the consequences of floods. Given that laws in Haiti impose restrictions on building in natural drainage areas, it is possible that, as with anthropic hazards, a lack of regulatory enforcement may aggravate the consequences of disasters (CIAT 2013).

Natural hazards can slow or stop growth and development, gen rating destruction and diverting public investment to emergency reconstruction operations.

Table 4.5. Triggers and consequences of hazards in Haiti

Hazards	*Predisposing factors*	*Triggering or aggravating factors*	*Socioeconomic amplification factors*
Natural hazards			
Earthquakes	Proximity to large structures, nature of superficial soil	Earthquake	Inadequate building codes, deficient urban planning, institutional weaknesses
Floods	Surface flatness and organization of the hydrographic network	Storms, hurricanes, exceptional rain in terms of intensity and duration	Inadequate building codes, deficient urban planning, institutional weaknesses
Torrential floods	Settlements in alluvial fans or glens	Storms, hurricanes, exceptional rain in terms of intensity and duration	Inadequate building codes, deficient urban planning, institutional weaknesses
Anthropic hazards			
Transport of dangerous materials	Dangerous products, inadequate transportation and routes	Human accidents, traffic congestion	Lack of regulation or enforcement
Fire	Flammable construction materials	Human accidents, traffic congestion	Lack of regulation or enforcement

Source: *Adapted from Mathieu et al. 2003.*

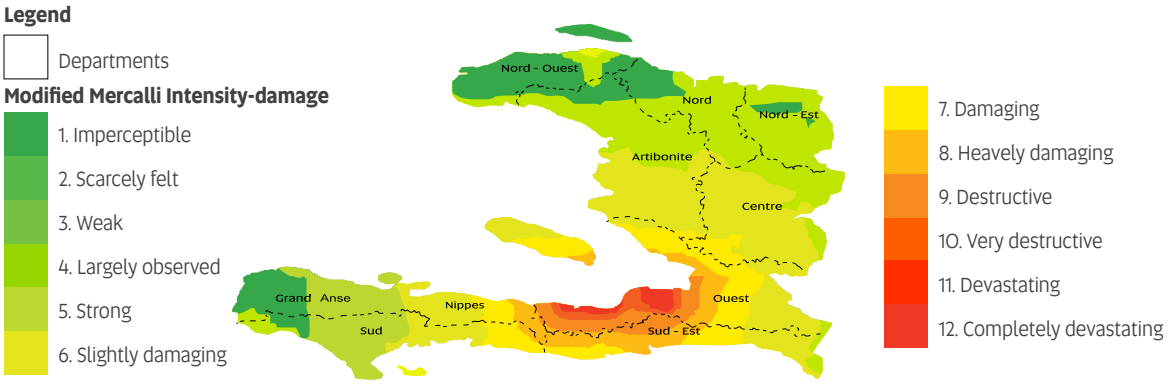
Box 4.2. The disaster risk management strategy in Haiti

Haiti's *Système National de Gestion des Risques et des Désastres (National Disaster Risk Management System, NDRMS)* was established in 2001 by 10 key line ministers and the president of the Haitian Red Cross. The NDRMS has achieved significant results in disaster preparedness and response since its inception: while the 2004 hurricane season resulted in 5,000 casualties and over 300,000 affected people, the Fay, Gustav, Hannah, and Ike Hurricanes resulted in a combined total of fewer than 800 casualties and over 865,000 affected people. Strong collaboration between the key members of the NDRMS and its technical and financial partners was critical to improving the speed and efficiency of the response capacity. However, the 2010 crisis following the earthquake was beyond the capacity of the NDRMS.

A focus on the impact of the 2010 earthquake

In January 2010, a magnitude 7.0 earthquake struck Haiti, the most powerful in over 200 years, causing hundreds of thousands of deaths and injuries, sending thousands more into homelessness or displacement, and inflicting tremendous infrastructural damage on water and electrical infrastructure, roads, and port systems in the capital, Port-au-Prince, and surrounding areas. The force of the earthquake was felt miles from the epicenter. Shaking intensity can be measured according to the Modified Mercalli Intensity scale, which is a measure of the severity of an earthquake. Gauged according to the scale, there was a major area of intensity close to the epicenter, the departments of Ouest and Sud-Est (map 4.1). Haiti was then struck by a cholera epidemic in October; four months later, some 4,500 deaths had been reported. Following the disaster, the human toll was extremely severe: 2.8 million people were affected by the earthquake, which caused over 200,000 deaths and more injuries. Over 97,000 houses were destroyed, and some 188,000 were damaged. Over 600,000 people fled to nonaffected regions (Échevin 2011).

Map 4.1. The shaking intensity of the 2010 earthquake

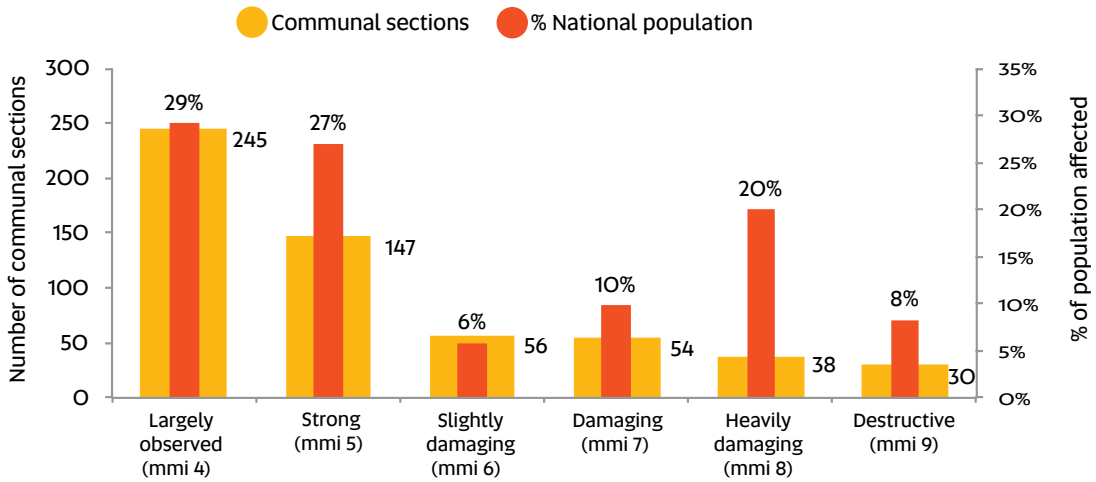


Source: *Based on data of "Shakemap us2010rja6," Earthquake Hazards Program, United States Geological Survey, Reston, VA, http://earthquake.usgs.gov/earthquakes/shakemap/global/shake/2010rja6/.*

Although the earthquake affected all the communal sections (sections communales) of the country, the impact was mainly concentrated in two departments. Among these communal sections, 30 were destroyed; 38 were heavily damaged; and 54 were damaged (figure 4.8). These communal sections are mainly in the departments of Ouest and Sud-Est, where almost 40 percent of the national population was concentrated in 2009. Additionally, 56 communal sections where slightly damaged, mainly in the departments of Artibonite, Centre, and Nippes. The remaining communal sections were largely or considerably damaged.

Figure 4.8. Damage among communes as a result of the 2010 earthquake.

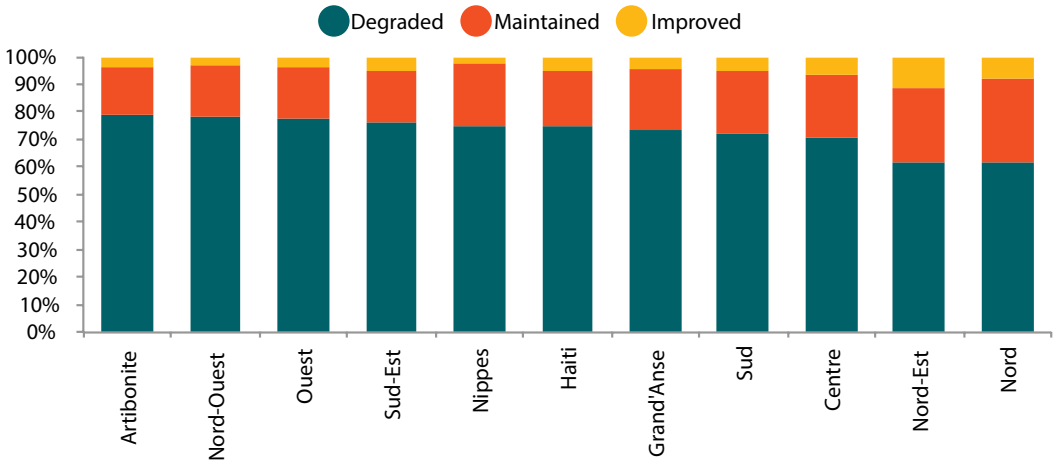
Communal sections and population affected, by shaking intensity



Source: *Based on data of "Shakemap us2010rja6," Earthquake Hazards Program, United States Geological Survey, Reston, VA, http://earthquake.usgs.gov/earthquakes/shakemap/global/shake/2010rja6/; population estimates: IHSI.*

The 2010 earthquake destroyed large numbers of dwellings and resulted in the loss of many jobs, though to a lesser extent. Nationwide, 41 percent of all dwellings were damaged. The share was much larger in the departments of Ouest (61 percent) and Sud-Est (54 percent). The share of dwellings damaged and the remuneration lost were smaller in Ouest (13 percent) and Sud-Est (12 percent); national figures stood at 8 percent. In 7 percent of the cases, only dwellings were damaged, but no remuneration was lost; the share was slightly larger in the departments that bore most of the damage. A large share of the families that saw their dwellings damaged had no employment prior to the earthquake. The dwellings were damaged of more than one in four families that had no jobs before the earthquake. The corresponding share was higher in Sud-Est (33 percent) and Ouest (37 percent). Among households, 75 percent believe their living standards have deteriorated since the earthquake (figure 4.9).

Figure 4.9. Perceptions of living standards after the earthquake



Source: ECVMAS 2012; World Bank and ONPES calculations..

4. Key messages

Vulnerability is extensive in Haiti. One million people live slightly above the poverty line and could be pushed below the line by a shock; almost 70 percent of the population is either poor or vulnerable to falling into poverty. The consumption level of only 2 percent of the population exceeds $10 a day, which is the region's income threshold for joining the middle class.

Haitians face frequent covariate and idiosyncratic shocks. The most common covariate shocks are weather-climate related. Economic shocks are also common in Haiti because of international fluctuations in import or export prices and the volatility of remittances. Political instability has haunted the country for several decades and can affect welfare if it results in an interruption or slowdown in economic activity or official development assistance. Haitians also face considerable idiosyncratic shocks such as death, illness, job loss, and declining wages.

While a typical Haitian household faces multiple shocks each year, poor and rural areas are even more vulnerable. Nearly 75 percent of households are economically impacted by at least one shock each year. The extreme poor are more vulnerable to shocks and the consequences of shocks: 95 percent experience at least one economically damaging shock each year. Rural households experience almost twice the number of shocks affecting households in Port-au-Prince. Health shocks and covariate weather-related shocks are the most common and most severe and affect the poor more heavily.

The poor in rural areas are more likely to be hit by agricultural and climatic shocks, while, in urban areas, economic shocks affecting labor incomes and private transfers are more common. The poor are much more likely to be hit by agricultural setbacks (33 percent among the extreme poor, against 18 percent among resilient households) and climatic shocks (73 percent among the extreme poor, against 46 percent among the resilient). Both types of shocks are more prevalent in rural areas. Idiosyncratic economic shocks and economic shocks caused by a decline in the transfers received from family, friends, or the government are more common in urban areas, where most of the resilient live, reflecting the higher reliance of urban households on labor income and private transfers.

It is critical to have effective risk management and social protection strategies in place to lessen the impact of shocks on Haiti's poorest and most vulnerable, and ensure their ability to cope with their effects

The poor are less successful in coping with shocks, and, if they have a strategy, it is more likely to impede future economic activities or human capital accumulation. Haitians, especially the poor, lack formal instruments to manage risk effectively, such as social protection programs and formal financial products, and rely on informal mechanisms, such as private transfers or debt, to mitigate the chocks ex post. As a result, most households do nothing (as in the case of cholera and weather-related shocks), suggesting that the poorest are unable to cope with shocks and adopt coping strategies that damage human capital. Overall, 23 percent of households in extreme poverty changed their nutritional profile in response to a major shock, and 58 percent did so in response to a covariate economic shock.

Natural disasters have a great disruptive potential because of the geographical position of Haiti, institutional weaknesses, and shortages of the resources needed to prepare for, mitigate, or cope with shocks at the macro and micro

levels. Haiti's hard-earned development gains are often jeopardized by adverse natural events that generate destruction of key human and infrastructural resources and divert development funds to emergency and relief operations.

In light of the high incidence of shocks, several priorities for policy actions emerge, as follows:

Priority 1: Assess the needs in social protection and possibly expand coverage among the poor and vulnerable to protect their assets and livelihoods. In the face of the high incidence and vulnerability to idiosyncratic or covariate shocks, the poor and vulnerable have limited access to public support. Most assistance is provided through remittances or support from churches, other nongovernmental institutions, and donors. Access to formal safety nets could allow the poor and vulnerable to smooth their consumption over time and prevent irreversible losses of human capital, as well as avoid destitution. In order to define the most appropriate support measures, however, a thorough understanding of the hazards and household coping strategies is needed: this study represents a first step in that direction.

Priority 2: Mainstream disaster risk management activities into all growth, development, and poverty reduction strategies to facilitate the transition from an approach based on living at risk to an approach based on living with risk. To ensure that the transition from the emergency response phase and the reconstruction phase after the earthquake is effectively brought to an end, it is important to continue strengthening and mainstreaming disaster risk management activities and make sure disaster risk management becomes a core component of a sustainable poverty reduction and economic growth strategy. Disaster risk management has already been included as a key cross-cutting priority in the government's Poverty Reduction Strategy Paper (2008–11) and as a principle pillar of the United Nations Development Assistance Framework (2009–11), as well as the World Bank's Country Assistance Strategy (2009–11), the Joint Aid Effectiveness Program (Programme conjoint d'efficacité de l'aide - PCEA) for 2013-2016 of the of Coordination framework of the External Aid for Development (Coordination de l'aide externe au développement - CAED) and other disaster risk management projects (see box 4.1). More recently, the Post-Earthquake Disaster Needs Assessment 2010 and the Action Plan for National Recovery and Development of Haiti present disaster risk management as a cross-cutting priority in both the public and private sectors and as an opportunity to promote (1) decentralization, (2) a stronger civil society, and (3) an innovative private sector. Overall, this demonstrates a growing consensus within the government and among technical and financial partners of the importance of integrating disaster risk management as a critical component of a successful poverty reduction and economic growth strategy.

Priority 3: Strengthen the capacity of the NDRMS; this capacity is low and has no legislative underpinning. To achieve and sustain growth, Haiti requires the robust

institutional and operational capacity to manage multiple risks and respond to disasters. This calls for a broad review of the NDRMS and a discussion of institutional and policy options for each of the following actions:

a. *A key initial step toward upgrading the management of disaster risks involves improving the identification and understanding of disaster risks in Haiti by quantifying and anticipating the potential impacts of natural hazards on Haitian society and the economy.* The Civil Protection Directorate and the Ministry of Economy and Finance could start by enhancing their disaster data management system and damage and loss assessment procedures and by keeping track of the historical disaster data. This information is essential to the assessment of disaster risks and the design of any disaster risk financing instrument. Beyond assessing the damage and losses from actual events, the development of hazard maps, the building of an exposure database, and the spatial analysis of risks are key elements in fostering appropriate investment and territorial planning, a fact that is recognized in article 149 of the decree of October 12, 2005 (CIAT 2013).

b. *Reducing existing risk and avoiding the creation of new risks by integrating risk awareness in public policies and investments.* Disaster-risk–related information can guide investments in addressing existing risks. The retrofitting of critical buildings, the construction of emergency safety infrastructure, and the rebuilding of natural ecosystems are examples of the disaster mitigation investments needed in Haiti. However, these engineered structural measures must be accompanied by, for example, adequate policies and programs to promote improved territorial planning and building regulations and practices to avoid the creation of new risks.

c. *Improving the capacity to manage disaster-related emergencies.* Strengthening institutional arrangements for emergency and preparedness, including a fully functioning National Emergency Operations Center, remains a top priority. Establishing a fully operational chain of command supported by emergency response plans, simulation exercises, and adequate warning and communication-sensitization systems requires strong national leadership and corresponding political traction.

d. *Increasing the resilience of government and households.* Financial protection strategies, particularly if they are designed to meet the needs of the population in extreme poverty, can help protect the government and households from the economic burden of shocks and disasters. Haiti's government is a member of the Caribbean Catastrophe Risk Insurance Facility, which allows the country to purchase insurance coverage to finance immediate postdisaster recovery needs, based on parametric triggers (the occurrence of a predefined event rather than an assessment of actual losses). Other parametric insurance instruments, such as index-based insurance or weather-based agricultural insurance products, could also be explored, but often face technical difficulties in modeling the risk.

Coverage of correctly identified risks is also a key condition of successful risk transfer. If the probability of the insured event is too large (for all high-probability, low-scale events), then the cost can become prohibitive in the absence of a subsidy. Finally, the use of subsidized microinsurance services could also be piloted as an alternative to social safety nets for vulnerable populations.

e. *Clearly define the institutional and budgetary framework of the NDRMS, including roles and responsibilities for the series of institutions that are involved in civil protection and risk management.* Providing the NDRMS with a new legal and institutional framework thus becomes paramount. In addition, the NDRMS requires long-term budget planning, particularly planning for staff and recurrent expenditures.

Chapter 5: Poverty and social protection

This chapter describes the access to social protection in Haiti[135]. The findings show that, in the face of significant poverty and numerous vulnerabilities throughout the life cycle, few of the poor have access to social protection or to safety nets. First, access to social security is out of the reach of most Haitians, but particularly the poor. Second, only a small share of the Haitian population benefits from social protection. Third, because of low coverage and limited generosity, social protection benefits are inadequate and play only a marginal role in reducing poverty and inequality and in improving opportunities for the population. The poorest groups—rural residents and children, especially young children—receive a disproportionately small share of the benefits. The costs generated by this lack of effective protection for the poorest households are thus high. Meanwhile, public policy has recently begun focusing on strengthening social protection so as to accelerate poverty reduction. The government's umbrella initiative, EDE PEP, represents a positive effort to create new programs to address important social risks. However, administrative data and the authors' confirm that the coverage of social protection programs and the coordination and coherence across programs, especially among the poorest and in rural areas, must still be significantly improved.

1. Introduction

The previous chapters highlight the potential role that effective and well-targeted safety nets could play in mitigating the significant poverty and vulnerability in Haiti (chapter 2), enhancing the access and use of health care and education and promoting human capital (chapter 3), and helping the poor manage shocks and risks (chapter 4), while connecting them to skills-building and income generating opportunities. Looking at evidence from the ECVMAS and complementary sources, this chapter explores the access of Haitian households, especially the poorest, to the public provision of safety nets. This issue is important because the government has traditionally been able to play only a limited role in providing a safety net to the poor and vulnerable. Devereux's Catch 22 (2000) of social protection, "the greater the need for social protection, the lower the capacity of the state to provide it" is particularly true in fragile states such as Haiti (Harvey et al. 2007, 4). In the face of economic shocks or natural disasters, the poor have limited access to public support, and most assistance continues to be provided through remittances or support from churches, other nongovernmental actors, and donors. The literature points to the low coverage and often ad hoc or limited nature of programs, which frequently cover only small geographical areas or narrowly defined sets of beneficiaries (Lamauthe-Brisson 2013; Lombardo 2012). The massive 2010 earthquake that ravaged the country both exposed and exacerbated Haiti's lack of

135 This chapter is based on Strokova, et al. (2014), a background paper for the study by the World Bank and Observatoire National de la Pauvreté et de l'Exclusion Sociale (ONPES). 2014. Investing in People to Fight Poverty in Haiti, Reflections for Evidence-based Policy Making. Washington, DC: World Bank.

a coherent safety net system. However, quantitative evidence has been lacking on the actual access of households to social protection; hence, the value added of this chapter at a time when the government has set out to develop a social protection strategy as part of its antipoverty program.

This chapter provides evidence on access to social protection instruments in Haiti, mainly based on ECVMAS 2012[136]. Given the fragmentation and low coverage of programs, it is nearly impossible to obtain comprehensive data on these interventions through nationally representative household survey data. Nonetheless, the results are indicative and could serve as a basis for a more detailed study based on alternative data sources, such as administrative data. The chapter does not aim to be comprehensive. For example, the analysis of programs is mainly limited to recent government platforms or initiatives and does not reflect the wide scope of donor initiatives.

The chapter is organized as follows. The next section outlines the conceptual and policy framework. Based on the ECVMAS findings and complementary sources of information. The following section summarizes the needs of Haitians for social protection interventions based on the diagnostic provided in previous chapters and using the life-cycle approach to social protection needs. The subsequent section assesses the extent to which these needs are addressed today in Haiti. The final section concludes.

Policy framework

Social protection includes a variety of interventions that can be tailored depending on purpose, target group, and context. Typical interventions include conditional or unconditional cash or part cash transfers, food transfers through food distribution, nutrition programs, school feeding programs, sales of subsidized food, universal subsidies to cover food and energy expenditures, labor-intensive public works programs (cash-for-work programs), and fee exemptions for basic services in health care or education (such as PSUGO in Haiti).

Depending on the needs of the target population and the objectives, the various interventions may be short term or medium to long term. In Haiti, for example, the lessons learned from the 2010 earthquake suggest that both short and medium term responses are needed. A social safety net should be able to provide support over the medium term basis if it is designed to address chronic vulnerability or promote access to health care and education through transfers linked to school attendance or health visits. If a crisis or disaster occurs, the system should be able to respond rapidly to needs either by scaling up existing schemes or

136 The goals of social protection are understood here as resilience, equity, and opportunity. The scope of social protection encompasses programs that range from noncontributory social assistance, including humanitarian aid, to contributory social insurance or social security, and instruments that can link households to skills-building and income generating opportunities through access to the labor market or self-employment (World Bank 2012).

diversifying interventions and implementing temporary short-term programs that are properly targeted.

The evidence suggests that social safety net programs must be part of a broader social protection and promotion system if they are to contribute effectively to poverty reduction and enhance resilience and equity. Promotion here refers broadly to interventions that favor increasing the human capital and the livelihood opportunities of the poor, including bridging coverage gaps in conditional cash transfers programs to boost the investments in health care and education and enhance the employability of beneficiaries and augment the access of beneficiaries to self-employment or small entrepreneurship programs. This broader social protection and promotion system encompasses three main types of interventions: (1) social insurance instruments or contributory schemes usually linked to formal occupation (contributory pensions, health, or unemployment insurance), (2) active labor market programs that foster employability and facilitate labor market insertion, and (3) noncontributory programs (social assistance) that support productive activities, for example, among poor farmers (agricultural inputs) or self-employment promotion among the extreme poor (such as microcredit schemes).

The fragility that Haiti experiences poses additional challenges in the design and implementation of effective and sustainable social protection interventions. First, households in fragile states face a mixture of acute and chronic needs that require a combination of flexible, short-term responses, as well as long-term interventions[137]**.** Humanitarian aid and emergency responses are challenged to become part of a system of long-term, yet responsive safety nets. Second, most analysts and observers recognize that the lack of conceptual clarity about what constitutes social protection adds another layer of difficulty, but argue that the objectives and types of instruments of social protection should be the same in fragile states as in other development contexts. Third, the extent to which currently available instruments, financing mechanisms, delivery arrangements, and actors (the government, NGOs, donors) are prepared to cope with the fragility context needs to be assessed.

2. Social protection needs throughout the life cycle

A summary of the key risks faced by various age-groups throughout the life cycle and the general implications for policy is presented in figure 5.1. Each age-group may be described as follows.

Young children (under 5 years old) in Haiti are at high risk of malnutrition and mortality. The main risks among this age-group are low birthweight, i adequate nutrition, debilitating disease, and lack of early stimulation, all of which

137 While few conclusions are supported by robust evidence, the literature offers insights into social protection in fragile states that are relevant for the Haitian case (Barrientos 2008; Carpenter et al. 2012; Harvey et al. 2007; IEG 2013; World Bank 2011).

may impair development and may contribute to perpetuating poverty[138]. Acute malnutrition and chronic malnutrition are still a concern among poor children under 5 years of age because they are primary indicators of the long-term, cumulative effects of undernutrition among young children. Households with children are more likely to suffer from food shortages. The related inequalities in health outcomes and access to health care are large, and the poorest quintiles do less well (chapter 3).

Figure 5.1 Key risks, the life cycle, and social protection in Haiti: a summary

Key facts on risks
- Malnutrition: 22 percent suffer from chronic malnutrition (DHS 2012)
- Mortality: the mortality rate is 92 deaths per 1,000 live births, nearly 6 times higher than the regional average of 16 (World Health Organization)

Key implications
- Programs aimed at malnutrition address supply and demand barriers
- A more comprehensive early childhood policy

Key facts on risks
- Nonenrollment or school drop-out rates: approximately 200,000 children (ages 6–14) are estimated to have dropped out of school (ECVMAS 2012)
- Child labor: 20 percent of children are involved in a work activity; 6 percent of children (ages 10–15) in the poorest quintile work and do not attend school
- Restavecs: up to 225,000 children are restavecs (PAHO 2009)

Key implications
- Social promotion programs to cover the direct and indirect costs (opportunity costs of child labor) of education for poor children

Key facts on risks
- Unemployment: 28.3 percent; up to 38.0 percent in urban areas and Port-au-Prince
- Not earning adequate income: 80 percent of the rural poor are in households headed by a working person (61 percent in urban areas and 56 percent in Port-au-Prince)
- Gender: Women are at a disadvantage in the labor market

Key implications
- Urban areas: temporary income generation programs that also incorporate improvement of training and skills-building
- Rural areas: holistic programs for the extreme poor combining consumption smoothing and food security, productive projects, and access to financial capital
- Address specific constraints for women (care for children, the elderly or disabled)

Key facts on risks
- Lack of stable income: more than half of people over 65 are poor
- Lack of access to health care or other care

Key implications
- Targeted social pensions, solutions for access to health care or other care

138 Because of data constraints, the report focuses on nutritional and health status during childhood as well as inferences on early childhood development.

More generally, children under 5 years of age are particularly vulnerable to poor developmental outcomes because of multiple and complex risk factors related to poverty; this can have lasting effects throughout the life cycle. Lack of stimulation, low levels of parental education, and other risk factors such as maternal stress and depression can have lasting impacts on children's cognitive development.[139] Without adequate stimulation in early childhood, children may enter school ill prepared and are more likely to have poor academic performance, to repeat grades, and to drop out of school relative to children whose cognitive skills and overall school readiness are higher upon primary-school entry (Currie and Thomas 1999; Feinstein 2003; Heckman and Masterov 2007; Pianta and McCoy 1997; Reynolds et al. 2001). The data on child development in Haiti are limited, but, according to the 2012 DHS, 81 percent of children (2- to 14-year-olds) experienced physical punishment. A growing body of research indicates that children who have experienced physical punishment tend to exhibit more aggressive and antisocial behavior (Durrant and Ensom 2012). These findings call for a pro-poor early childhood development approach whereby social protection instruments help link families and parents to adequate services (for example, food security, health care, education, prevention of violence in the home).

School-age children (6–17 years old) from poor backgrounds are at a significant disadvantage in school attendance (chapter 3). For this age-group, the major risks are nonattendance or dropping out of school for several reasons, particularly money-related reasons or early pregnancy.

A nonnegligible share of children are involved in child labor, and many continue to serve as restavecs. A nonnegligible share of school-age children work and do not attend school. Restavec children who work as domestic servants outside their own households are difficult to identify in household survey data; some studies indicate the problem is significant. For instance, a 2009 study by the Pan American Development Foundation found that there may be as many as 225,000 restavecs in Haiti (Pierre et al. 2009).

Adults also face important risks in Haiti (chapter 2). Many adults (18–64 years of age) in Haiti face a risk of unemployment or lack of sufficient income, which reinforces the need to frame social protection more broadly as promotion because poor households need to be connected to skill enhancement and better opportunities to earn income. The principal risks facing adults are unemployment, underemployment, low and variable income, informality, working but earning insufficient income to cover basic needs (the working poor), unstable livelihoods, and lack of access to physical and financial capital.

Women are at a disadvantage in many respects (chapter 2). The unemployment rate is twice as high among women relative to men, but the disparity is greater in rural areas, where women are almost 3 times more likely to be unemployed than men. The relationship between unemployment and poverty varies by area.

139 Elevated levels of maternal stress during pregnancy have been found to be associated with poorer cognitive functioning among offspring at 1 year of age (Davis and Sandman 2010).

Overall and in other urban areas, the unemployed are split almost equally between the poor and the nonpoor, the majority of the unemployed in Port-au-Prince are nonpoor, and, in rural areas, the unemployed are primarily poor, particularly among women. In rural areas, woman-headed households have less access to agricultural inputs (such as seeds) which could lead to lower productivity, thereby creating a gender gap.

Youth face additional challenges in becoming active on the labor market. In urban areas, young people between the ages of 15 and 24 exhibit not only the lowest rates of labor market participation and employment, but also the highest rates of unemployment and informal employment (chapter 2).

The elderly (65 years and older) in Haiti are vulnerable to poverty and have to rely on support from their families. The main risk among the elderly is the lack of any pension (contributory or noncontributory scheme) or access to health care and the reliance on family and charity for survival (chapter 3). Given the dynamics of demography in Haiti, the elderly tend to be somewhat neglected in antipoverty programs. The elderly represent less than 5 percent of the poor; however, poverty is still prevalent among this group because more than half of people above age 65 are poor (see below).

Persons with disabilities are likely to suffer specific disadvantages. Although data limitations in the ECVMAS 2012 have led to an underreporting of disability, the ECVMAS analysis of education outcomes shows significant differences in terms of enrollment among children with and without disabilities.[140] This likely reflects the limited resources available for special education as well as the physical and social barriers to access (Beeston 2010). However, a better understanding is needed of the types of disabilities children have and the nature of the related barriers.

3. Alignment of social protection, poverty, and risk analysis

This section examines the extent to which the social protection needs presented above are addressed in Haiti today. It assesses the extent to which the current mix of programs fit with the poverty and vulnerability profiles of Haitians. What are the recent trends in social protection? Are they moving in the right direction? Is the performance of social protection policies in terms of coverage, equity, and adequacy appropriate? The section first presents key findings from the ECVMAS data and then brings together the available evidence based on recent assessments of social protection sectors in Haiti, interviews and discussions with stakeholders, and administrative data.[141]

140 While only 2 percent of children aged 6–14 are identified as physically or mentally disabled in the ECVMAS 2012 data, these children are 50 percentage points less likely to be in school, meaning only 41 percent are in school (Adelmann 2014).

141 Field interviews were conducted with a representative sample of donors, government agencies, and international and local NGOs in October 2013. The findings and analysis presented in this report also benefited from a consultation workshop, "Strengthening Social Protection and Promotion in Haiti," in May 2014.

Key findings based on ECVMAS data

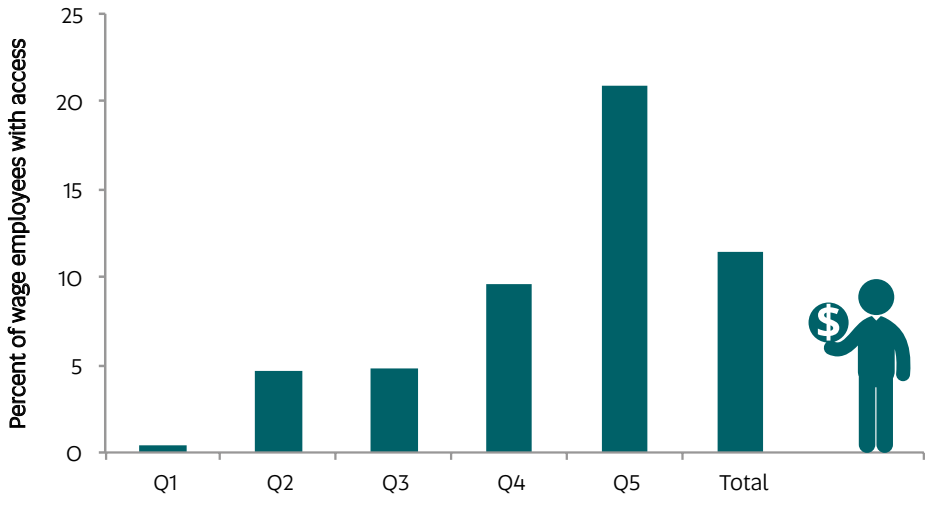
Fact 1: Access to social security (contributory programs) is out of reach for most Haitians, especially the poor, leading to a lack of protection in old age or in case of sickness or disability.

Only wage employees working in the formal sector have access to the limited social insurance schemes existing in Haiti. Social security in Haiti covers formal private sector wage-earning employees (administered by the National Security Office for Old Age and the Office of Workers Compensation Insurance, Sickness, and Maternity) and public civil servants (administered by the Direction of the Civil Pension and Self-Insurance Program). Among the active population, that is, those in the labor force, employees in wage employment constitute only one-fifth of the total, which corresponds to less than 10 percent of the population.

Because of high levels of informality, only 11 percent of wage workers have access to social security, primarily concentrated in the upper quintiles of the population.[142] Among wage workers, only a small share (11 percent) have access to social security, while the overwhelming majority do not (figure 5.2). Access to social security is greatest among individuals in the richest quintile of per capita consumption. Two-thirds of employees with social security are in the top quintile, while only 5 percent are in the second poorest quintile, and virtually no one in the bottom quintile has access. Given the prevalence of informality in rural areas, access is concentrated in urban areas, particularly in Port-au-Prince.

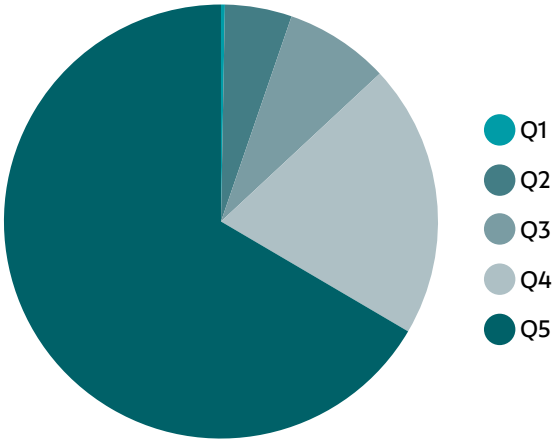
Figure 5.2. Access to social security by quintile of per capita consumption

a. Access by quintile, %



142 Individuals employed as wage workers who contribute to social security or receive social security benefits, such as paid sick leave or maternity or paternity leave, are considered here to have access to social security. The survey questions used for this analysis refer to individual employees.

b. Extent of access by quintile



Source: *ECVMAS 2012; World Bank and ONPES calculations*

Access to health insurance through employment in a firm registered with the Office of Workers Compensation is also low. Only a small percentage (less than 4 percent) of the Haitian population has access to health insurance administered by this agency. Most households with the insurance are in the highest consumption quintile and live in the Metropolitan Area. The insurance is only available to employees of formal firms and their families, and the social contributions by both employers and employees and the coverage are voluntary (Cross et al. forthcoming).

Because they lack access to contributory programs, poor Haitians have limited protection against poverty in old age or in case of disability or sickness. Because the access to social security is limited, few people are eligible for contributory pensions when they retire and those who are eligible tend to be much better off. ECVMAS 2012 data show that only 2.6 percent of the elderly (aged 65 years and older) receive pensions (old age, disability), and the majority are nonpoor. Pension beneficiaries overwhelmingly reside in urban areas (92.0 percent), and almost half (43.2) percent live in the Metropolitan Area. These results are consistent with the fact that access to social security is limited in rural areas.

Fact 2: Social assistance coverage is alarmingly low and well below the level of identified needs, particularly among young children.

Only about 8 percent of the Haitian population received noncontributory social assistance benefits in 2012.[143] According to ECVMAS 2012 data, the benefits included scholarships, food aid, and other transfers (figure 5.3). (But see box 5.1 for the limitations of ECVMAS 2012 data.) Overall coverage, defined as the share of the population receiving benefits[144], is slightly higher in rural areas, primarily because of the larger share covered

143 Preliminary findings from ECVMAS 2013 also confirm that overall coverage is on the order of 16 percent for social protection and about 13 percent for social assistance, not including assistance from NGOs and religious organizations, the coverage of which is estimated at about 5.5 and 0.8 percent of the population, respectively.

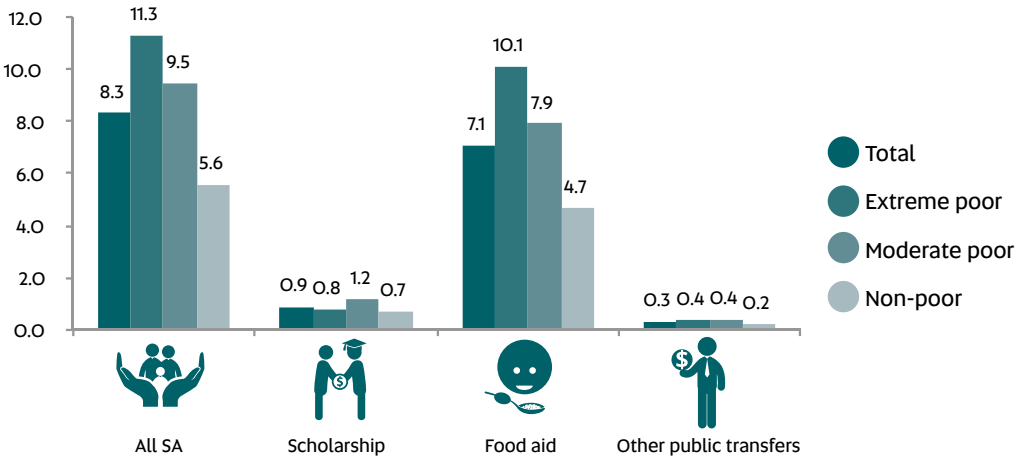
144 Both direct and indirect beneficiaries are taken into account, i.e. if one member of the household receives social protection benefits, all members of the household are considered beneficiaries.

by food aid (8.8 percent compared with 5.3 percent in urban areas).[145] More than 60 percent of food aid beneficiaries reside in rural areas, while the beneficiaries of scholarships and other transfers are slightly more likely to be in urban areas.[146]

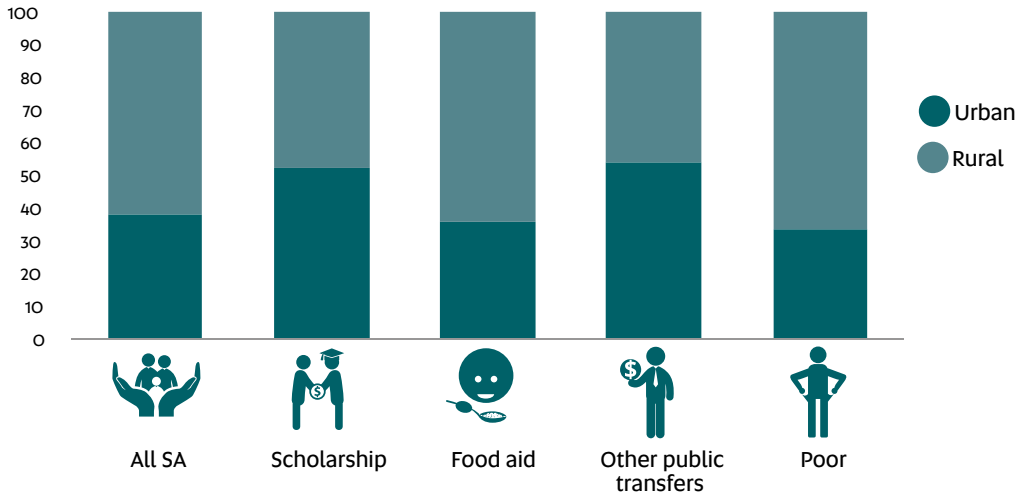
Figure 5.3. Coverage of social assistance programs and distribution of beneficiaries.

Population covered, percent

a. Total and by poverty status



b. Beneficiaries, urban vs rural



Note: Direct and indirect beneficiaries. Source: ECVMAS 2012; World Bank and ONPES calculations

145 In contrast, more than half the population benefits from remittances, which arguably play the role of an informal safety net in Haiti. (See the Shared prosperity background paper [2014], Haiti Poverty Assessment, World Bank, Washington, DC.)

146 The types of assistance discussed here are more permanent and do not cover the emergency humanitarian assistance that was provided after the 2010 earthquake. A retrospective module in ECVMAS 2012 shows that a large share of the population (about 70 percent) received some humanitarian assistance.

Box 5.1. Methodology and limitations of ECVMAS data on social protection

Data on the coverage and performance of social protection programs are limited in Haiti, and ECVMAS provides an important baseline; however, it is not without limitations. Social protection programs are highly fragmented and often small in scale and coverage. Thus, household survey data do not capture many beneficiaries of such programs. If the coverage is low among the general population, there would be few observations in a nationally representative survey, thereby limiting the analysis possible with the data.

The main cash transfers or benefits identified in the ECVMAS 2012 survey are pensions (old age, disability, and so on), scholarships, and other transfers (food aid, survivor benefits, and so on). Only 114 individual-level observations report receipt of at least one of these social protection benefits. There are 309 households that report receiving food aid from the government, NGOs, or associations (table B5.1.1). The small number of observations represents a limit on the possible conclusions, especially for specific benefits, and, overall, the analysis should be taken as indicative and reflective only of the programs discussed. Most EDE PEP programs are not likely to be reflected in the statistics, with the possible exception of food aid. Similarly, other (nonfood) assistance received from NGOs is also not included.a

Table B5.1.1. Sample and population sizes for social protection variables in ECVMAS 2012

	Sample size			*Population*		
Indicator	Households	Individuals	Recipients	Households	Individuals	Recipients
All observations	4,930	23,555		2,260,110	10,805,830	
All social protection	396	1,998	114	198,905	957,178	50,194
Pensions	32	150	35	14,212	63,435	16,754
All social assistance	366	1,854	81	185,813	897,601	34,560
Other transfers	16	76	18	7,347	35,199	8,078
Scholarships	42	235	63	18,436	97,231	26,482
Food aid	309	1,547	1,547	160,461	766,895	766,895
All remittances	3,440	16,088	3,440	1,586,283	7,419,728	1,586,283

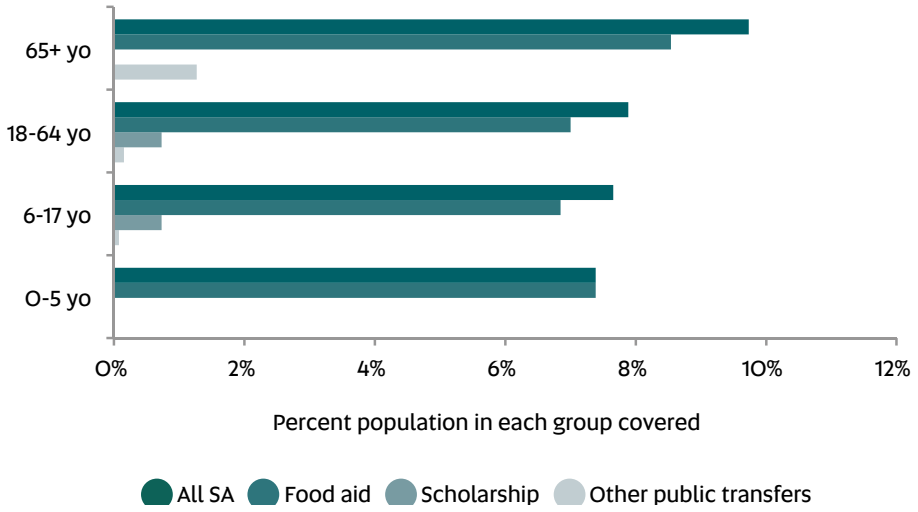
Source: ECVMAS 2012; World Bank and ONPES calculations Note: The sample size columns show the number of households, individuals, and recipients of social protection programs in the survey. The population columns show the number of households, individuals, and recipients of social protection programs, expanded to the population through the use of expansion factors.

a. *Many other programs have been shown to have limited coverage, with a few exceptions, such as the school meal program (the National School Canteens Program) or PSUGO (Lamauthe-Brisson 2013; Lombardo 2012). In 2013–14, the school meals program and its partners covered almost 0.9 million students (according to the Ministry of Education and Vocational Training), and PSUGO had a coverage of around one million students (Lamauthe-Brisson 2013).*

While social assistance coverage appears to be progressive, it varies somewhat by program type. About 11 percent of the extreme poor receive some social assistance benefits, compared with 10.5 percent among the moderate poor and 5.6 percent among the nonpoor. While the coverage of food aid is lower among the nonpoor, it is less so for scholarships and other transfers.

The social assistance coverage of various population groups is not even; young children are underrepresented among social assistance beneficiaries, which is a concern given the vulnerability of this group. Children under 5 have the lowest coverage: only 7.4 percent of all children under the age of 6 benefit (indirectly) from social assistance benefits (figure 5.4). This is a particular concern given that this group suffers from the highest poverty rates (see above). While the coverage of school-age children is also quite low, these children are much more likely to benefit from programs targeted at schools, such as school feeding programs or PSUGO, which are not captured by the survey.

Figure 5.4. Coverage of social assistance programs, by age-group



Source: *ECVMAS 2012; World Bank and ONPES calculations*
Note: The figure shows direct and indirect beneficiaries.

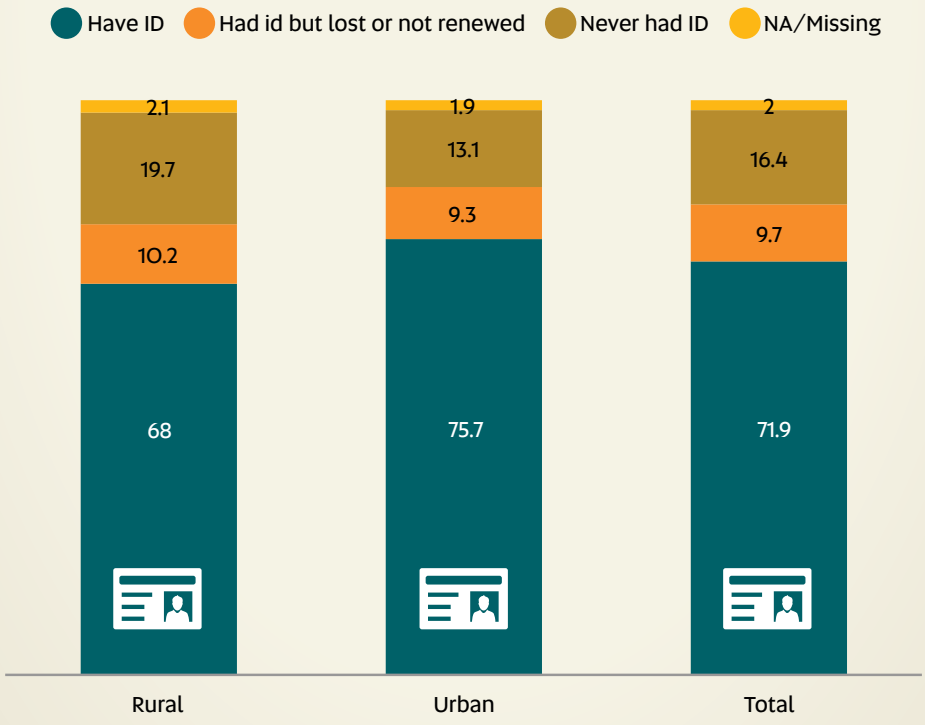
Limited access to a national identification document (CIN) can be an obstacle in gaining access to social protection and other services. Analysis of ECVMAS data also points to the fact that access to CIN is more limited in rural areas and among the poor, especially among female heads of households, who are most likely be the ones seeking social assistance or services (Box 5.2).

Box 5.2. Limited access to a national identification document (CIN) can be an obstacle in gaining access to social protection and other services

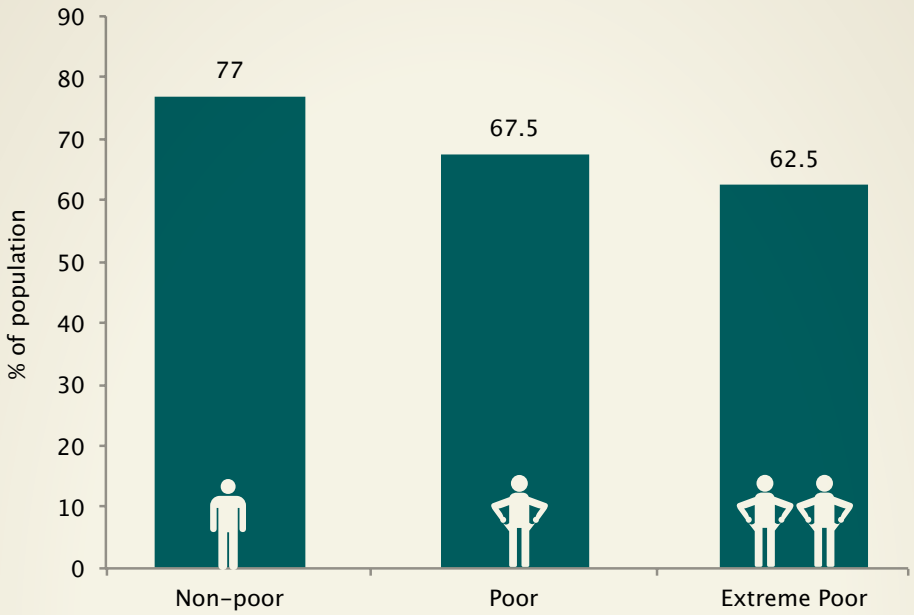
Access to a national identification document (CIN) is more limited in rural areas and among the poor, especially the extreme poor in the Centre and Nord departments.[a] Among adults, 72 percent have a valid CIN, while almost 16.5 percent of adults have never had a CIN (the remaining 10 percent have had a CIN, but either have lost it or it was not renewed after expiration) (figure B5.2.1). This share is higher in rural areas, where almost 1 in 5 adults has never had a CIN, and for the poor: while 77 percent of the nonpoor have CIN, the share is 67.5 and 62.5 percent among the moderate and extreme poor, respectively. The poor in the Centre and Nord departments have the least access to CIN, since only 55 and 57.5 percent of the extreme poor have a valid CIN, respectively.

Figure B5.2.1. Availability of national ID among adults 18 years and older

a. by residence area



b. By poverty status



Source: ECVMAS 2012; World Bank and ONPES calculations.

Heads of poor households are less likely to have a CIN, particularly if they are women, with important consequences for household access to social protection programs. While only about 8 percent of all heads of households have never had a CIN, 67 and 73 percent of heads of extreme poor and poor households have a CIN, against 83.6 percent among nonpoor households. Furthermore, while woman heads of households are less likely to have a CIN than man heads of households, the gap is much larger for poor women. Among the extreme poor households, for example, only 62 percent of woman heads have a CIN, while 70.7 percent of man heads have a CIN. In comparison, among the nonpoor, 78.3 percent of woman heads and 83.2 percent of man heads of household have a CIN. Because heads of households are more likely to be the ones applying for services, including social aid or accessing other forms of assistance, having a CIN is especially important for the heads of poor households.

a. ECVMAS 2012 has a question on whether those above 10 years old have a CIN, but only those 18 years and above are eligible for a CIN; hence, the analysis is limited to adults 18 years of age and older.

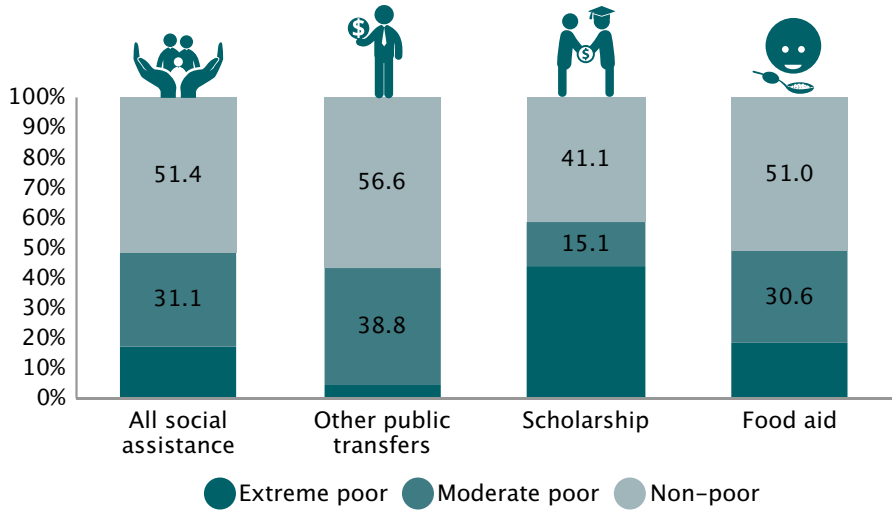
Fact 3: The targeting of social assistance benefits could be improved because a large share accrues to the nonpoor. *As much as half of social assistance benefits accrue to the nonpoor.*[147] Among social assistance benefits, as much as half go to the nonpoor (figure 5.5). While this may be somewhat puzzling given that the

147 This share is reflective of only the programs captured in ECVMAS. It is not currently possible to estimate what share of other assistance provided by the government or NGOs goes to the poor.

share of nonpoor beneficiaries is less than half, the size of the transfers tends to be bigger among better off quintiles, leading to a much more regressive distribution of benefits.[148] This is especially the case in other transfers, but also holds for food aid and, to some extent, for scholarships.[149]

Another issue is that some government subsidies, such as gasoline subsidies, are highly regressive; as much as 95 percent of the subsidy accrues to the richest quintile.[150]

Figure 5.5. Incidence of social protection benefits, by quintile of per capita consumption and poverty status



Source: *ECVMAS 2012; World Bank and ONPES calculations*
Note: The figure shows direct and indirect beneficiaries.

Fact 4: Adequacy of social assistance benefits is low.

The value of most social assistance benefits (cash or food) is small and, hence, contribute relatively little to the consumption of beneficiaries. With the exception of other transfers, which are larger in absolute terms, social assistance benefits are much less generous (figure 5.6, chart a). Scholarships, albeit small in absolute value, contribute a large share (almost 33 percent) to the consumption of the extreme poor (figure 5.6, chart b). Overall, however, social assistance benefits contribute only 11 percent to this consumption. The contribution to consumption tends to fall among the moderate poor and the nonpoor because their consumption is larger compared with the value of benefits; so, the benefits are relatively more important among the poorest.

148 Households are ranked according to consumption, net of social assistance transfers; so, this is not simply a result of households moving up the quintiles merely because of the transfers.

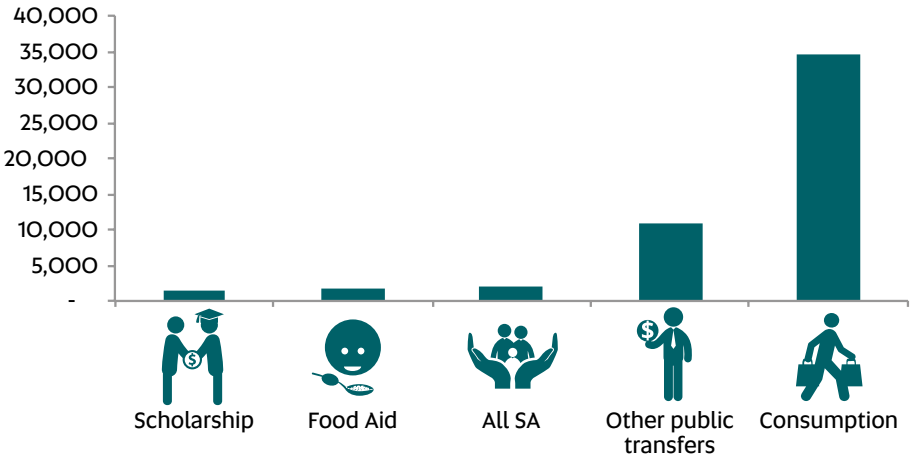
149 The number of observations for other transfers is small; so, these estimates are less reliable.

150 Based on an analysis of fuel subsidies currently being carried out by the World Bank.

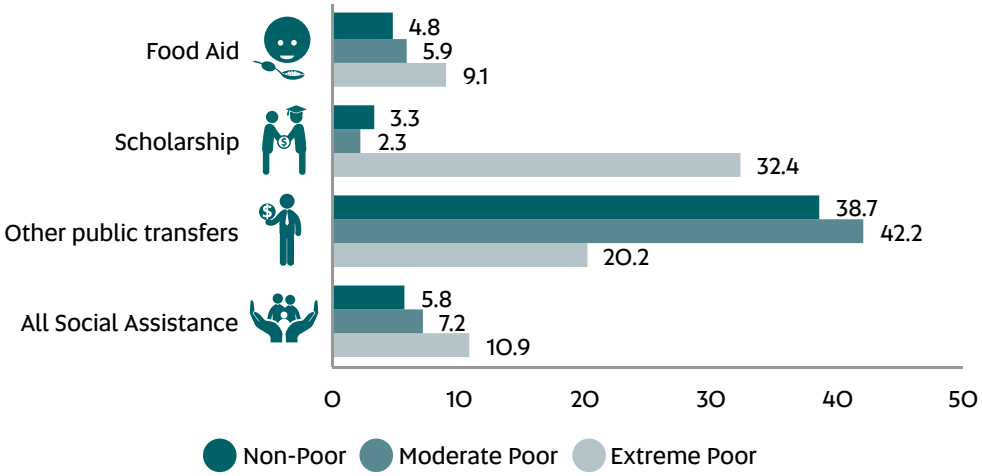
The groups with the highest poverty receive a disproportionately small share of the benefits.

Figure 5.6. Benefit amounts and the contribution to the consumption of beneficiaries

a. Average annual per capita transfer



b. Average share of benefits in consumption by benefit type



Source: ECVMAS 2012; World Bank and ONPES calculations Note: The figure shows beneficiary households only. Households are ranked into quintiles on the basis of per capita consumption, net of social assistance transfers.

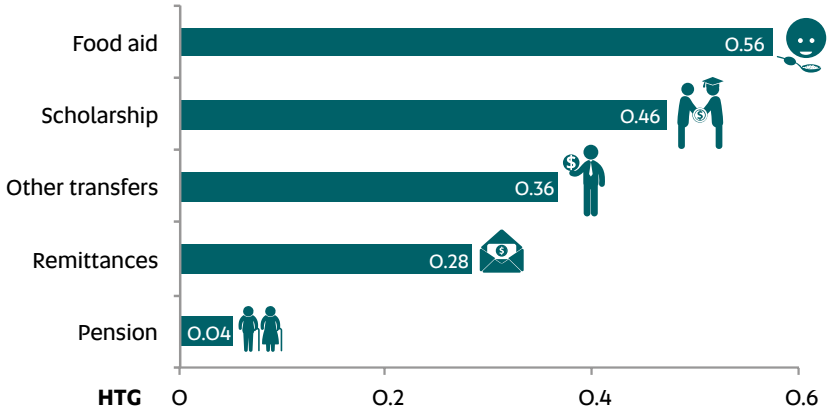
Fact 5: Social protection programs have limited impact on poverty and inequality because of the low coverage and limited value. For instance, without social protection transfers, including pensions, the poverty headcount would be less than half a percentage point higher relative to the current poverty rate. In contrast, without remittances, the poverty rate would be almost 4.5 percentage points higher: 63 percent instead of 58.5 percent.

Fact 6: Some types of programs perform better than others in reducing the poverty gap. Despite the overall low impact, some programs are able to reduce the poverty gap to a greater extent than others. The cost-benefit ratio, or the

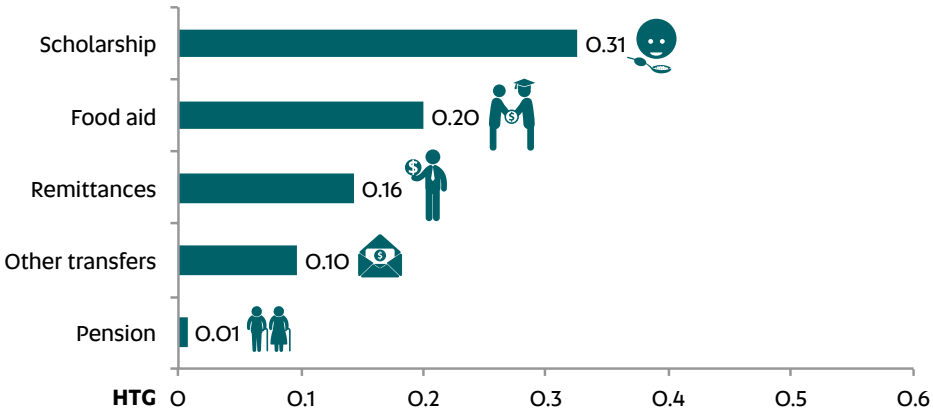
reduction in the poverty gap obtained for each G 1 spent on the program, varies greatly by transfer type and the degree of poverty. Among the moderate poor, for instance, food aid and scholarships reduce the poverty gap by, respectively, about G 0.56 and G 0.44 for each G 1 transferred to households (figure 5.7). Among the extreme poor, scholarships are more effective than food aid. Because of the characteristics of the beneficiaries, pensions are not effective at reducing the poverty gap.

Figure 5.7. The cost-benefit ratios of various social protection transfers

a. Moderate poor



b. Extreme poor



Source: *ECVMAS 2012; World Bank and ONPES calculations Note: The figure shows the reduction in the poverty gap obtained for each G 1 spent on the programs.*

Insights from other complementary sources: the underlying factors of the inadequate social protection in Haiti

Given the ECVMAS data limitations and the need for a more comprehensive analysis of social protection program provision, the examination of other relevant sources of information is useful. These include previous analyses of the social protection system in Haiti (UNECLAC 2013; UNICEF 2012); a preliminary analysis of public expenditures (as part of the ongoing World Bank Public Expenditure Review); stakeholder interviews, and a review of the recent strategy developed by the government to accelerate poverty reduction, the *Plan d'Action pour l'Accélération de la Réduction de la Pauvreté* (PAARP), which encompasses the EDE PEP platform, the umbrella for social protection programs. The key conclusions are summarized as follows.

First, complementary sources of information corroborate the ECVMAS findings regarding the lack of adequate social protection coverage given the needs of the population. Recent studies confirm that there is an underprovision of social protection in Haiti (Lamauthe-Brisson 2013; Lombardo 2012). Considering the high level of poverty and the poor social indicators, which are exacerbated by the high risk of economic shocks or natural disasters, the poor have limited access to public support. Most assistance continues to be supplied through remittances or support from churches, other nongovernmental actors, and donor projects. Existing programs are characterized by limited coverage, are often ad hoc, cover small geographical areas or narrowly defined sets of beneficiaries, and are scattered across numerous institutions.

Second, the complementary sources of evidence shed light on the underlying interrelated factors behind the inadequate social protection provision in Haiti.

*The weak implementation capacity characteristic of a fragile country such as Haiti is exacerbated by the multiplicity of a*ctors operating in social protection, including numerous donors and NGOs. Following the earthquake, the number of humanitarian organizations on the ground increased dramatically, and, despite coordination efforts (the United Nations–led topical clusters), there was a multitude of simultaneous interventions in the same geographical areas, sometimes benefiting the same households.

*The postearthquake period has also made the problems more evident: the multiplicity of actors, the lack of coordination mechanisms, and the lack of a common targeting appro*ach. The development of an overarching social protection strategy has also been more difficult during the postdisaster period. Such a strategy would have allowed, at a minimum, the identification of priorities and greater clarity in appropriate institutional roles, thereby reducing fragmentation and duplication within the government and across donors and NGOs.

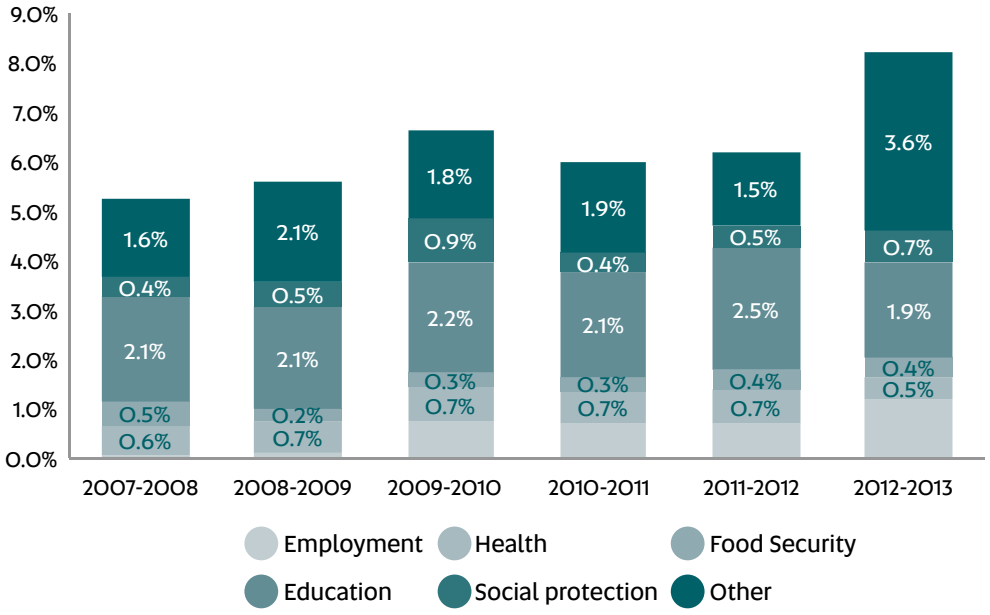
The focus has primarily been on emergency response rather than on building the foundations of a long-term social protection system, such as a solid targeting

mechanism, an integrated information system, and a vision of the types of social protection interventions necessary to meet the needs of the people.

The majority of recent policies and programs has focused more on the supply side of public provision in education (PSUGO), health care, infrastructure, or microcredit, and has neglected the development of the abilities of the poor and vulnerable to access these facilities through social protection interventions (Lombardo 2012). Some observers have regretted the lack of social protection instruments such as conditional cash transfers that could effectively promote investments in health care and education by poor households.

Government spending on social protection continues to be low.[151] Data on expenditure related to poverty reduction activities suggest that social protection spending is a relatively small share of overall spending. Social protection spending peaked at about 0.9 percent of GDP in 2009–10, but has fallen since (figure 5.8). However, since 2009, the spending on promoting employment has been around 0.7 percent of GDP and jumped to 1.2 percent of GDP. The expenditure on food security increased from about 0.3 percent of GDP between 2009 and 2011 to 0.4 percent in 2011–12. Still, combined, these three areas continue to be dwarfed by spending on infrastructure (power supply, transport) and access to basic services (sanitation, drinking water).

Figure 5.8. Poverty-related spending as a share of GDP



Source: World Bank and ONPES calculations based on data of the Direction des Etudes et de la Programmation Budgétaire. Note: Social protection expenditure includes public pensions, health insurance and social assistance activities from MAST and MCFDF. It excludes EDE-PEP spending, PSUGO and PNCS, as well as non-public social insurance schemes. Other includes power supply, transport, sanitation, equipment, housing, and access to drinking water. It does not include extrabudgetary expenditure.

151 The Public Expenditure Review under way will help capture the spending of donors and NGOs that is not captured here.

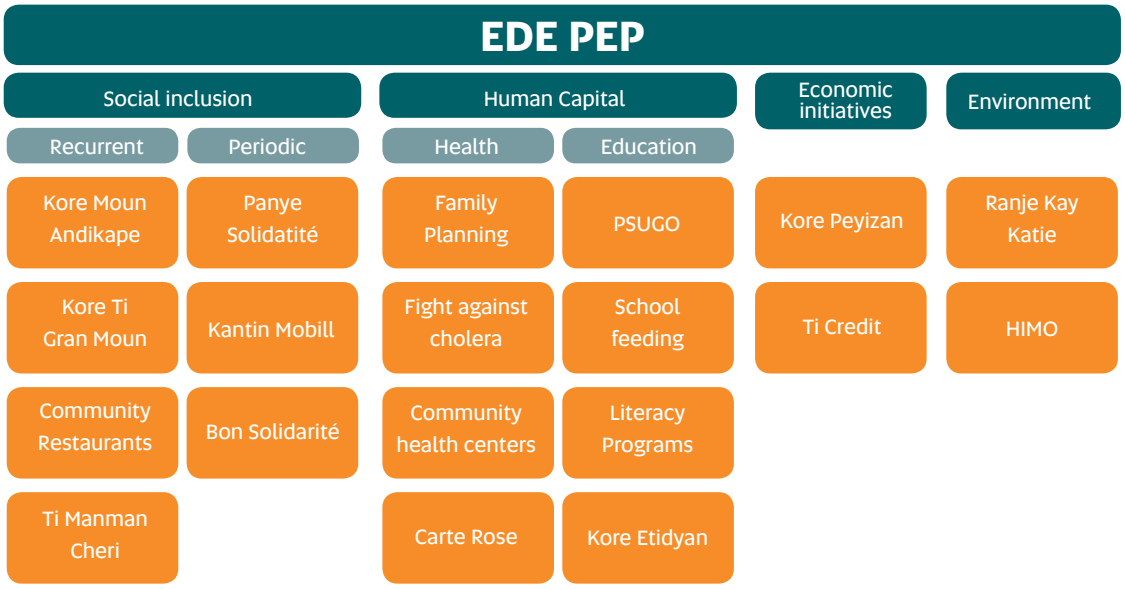
Recent trends in social protection: encouraging developments

Despite the challenges, there have been some encouraging recent developments in social protection. This includes efforts to establish a national social protection strategy, which has started by laying the foundation of the key blocks needed for a social protection system.

In recent years, the government of Haiti has taken several steps to develop a national social protection strategy. The government's Action Plan for National Recovery and Development of Haiti of March 2010 views the establishment of a social protection system as a critical factor in the recovery and growth of the country. Since then, several initiatives have been launched, such as the fight against hunger, the extreme poverty initiative Aba Grangou and EDE PEP. In May 2014, the Prime Minister's Office launched PAARP, which is organized around EDE PEP and identifies the elements underpinning the implementation of a social protection system, such as a national targeting system, a unique beneficiary registry that can be used in various social programs, and an integrated service delivery model aimed at communes through a network of multisectoral agents and local coordination in social protection.

EDE PEP has recently emerged as the framework for several government flagship programs. The goal of EDE PEP is to protect the vulnerable living in extreme poverty throughout the life cycle to ensure long-term investment in human capital and to provide opportunities to overcome the condition of extreme poverty. The program is implemented primarily by FAES, with some programs under the Ministry of Social Affairs and Labor and the Ministry of Public Health and Population. It is based on four complementary pillars: (1) social inclusion, (2) the development of human capital, (3) economic inclusion, and (4) the development of a decent environment (figure 5.9).

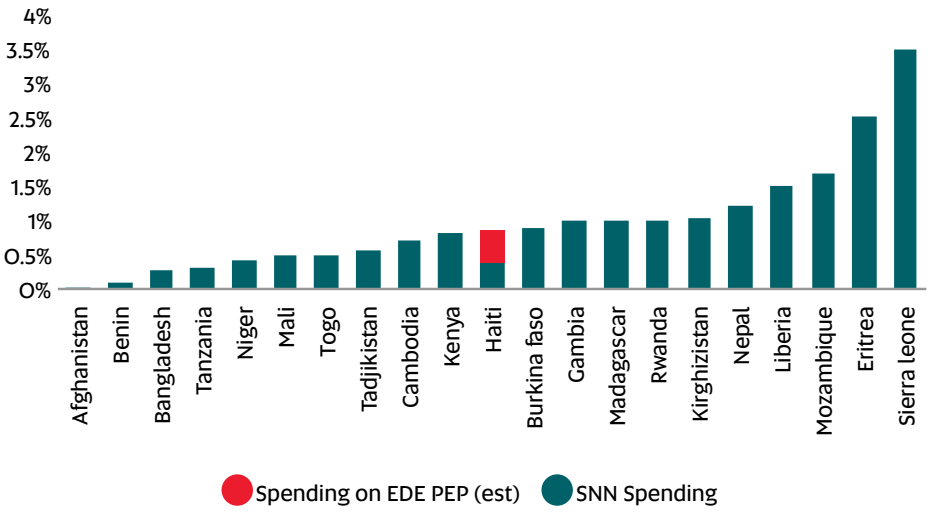
Figure 5.9. Main programs under EDE PEP



Source: FAES 2014.

Because of the expansion of EDE PEP programs, spending on social safety nets has recently grown in comparison with the corresponding spending in other low-income countries, though it is still low.[152] Government spending on social safety nets in 2012–13 is estimated at 0.84 percent of GDP (figure 5.10).[153] Budgetary expenditure on social safety nets by the Ministry of Social Affairs and Labor and the Ministry of Women's Affairs and Women's Rights represents only 0.4 percent of GDP. However, the recent expansion of EDE PEP programs, estimated at 0.5 percent of GDP in 2012–13, has nearly doubled the spending on safety nets, though it is still low relative to the corresponding spending in other low-income countries. Financed through extrabudgetary sources (Petrocaribe), this increase in spending suggests that one should take a closer look at the effectiveness of these new programs in realizing their objectives and improving their targeting to ensure they reach the most vulnerable.

Figure 5.10. Social safety net spending as a share of GDP, low-income countries



Sources: *Haiti: World Bank calculations based on Ministry of the Economy and Finance and FAES data; other countries: World Bank 2014. Note: The figure shows social safety net spending in various years (2009–11). For Haiti, the data correspond to poverty-related social protection expenditure in 2012–13. The expenditure on EDE PEP is estimated.*

The government is engaged in the development of a national targeting system that will be coupled with a social registry of beneficiaries to improve the efficiency and effectiveness of social protection programs. This is necessary

152 Because of the fragmentation of social protection programs across various institutions and agencies within and outside the government, collecting comprehensive data on spending is challenging. Borgarello (2009) finds that total spending on social safety nets was only 0.7 percent of GDP in 2009, excluding fuel and electricity subsidies, and 2.4 percent, including them. This includes spending through the state budget and multilateral and bilateral agencies.

153 Includes budget expenditures of the Ministry of Social Affairs and Labor and the Ministry of Women's Affairs and Women's Rights and extrabudgetary expenditure on EDE PEP.

because no common targeting approach exists, and the targeting of government programs varies by program and may not be systematic. A technical committee to develop a national targeting tool has been created under the leadership of the Ministry of Social Affairs and Labor, and a proposal for a national targeting tool was approved by the committee in early 2014.[154] This tool needs to be tested in the field, and it will undergo a broader consultation and validation process, including with actors in other sectors such as health care and education. In the short term, the tool will be used primarily in donor-supported programs that fall outside the scope of EDE PEP, but may eventually be used in EDE PEP programs.

The government also plans to start consolidating public social programs that have similar objectives and more effectively coordinating donor programs. The PAARP envisions better coordination and consolidation among programs that are currently duplicated across various institutions. For example, Kore Moun Andikape is a cash benefit for the disabled and the elderly that is currently administered separately by FAES and the Social Assistance Fund under the Ministry of Social Affairs and Labor, with different benefit levels and eligibility criteria. Furthermore, the government is also seeking to coordinate donor programs to fill the gaps identified in the plan more effectively (for instance, coverage gaps).

PAARP envisions the use of a network of agents to accompany vulnerable families and coordinate at the communal level; an example is the Kore Fanmi project. This model aims to improve the efficiency of social service delivery in Haiti. Kore Fanmi is an initiative of the government and is supported by the United Nations Children's Fund and the World Bank. It aims to lay the foundation for a cost-effective and sustainable strategy for integrated social service delivery by providing a common platform for the coordination of social interventions by all service providers at the local level. It is being implemented by FAES in partnership with United Nations agencies, especially the United Nations Children's Fund and the World Food Programme. The initiative serves as the link between demand and supply and is helping to lay the groundwork of a social protection system (box 5.3). In addition, Kore Fanmi has also been able to play a role in emergency response. In the case of flooding in one commune and acute food insecurity resulting from drought in another, Kore Fanmi was able to use information from community agents to identify affected families, request an immediate response, and coordinate the delivery of assistance to the appropriate beneficiaries

154 This committee includes representatives of FAES and major donors, such as the United Nations Children's Fund, the United Nations Development Programme, the U.S. Agency for International Development, the World Bank, the World Food Programme, and international NGOs such as CARE and Action Contre la Faim. The committee sought to develop a targeting tool that would respond to the specific needs of two major programs, Kore Fanmi and Kore Lavi (a nutrition and food voucher program), as well as serve the country more broadly with a national tool.

Box 5.3. Kore Fanmi

Kore Fanmi seeks to improve the access and efficiency of social service delivery in the rural areas of Haiti. The approach involves direct family accompaniment and support for the basic human rights of families.

Kore Fanmi relies on a network of multisectoral community agents who work directly with and are accountable to a specific set of families. These agents deliver direct life-saving services and essential commodities (for example, nutrition supplements, vaccinations, mosquito nets, and soap), promote positive behavioral change, and refer families to the available social services.

Before initiating family support activities, the program undertakes a mapping exercise, which is an inventory of the services available to the population in the target area through various service providers. This inventory, called the opportunity map, is used as a basis for referral. A tailored family development plan for each family that outlines a set of life objectives is created based on a socioeconomic survey of each family's vulnerabilities. The type and intensity of family coaching vary depending on the needs and vulnerabilities of each family.

Kore Fanmi uses a dynamic and integrated management information system to analyze each family's conditions and vulnerabilities, propose key actions, and track progress.

Thus, Kore Fanmi creates a mechanism to reach poor and vulnerable families, generates an objective way of identifying the most vulnerable families and analyzing their needs, coordinates the provision of services in municipalities, and strengthens the capacity of local governments to oversee the provision of services within their jurisdictions.

Recent trends in social protection: persisting challenges

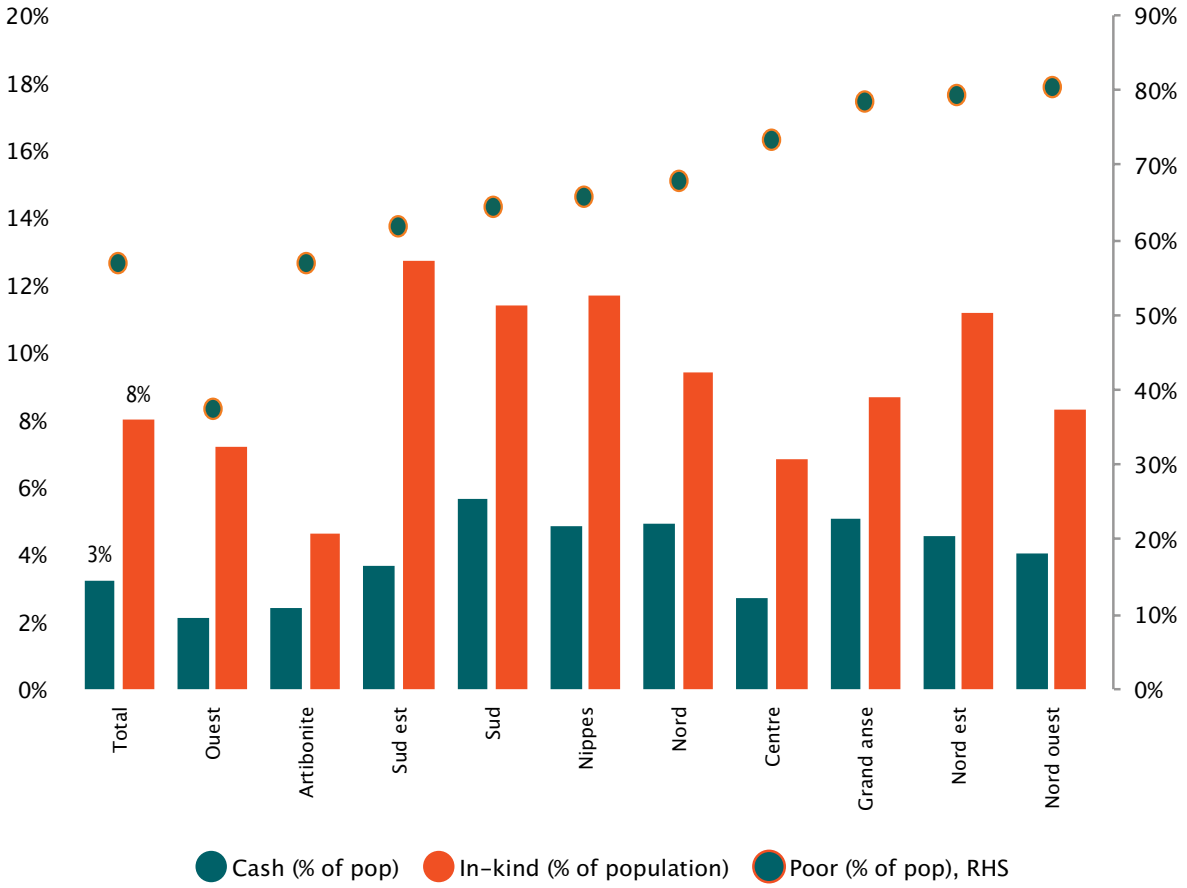
Despite the recent progress, significant challenges remain, especially with regard to closing the coverage gaps affecting certain population groups, such as young children.

Given the limited coverage of social protection, EDE PEP seeks to reduce coverage gaps. Coverage is still narrow in the regions with the highest poverty rates. While it is not possible to gauge the coverage of EDE PEP programs using ECVMAS, administrative data available from FAES shed light on the extent of coverage over the previous two years. The coverage of in-kind programs, such as mobile canteens or the distribution of food kits, is much wider than that of cash transfers (figure 5.11). Cash transfers cover about 3 percent of the population, while in-kind programs, excluding food distribution, cover as much as 8 percent.[155] But even in-kind programs have limited coverage in the departments with the highest poverty rates (Centre, Grand'Anse,

155 Information on unique beneficiaries is not available; so there may be some double counting.

Nord-Ouest). Estimating the coverage of food distribution is problematic, but data show that, by far, the majority of meals are distributed in the Ouest department (in Port-au-Prince, in particular), where poverty rates are the lowest.

Figure 5.11. Coverage of EDE PEP programs, by type and by poverty rate and departmen, 2012-13



Source: World Bank calculations based on data of FAES and ECVMAS 2012. Note: Coverage is calculated using administrative data and capture only direct beneficiaries of the following programs cash and in-kind transfers: Ti Manman Cheri, Kore Etidyan, Kore Moun Andikape, Bon Solidarite, Bon Dijans, Panye Solidarite, Kore Paysan (seed), Kore Paysan (fish). It does not include PNCS, PSUGO and Kantine Mobile.

EDE PEP proposes a life-cycle approach, but seems to lack sufficient focus on early childhood. The plan for the reduction of extreme poverty includes a few programs in the early childhood window; however, most of the interventions (community restaurants, disaster response programs, and health interventions) are insufficient and not tailored to the needs of this age-group (table 5.1). For example, health insurance is available only in urban areas and is contributory; so, it is unlikely to reach the most vulnerable. Meanwhile, community pharmacies do not focus on preventive health care and malnutrition, which is a critical priority among young children.

Table 5.1. Alignment of EDE PEP programs with risks and vulnerabilities across the life cycle

Life-cycle stage	*Risk*	*Projects under EDE PEP*	*Planned number of beneficiaries (2016)*
1. Early childhood	Malnutrition	unaddressed	—
	Mortality	unaddressed	—
	Poor child development	unaddressed	—
2. School-age childhood	Low school enrolment and drop-out	PSUGO	1,500,000
		School feeding	1,200,000
		Ti Manman Cheri	100,000
	Child labor/Restavek	unaddressed	—
3. Youth	Unemployment	unaddressed	—
	Poor educational outcomes	Kore Etidyan	30,000
4. Adulthood	Unemployment, lack of access to credit	Ti Kredi	6,500
	Female unemployment	unaddressed	—
	Low income, insecure livelihoods	Kore Peyizan	100,000
	Unemployment, low income	HIMO (public works)	—
	Poor living conditions, poor sanitation	Ranje Kay Kartier/ Banm Lumie- Banm Lavi	25 districts
	Illiteracy	Alphabétisation	150,000
5. Old age	Low income	Kore Ti Gran Moun	30,000
6. All cycles	Disability	Kore Moun Andikape	30,000
	Malnutrition and food insecurity	Resto Communautaire	150,000
	Natural disaster/emergency	Panye Solidarité	600,000
		Kantin Mobil	1,000,000
		Bon Dijans	—
	Disease/lack of access to health care	Campaign for prevention of cholera	—
		Community health centers	—
		Carte Roz	2,500,000
	Inadequate living conditions (lack of access to sanitation, drinking water or waste management)	Ranje Kay Kartier/ Banm Lumie- Banm Lavi but insufficient	—
	Violence	unaddressed	—

Source: World Bank, based on data of FAES. Note: — = not available.

Additionally, considering the main risks affecting each stage of the life cycle, there are discrepancies between programs and needs not only in terms of the risks addressed, but also in terms of the scope of the programs. For example, malnutrition is a major risk affecting children under 5; however, under the new strategy to reduce extreme poverty (based on the EDE PEP framework), there is little effort directed at preventing malnutrition or proactively improving children's development potential early in life. While child labor and restavecs are considerable phenomena, the risks are not addressed by EDE PEP programs. Half the people above age 65 are poor, and the coverage of contributive pensions is limited. Yet, the non-contributory cash transfer program will only be able to cover 30,000 people.

Risks related to poor living conditions, that is, related to health or disaster vulnerability, are not addressed under the current strategy. The programs under the fourth pillar of EDE PEP (the development of a healthy environment and fostering access to decent lodging) have limited coverage. For example, *Ranje Kay Kartier* and *Banm Lumie-Banm Lavi*, which seek to improve urban neighborhoods, are only expected to cover 25 neighborhoods. Public works are also included under the pillar, but it is not clear what they will cover.

The gap between current programs and needs may still be bridged by rethinking the design of some of the flagship programs. For example, the target groups could be expanded to include young children, and the benefit mix could be modified to support human capital formation more effectively.

4. Key messages

In the face of large and entrenched poverty rates and numerous vulnerabilities, few of the poor have access to social protection or formal safety nets. First, access to social security is out of reach for most Haitians, particularly the poor. Second, only a small share of the population benefits from social protection. Because of narrow coverage and limited generosity, social protection benefits are inadequate and play only a marginal role in reducing poverty and inequality and in improving opportunities among the population.

The groups with the highest poverty—rural residents and children, especially young children—receive a disproportionately small share of the benefits.

The costs generated by this lack of effective protection for the poorest households are high, especially for future generations, and lead to missed opportunities in the formation and accumulation of human capital. These costs are borne principally by children; this is of great concern because the consequences can become irreversible if children do not obtain proper support in their first thousand days, if they do not receive early childhood stimulation, or if they are kept out of school for too long. ECVMAS data show that children had the lowest social protection coverage, despite the high poverty rates and risks they face.

On the positive side, the recent development of public policy is focusing on strengthening social protection to accelerate poverty reduction. The government's

Only 11 percent of the extreme poor received public social assistance through scholarships, food aid, or other transfers.

umbrella initiative, EDE PEP, represents a positive effort to create new programs to address important constraints and risks such as the high cost of school tuition (the PSUGO program) and disabilities (Kore Moun Andikape). It also applies a life-cycle approach that responds to some of the needs identified through the ECVMAS and complementary sources such as the DHS.

Overall, the findings presented here confirm the urgent need for social protection and promotion interventions that would enable the poorest households (especially those in rural areas and with young children) to overcome the hurdles to building and preserving human capital in the face of repeated shocks. This could include instruments such as a cash transfer targeted on families with pregnant women and children under 5 years of age, interventions to effectively reduce the costs of schooling, programs to provide productive opportunities, and programs to improve living conditions.

The challenge and opportunity now involve deciding how these key findings can translate into elements of a strategic agenda and how to establish priorities in a fiscally constrained institutional environment. Setting the following four priorities may be useful.

Priority 1: Build the foundational blocks of a social protection and promotion system, starting with a targeting system. This priority would include the following actions:

a. *Implement the new national targeting tool and establish a system of monitoring and evaluation.* The targeting tool was developed by the government and donor partners to improve the equity and efficiency of social protection spending and to reduce the gaps in coverage. A system of monitoring and evaluation, including impact evaluations of existing programs, would allow identifying obstacles or implementation problems and evaluate the effectiveness of interventions (comparing impacts of cash vs. in-kind transfers, for example).

b. *Build on existing government efforts to formulate a strategy based on the poverty and vulnerability profile emerging from ECVMAS and focusing on a minimum package of social protection and promotion interventions.* The interventions should have clear objectives and target the poorest populations (especially young children) and the geographical areas most in need (especially rural areas). According to most stakeholders, both EDE PEP and, more recently, PAARP represent initial steps and can benefit from feedback and improvements.

c. *Define and reinforce institutional arrangements and sustainable coordination mechanisms within the government and with interested donors to reduce fragmentation and enhance efficiency.* Within the government, more clarity could be established by defining and reinforcing the roles and responsibilities of ministries (the Ministry of Social Affairs and Labor) and agencies (FAES), especially in terms of planning and coordinating. Among interested donors, the revival of a social protection donor roundtable (within the CAED) is encouraging. These efforts are shifting away from an emphasis on emergency response and short-term actions and toward an emphasis on the introduction of medium-term social protection interventions. The harmonization of social protection approaches and indicators is advancing thanks

to multiagency initiatives such as the Social Protection Inter-agency Cooperation Board.[156] In the case of Haiti, a common approach to communal agents linking users and beneficiaries to services and opportunities would be highly relevant. Various programs and donors are supporting the government in this approach (the United Nations Children's Fund and the World Bank in Kore Fanmi, the U.S. Agency for International Development in Kore Lavi, and so on).

d. *Move forward with the development of a unique registry of social protection beneficiaries in priority areas.* Given the difficulties of implementation, this effort could be restricted to priority areas of focus such as all social safety nets aimed at children or at the geographical areas with the highest levels of poverty. It can also support efforts to ensure that national identification is available to all poor and vulnerable to allow access to social assistance and services. A phased approach could also be envisaged.

Priority 2: Increase the coverage of social safety nets, especially among households with children, while insuring sound targeting and improving the quality of relevant programs, particularly those able to enhance human capital promotion. This priority would entail some of the following actions:

a. *Take advantage of existing potential.* Extend the coverage of relevant programs that promote human capital accumulation among the poor, while improving program design and effectiveness. For example, the Ti Manman Cheri conditional cash transfer currently targets school-age children already in school, but would be more effective at supporting human capital formation if it covered younger children and encouraged children who are out of school to enroll in school. In addition, initiatives aiming at improving the efficiency of social service delivery, such as Kore Fanmi, could be helpful in linking poor households to services and opportunities.

b. *Given the close links between poverty and education outcomes, take the following steps:* (1) continue to exploit the synergies between initiatives removing supply-side constraints (the removal of school tuition fees through PSUGO using funds channeled to schools) and demand-side barriers (Ti Manman Cheri to address nontuition costs), (2) intensify efforts to identify and include children currently out of school, and (3) target the poorest areas identified in ECVMAS; these are mainly in the north.

c. *For the minimum set of social protection and promotion interventions suggested above, ensure the gradual improvement in quality standards in service delivery through financial incentives.* A possible avenue would be to link additional donors or budget funding to the use of targeting, user feedback, and monitoring and evaluation mechanisms.

156 This initiative includes the Department for International Development Cooperation of Finland, the Deutsche Gesellschaft für Internationale Zusammenarbeit, the European Commission, the Food and Agriculture Organization of the United Nations, the International Labour Organization, the International Policy Centre for Inclusive Growth, the United Nations Children's Fund, the United Nations Development Programme, and the World Bank.

Priority 3: Pursue articulation efforts and watch for agile implementation on the ground.

a. *Make social protection productive in addressing the risk of volatile and insufficient income among poor adults.* Promote the articulation of well-targeted social protection programs that promote human capital and productive initiatives, with some adaptation for differences in rural and urban areas. In rural areas, the government and interested donors could consider scaling up promising pilot initiatives with good track records such as the Fonkoze multipronged initiative Chemen Lavi Miyo (pathway to a better life) for extremely poor women in the Plateau Central.[157]

b. *Address regional disparities by building on and improving the geographical Plans Spéciaux* (territorial action plans for poverty reduction) and mainstream inclusion in targeted social protection interventions.

c. *c. Continue to assess the comparative advantage of various actors* (the government, NGOs, foundations) in the implementation of social protection and promotion initiatives, with a view to achieve flexible, agile, and swift implementation even in the most far-flung areas. This is based on the recognition that the government is not currently able to ensure the delivery of social protection interventions at scale.

d. *Complement demand-side interventions through sectorial policies to improve the access, affordability, and quality of services, especially in health care and education.* Common targets in priority regions identified by ECVMAS and other sources could be determined.

e. *Strengthen the links between structured programs designed to address chronic poverty or human capital promotion and emergency disaster response mechanisms.*

Priority 4: Address the issue of predictable, efficient, and sustainable financing for social protection. This action entails seizing the opportunity of the current Public Expenditure Review co-led by the government and the World Bank. In this context, a few issues are emerging. While the data call for greater spending on social protection to ensure better coverage, there might also be ineffective and regressive expenditures that could be reallocated, such as fuel subsidies. The fuel subsidy reform that is currently under way could provide an opportunity to reallocate some of the savings to support interventions with the highest potential to reduce poverty and promote investments in human capital. Candid and constructive discussions should also be encouraged on the sustainability of investments. Sustainability relates to institutional sustainability; hence, the need to achieve progress in establishing the institutional framework highlighted in priority 1, to ensure efficiency and equity, to speed up the targeting reforms, and to focus on results.

157 Following the graduation approach promoted by the Ford Foundation and other partners, Fonkoze, a Haitian microfinance NGO, rigorously selected extremely poor women in the Plateau Central and provided them with social protection and productive opportunities: consumption support through small cash benefits, support for free health services and housing improvements, access to savings, asset transfers, technical training, and coaching. Three years after the start of the program, 96.2 percent of the women participants had lowered their poverty level, and 70 percent were sending children to school, versus 10 percent at the beginning of the program.

Part III:

Reflections to Promote Evidence-based Policy Making

Chapter 6: The way forward: key messages and priority areas of policy actions

For the first time in a decade, it is possible to study the extent, evolution, and drivers of poverty in Haiti based on household characteristics and behaviors throughout the country and across rural and urban settings. The collaboration between ONPES and the World Bank, the efforts to collect the living standards measurement survey ECVMAS 2012 and the official poverty lines recently developed by the government have made this possible.

Two years after the 2010 earthquake, monetary and multidimensional poverty was still severe in Haiti, particularly in rural areas. In 2012, almost 60 percent of the population was poor, and one person in four was living below the extreme poverty line. Nearly half of all households were considered chronically poor because they were living below the moderate poverty line and lacked at least three of the seven basic dimensions of nonmonetary well-being. In rural areas, these numbers were even higher: three-quarters of all households were monetarily poor, and two-thirds were living in chronic poverty.

Compared with 2000, monetary and multidimensional poverty has improved slightly, but inequality in both income and access to basic services remains the highest in the region. Extreme poverty declined from 31 to 24 percent between 2000 and 2012, and there were gains in access to education and basic infrastructure, although the levels and quality were low. Income inequality is the highest in the region—at a Gini coefficient of 0.61—and has been steady at that value since 2001. At the same time, access to basic services such as water and sanitation and to economic opportunities are characterized by huge inequalities dictated by poverty, location of residence, and gender.

Women and girls are particularly vulnerable because they face important obstacles in the accumulation and use of assets, particularly human capital. Despite sizable progress in education and health outcomes, adult women are still less well educated than adult men and are more likely to be illiterate, while maternal mortality is still five times higher than the regional average. Apart from initial differences in endowments, women in Haiti also face additional obstacles in participating in the labor market: they are significantly less likely to be employed, have less access to inputs, and earn more than 30 percent less than man. Gender-based violence and low participation in the public sphere are widespread in Haiti, reflecting weak agency.

The analysis in this report is framed around the importance of asset-building and protecting the poor and vulnerable. This report builds on new evidence to provide stylized facts and analysis to contribute to an informed debate on the challenges and opportunities in poverty reduction. Creating an environment that promotes greater growth and prosperity is critical for the country, but, if growth is be increased and shared with those less favored, the vulnerable must be supported in building and protecting their assets. Better access to education and health care as well as physical and

financial assets improves income generation opportunities across the board. But in a context of significant exposure to aggregate and idiosyncratic shocks, it is also essential to protect asset accumulation among the poor through access to safety nets and social protection services for improved risk management.

The regular monitoring of poverty and living conditions is a necessary step to promoting effective, evidence-based policy making and policy implementation. One of the many obstacles to post earthquake reconstruction and emergency operations is the lack of sound statistical information at the national level. Making sure that the next household survey is implemented within a reasonable time frame will help prevent the recurrence of the shortage of information. Regular monitoring built on the solid baseline described in this report will contribute to enhancing the design and efficacy of antipoverty policies.

While overall economic growth remains a prerequisite for poverty reduction, policies should seek to raise the capacity of the poor and vulnerable to accumulate assets, generate income, and protect their livelihoods from shocks. Special attention should be paid to vulnerable groups, such as women and children, and to rural areas.

In the following paragraphs, the main priority areas for policy actions emerging from the diagnostics produced in the previous chapters are listed. These areas of actions will provide a new platform of dialogue for Government and its partners. This evidence-based dialogue will allow the various players to define and prioritize actions, and allocate resources accordingly.

1. Urban and rural livelihoods

Challenges

Incomes have stagnated in rural areas, where 80 percent of the extreme poor are concentrated. The stagnation reflects the problems with reliance on the low-performing agricultural sector and production for home consumption. Rural livelihoods are highly dependent on agriculture. Almost 80 percent of rural households engage in farming, and, in 50 percent of households, farming is the sole economic activity. However, the returns to agriculture are low and unreliable, and the activity resembles a subsistence strategy rather than reliance on a productive economic sector. This situation has led to constant migration from rural areas to urban areas.

Participation in the nonfarm sector helps rural households emerge from poverty. Engaging in the nonfarm sector in rural areas reduces the probability of being poor by 10 percentage points. The typical nonfarm job in rural areas is a one- or two-person shop engaged in small retail. Still, the returns to this activity surpass those accruing to farming. About 40 percent of nonpoor households participate in the nonfarm sector, a participation rate that is 1.5 times higher than the participation rate among the poor.

Urban areas have fared better than rural areas, reflecting larger private transfers, more nonagricultural employment opportunities, narrowing inequality, and more access to critical goods and services. While urban areas offer comparatively better opportunities to escape poverty, access to services is affected by overpopulation; unemployment affects 40 percent of the urban workforce; and 60 percent of workers earn less than the minimum wage. The urban poor must therefore resort to self-employment or two-person businesses as a coping mechanism. Overall, almost 60 percent of the poor are in this type of occupation.

Internal and international migration is an important livelihood strategy among rural and urban households. Physical mobility from rural to urban areas and from Haiti to other countries is a strategy that households commonly adopt to improve labor market incomes and obtain higher returns to human capital. About 20 percent of Haitians have migrated internally; 10 percent live abroad; and private transfers (domestic and foreign) account for 13 percent and 20 percent of income in rural and urban areas, respectively.

Policy guidance

While consistent economic growth is a prerequisite for poverty reduction, policies should focus on increasing the income generating capacity of the poor. Microeconomic determinants are equally critical for fostering economic opportunities that are inclusive and contribute to poverty reduction. The in-depth analysis of living conditions described in this report allows three priorities to be distilled for policy makers, as follows:

- **In rural areas:**
    - Boost agricultural productivity through improved access to basic inputs (fertilizer, pesticides, seeds, labor and distribution chains) and output markets; encourage the diversification of crops, the acquisition of skills and knowledge specific to the Haitian rural context, as well as the sustainable use of natural resources.
    - Facilitate off-farm jobs opportunities as a way of generating additional revenue and managing risk by undertaking interventions designed to improve the quality of the rural labor force (e.g., basic education, vocational training) and to generate increased rural non-farm employment opportunities (e.g., programs to encourage expansion of rural enterprises, support to rural financial institutions).
- **In urban areas:**
    - Invest in skills because workers with better educational attainment are able to obtain substantially better results than workers without education. Focus on entrepreneurial knowledge to improve the profitability of self-employment.

Pay special attention to women and youth, who are particularly disadvantaged in labor markets.

- **In both rural and urban areas:**
  - Invest in basic infrastructure (including electricity, water, and roads) and seek a more enabling business environment to boost the performance of farmers and the self-employed.
  - Harness migration: private transfers play an important role in the capacity of households to stay out of poverty.

2. The access to and quality of health and education services

Challenges

The utilization of education and health care services and health and education outcomes have improved; however, the related indicators are still relatively low, and inequality is still substantial. Adult literacy and enrollments among school-age children are significantly lower among poor households. Several factors may explain this result. A large number of poor children have to work while attending school, raising the probability of dropping out or being overage for grade. Similarly, poor households spend substantially less on school fees, which are associated with the quality of the service and the infrastructure provided by schools. Child and maternal mortality indicators show a similar pattern: child mortality and malnutrition and maternal mortality are higher among the poorest, suggesting less reliance on health services and a greater impact of health shocks on poor households. The health outcomes and service utilization among women are particularly worrisome.

The financial burden and inadequate service supply constrain health and education service utilization and outcomes, particularly in rural areas. Households spend, on average, 10 percent of their budgets on education and 3 percent on health care.[158] Sickness is considered the most severe shock in economic terms. The low levels of household health expenditure suggest that households cannot afford to pay more or do not have access to health services. Cost is the main reason children are kept out of school or do not benefit from medical care. Distance from a service provider is the second-most important reason. As donor support declines, the incidence of these expenditures is likely to rise, and service utilization is likely to narrow, impacting outcomes.

Policy guidance

Policy makers should seek to raise the human capital accumulation capacity of the poor and vulnerable, considering the importance of this capacity in improving welfare.

158 Conditional on registering positive expenditures for education and health care.

- **In education:**
  - Sustain and expand access to primary education. Achieving universal primary enrollment will require several critical actions by the government and among development partners, including (a) the production and implementation of a short- to medium-term financing plan in primary education to increase resources available to the sector; (b) in coordination with social protection programs, the determination of medium- to long-term strategic plans for service delivery by type of provider at all levels of education, starting with primary education.
  - Improve learning and the quality of service delivery in education. Increasing quality will require several key measures, including (a) increasing public oversight through targeted and well-implemented measures and systematic data collection to hold schools accountable, and (b) addressing problems in preprimary education to give children a solid basis for skill building.
- **In health care:**
  - Expand coverage, utilization, and the quality of services by building on promising service delivery models. The government and development partners should focus on programs with a proven record of enhancing the utilization of health services, especially primary health care and in communities, including results-based financing and community service provision.
  - Develop innovative donor coordination mechanisms in the health sector, taking into account national priorities.
- **In both education and health care:**
  - Establish an information system with a unified beneficiary and targeting mechanism.
  - Narrow the knowledge gap, particularly the determinants of low school progression, learning and abandonment, as well as the low usage, low spending conundrum in health care services.

3. Risk management and protection

Challenges

Vulnerability is extensive in Haiti. One million people live slightly above the poverty line and could be pushed below the line by a shock; almost 70 percent of the population is either poor or vulnerable to falling into poverty. A typical Haitian household faces multiple shocks annually; 78 percent of households in Port-au-Prince, 89 percent of households in other urban areas, and 94 percent of rural households experience at least one economically damaging shock each year.

Haiti's hazards have larger consequences compared with other countries not only because of the country's geological, geographical, and developmental challenges, but also because of institutional weaknesses, including inadequate planning and lack of regulatory enforcement. Haiti's hard-earned development gains are often jeopardized by adverse natural events.

In the face of the high incidence and vulnerability to idiosyncratic or covariate shocks, the poor and vulnerable have limited access to public support. Recently, the government undertook significant efforts to expand social assistance provision through the EDE PEP framework. However, substantial challenges remain, especially in closing coverage gaps affecting certain population groups, such as young children, or regions with highest poverty rates, such as Centre, Grand'Anse, and Nord-Ouest. EDE PEP proposes a life-cycle approach, but lacks sufficient focus on the early childhood window.

Policy guidance

In light of the high incidence of shocks, two types of interventions are needed to increase resilience: assess social protection needs and expand coverage among the poor and vulnerable where possible and mainstream disaster risk management activities in all poverty reduction strategies.

- **In social protection:**
  - Build the foundational blocks of a social protection and promotion system, starting with a targeting and monitoring system.
  - Increase the coverage of social safety nets, especially among households with children, while insuring optimal targeting and improving the quality of relevant programs, particularly those able to enhance human capital promotion.
  - Pursue the capacity building and coordination of efforts across ministries and agencies and ensure effective implementation on the ground.
  - Address the problems in the provision of predictable, efficient, and sustainable financing for the overhauled social protection and promotion package.
- **In disaster risk management:**
  - Improve the identification and understanding of disaster risks in Haiti by quantifying and anticipating the potential impacts of natural hazards, and deepen the knowledge about households' coping strategies.
  - Reduce risks and avoid the creation of new risks by integrating risk management in public policies and investments. Information on disaster risks can be used to guide investments so as to address risks. The retrofitting of critical buildings, the construction of protective infrastructures, and the rebuilding of natural ecosystems are examples of disaster mitigation investments needed in Haiti.
  - Improve the country's capacity to manage disaster-related emergencies by strengthening the institutional arrangements for emergency and preparedness, including a fully functional capacity for the National Emergency Operations Center, and focusing on the importance of public sensitization and communication campaigns.
  - Increase the resilience of the government and households by adopting financial protection strategies (for example by promoting financial inclusion that allows the mobilization of savings or access to insurance systems).

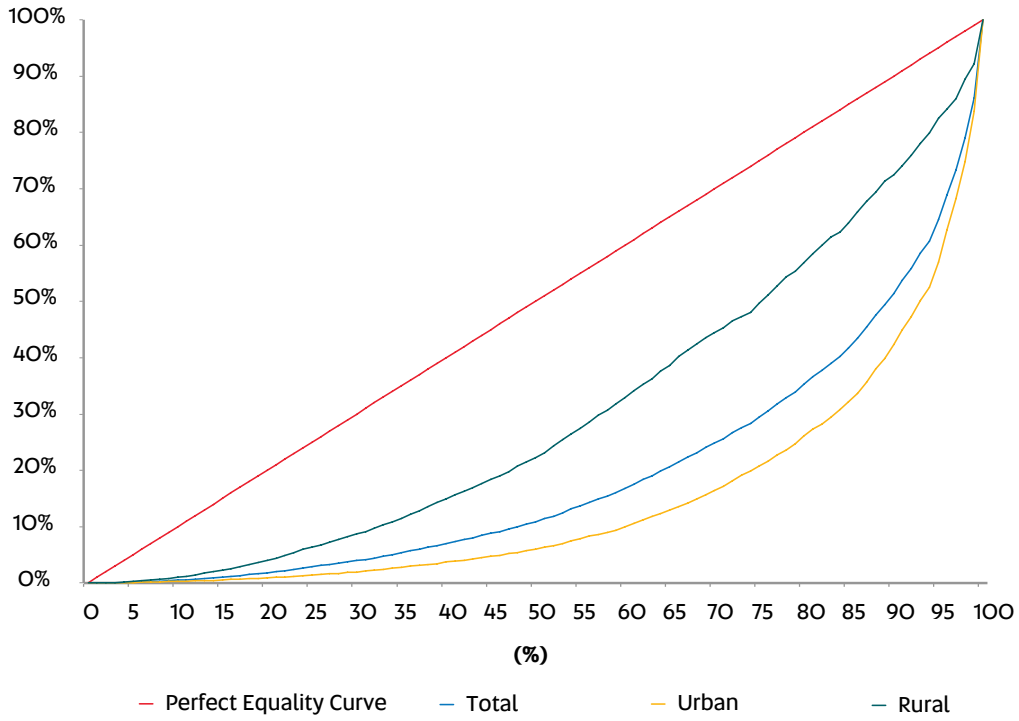
Appendix A. Poverty indicators, disaggregated by department and area of residence, 2012

Table A.1. Poverty indicator, disaggregated by department and area of residence, 2012

Location	*Poverty head-count*	*Poverty gap*	*Squared poverty gap*	*Total popu-lation*	*Total poor*	*Population share, %*	*Share of poor, %*
Artibonite							
Urban	42	10	4	727,075	304,672	41	29
Rural	74	34	20	1,028,727	757,382	59	71
Total	60	24	13	1,755,802	1,062,054	100	100
Centre							
Urban	47	13	6	141,101	65,818	19	12
Rural	81	39	22	620,060	500,360	81	88
Total	74	34	19	761,161	566,178	100	100
Grand'Anse							
Urban	70	28	14	109,379	76,404	22	19
Rural	82	39	22	399,246	328,582	78	81
Total	80	36	21	508,625	404,986	100	100
Nippes							
Urban	57	23	12	59,362	33,885	17	15
Rural	68	30	16	288,995	196,421	83	85
Total	66	29	15	348,357	230,306	100	100
Nord							
Urban	51	17	8	488,244	249,168	46	34
Rural	84	44	27	567,997	477,084	54	66
Total	69	32	18	1,056,241	726,252	100	100
Nord-Est							
Urban	73	31	17	192,579	140,707	47	43
Rural	85	49	32	215,994	183,474	53	57
Total	79	40	25	408,573	324,181	100	100
Nord-Ouest							
Urban	65	29	16	189,278	122,305	25	20
Rural	87	44	26	574,227	502,319	75	80
Total	82	40	24	763,505	624,624	100	100
Ouest							
Urban	33	9	4	3,041,085	1,009,360	79	67
Rural	61	27	15	808,732	496,000	21	33
Total	39	13	6	3,849,817	1,505,360	100	100
Sud							
Urban	49	17	8	142,224	69,414	19	15
Rural	69	31	18	593,651	407,186	81	85
Total	65	29	16	735,875	476,600	100	100
Sud-Est							
Urban	35	14	8	93,662	32,755	15	8
Rural	69	29	16	524,212	363,190	85	92
Total	64	27	14	617,874	395,945	100	100

Appendix B. Income Inequality – Lorenz Curves

Figure B.1. Lorenz Curves at National, Urban and Rural levels, 2012



Sources: *ECVMAS 2012; World Bank and ONPES calculations.*

Appendix C. Poverty rate comparisons

Table C.1. Poverty rates based on different poverty lines and welfare measures, 2000–12

A. Consumption							
Type of line	PPP convertor		Line		2000	2001	2012
Extreme	No	Annual	15,2240.03	Haitian gourdes	NA	NA	24
Poverty	No	Annual	29,909.87	Haitian gourdes	NA	NA	59
Extreme	Yes: 2005	Day	1.08	PPP dollars	NA	NA	19
Extreme	Yes: 2005	Day	1.25	PPP dollars	NA	NA	25
Moderate	Yes: 2005	Day	2	PPP dollars	NA	NA	47
Moderate	Yes: 2005	Day	2.5	PPP dollars	NA	NA	60
Moderate	No	Annual	5,638**	Haitian gourdes	48	NA	45
Extreme	No	Annual	4,243**	Haitian gourdes	31	NA	31
Moderate	Yes: 2005	Day	4	PPP dollars	NA	NA	82
Vulnerable	Yes: 2005	Day	10	PPP dollars	NA	NA	98
B. SEDLAC official income aggregate							
Type of line	PPP convertor	Periodicity of line	Line	Currency	2001	2012	
Extreme	Yes: 2005	day	1.08	PPP dollars	53	NA	
Extreme	Yes: 2005	day	1.25	PPP dollars	75	NA	
Moderate	Yes: 2005	day	2	PPP dollars	81	NA	
Moderate	Yes: 2005	day	2.5	PPP dollars	81	NA	
Moderate	Yes: 2005	day	4	PPP dollars	89	NA	
Vulnerable	Yes: 2005	day	10	PPP dollars	97	NA	
C. SEDLAC unofficial income aggregate							
Type of line	PPP convertor		Line		2001	2012	
Extreme	Yes: 2005	day	1.08	PPP dollars	56	52	
Extreme	Yes: 2005	day	1.25	PPP dollars	61	57	
Moderate	Yes: 2005	day	2	PPP dollars	77	72	
Moderate	Yes: 2005	day	2.5	PPP dollars	82	78	
Moderate	Yes: 2005	day	4	PPP dollars	90	88	
Vulnerable	Yes: 2005	day	10	PPP dollars	98	97	
D. SEDLAC unofficial without imputed rent							
Type of line	PPP convertor		Line		2001	2012	
Extreme	Yes: 2005	day	1.08	PPP dollars	65	56	
Extreme	Yes: 2005	day	1.25	PPP dollars	69	61	
Moderate	Yes: 2005	day	2	PPP dollars	81	75	
Moderate	Yes: 2005	day	2.5	PPP dollars	85	80	
Moderate	Yes: 2005	day	4	PPP dollars	91	89	
Vulnerable	Yes: 2005	day	10	PPP dollars	98	97	
E. Fafo							
Type of line	PPP convertor		Line		2001	2012	
Extreme	Yes: 1993	Annual	2757	Haitian gourdes	56	NA	

*Note: Panels A and B do not include the income referent to members of secondary households. All aggregates refer to per capita values and include production for home consumption. For the estimation of the household size, ALL members—both main and secondary—where included as long as they all fulfill our definition of household member. * 2012 line. ** Source Fafo. Lines for 2012: 23,912.044 and 17,995.531, for poverty and extreme poverty, respectively. Link to the methodology for the estimation of poverty line in 2000: http://www.fafo.no/ais/other/haiti/poverty/PovertyLineForHaiti.pdf.*

Appendix D. The methodology for determining the MPI and identifying the categories of the poor, 2012

The dimensions of the MPI

1. **Food security score** (Food and Agriculture Organization of the United Nations): This indicator is based on the Dietary Diversity Index, defined on a scale from 0 to 12. A household is considered as food secure if its score is above 8 (see Swindale and Ohri-Vachaspati, 2005, Crush et al. 2012)

2. **Kids in school age are all enrolled in school : The household is not deprived if** all school age children are enrolled in school

3. **The household head has at least 5 years of education**

4. **Access to a protected water source (drinking water)** : The household is not deprived if it has access to one of the following sources
    a. Private tap / DINEPA (Direction Nationale de l'Eau Potable et de l`Assainissement)
    b. Public Fountain
    c. Artesian / Drilled Well
    d. Protected well
    e. Protected water source
    f. Rainwater
    g. Kiosk (seller of treated water)
    h. Treated water (truck, bottle, bag, dock, gallon)
5. **Hazardous material** : The household is not deprived if its dwelling is constructed with the following non-hazardous materials:
    a. Walls: wood/boards, cement/blocks, bricks/stone
    b. Ceiling: cement/concrete, metal sheet
    c. Floor: cement, wood/boards, tiles, ceramic, marble
6. **Source of Sustainable Energy**: The household is not deprived if it has access to one of the following sources of energy:
    a. Electricity (individual meter EDH, collective meter EDH or without meter)
    b. Generator (Delco)
    c. Solar panel.
7. **Improved Sanitation**: The household is not deprived if it has access to one of the following improved sanitation facilities:
    a. Flushing toilet (WC)
    b. Individual/private improved latrine
    c. Public/collective improved latrine

The two dimensions of poverty:

1. **Income poverty**: The household is poor in the monetary dimension if its annual consumption per capita is less than the poverty line (29,909.87 gourdes).

2. **Non-income poverty**: The household is poor in the non-monetary dimension if it is deprived in 3 or more dimensions of the multidimensional index.

The categories of poverty:

1. **Chronic**: monetary and non-monetary poor.
2. **Deprived**: non-monetary poor.
3. **Transient**: monetary poor.
4. **Resilient**: not poor in all dimensions.

Appendix E. The evolution of the characteristics of households (poor and nonpoor)

Table E.1. Characteristics of poor households, 2001 and 2012

	2001			2012		
Variable	National	Urban	Rural	National	Urban	Rural
Household size	4.54	4.55	4.53	4.78	4.66	4.90
Urban, %	41%			48%		
Man-headed	47%	41%	51%	57%	52%	62%
Woman-headed	53%	59%	49%	43%	48%	38%
Head with no education	55%	34%	69%	38%	20%	55%
Head with incomplete primary	19%	21%	17%	22%	22%	22%
Head with compl. prim and sec1 incompl.	11%	17%	8%	17%	22%	12%
Head with compl. sec1 and incompl. sec2	11%	19%	6%	16%	25%	8%
Head with compl. sec2 and tert.	4%	9%	1%	7%	11%	3%
Age of the head	46.30	44.00	47.87	46.41	43.46	49.14
Head employed	63%	57%	67%	71%	65%	77%
Head single	6%	9%	3%	7%	9%	5%
Head married	34%	33%	35%	33%	31%	35%
Head in informal union/place	36%	31%	40%	41%	39%	42%
Head widow	13%	12%	13%	10%	9%	12%
Head divorced	0%	1%	0%	0%	0%	0%
Head separate	10%	13%	8%	9%	12%	6%
Asset indicator	19.33	30.94	11.41	23.70	36.35	12.04
All kids in school	78%	84%	74%	90%	93%	87%
Head with five or more years of education	27%	45%	16%	45%	64%	28%
Dwelling with tap water	7%	13%	3%	11%	18%	5%
Dwelling with sustainable source of energy	32%	62%	11%	36%	63%	11%
Dwelling with toilet	37%	56%	24%	67%	89%	47%
Dwelling constructed of nonhazardous materials	48%	71%	33%	60%	81%	41%
Dwelling with garbage collection	9%	19%	3%	12%	25%	0%
Household receives transfers	52%	59%	46%	69%	73%	65%
Average number of children aged 0–4 per household	0.75	0.69	0.80	0.76	0.68	0.85
Average number of children aged 5–14 per household	1.73	1.59	1.82	1.55	1.37	1.71
Average number of adults aged 15–65 per household	3.13	3.40	2.95	3.50	3.66	3.35
Average number of adults aged 65 or more per household	0.27	0.24	0.29	0.25	0.19	0.30
Demographic dependency ratio (15–70 years)	86%	76%	93%	76%	64%	87%
Economic dependency ratio (active)	n.a	n.a	n.a	63%	60%	67%

Sources: ECVH 2001; ECVMAS 2012; World Bank and ONPES calculations.

Appendix F. Poverty correlates

Table F.1. Linear regressions to identify poverty correlates, by area of residence

Dependent variable: \ln(PC expenditure/poverty line	*Model 1*			*Model 2*		
	(1)	(2)	(3)	(1)	(2)	(3)
	National	Urban	Rural	National	Urban	Rural
Demographic						
Nbr children 00-04	-0.204***	-0.192***	-0.211***	-0.204***	-0.192***	-0.209***
	(0.0110)	(0.0147)	(0.0165)	(0.0110)	(0.0147)	(0.0166)
Nbr children 5-14	-0.142***	-0.137***	-0.145***	-0.141***	-0.135***	-0.144***
	(0.00716)	(0.00973)	(0.0106)	(0.00718)	(0.00977)	(0.0107)
Nbr adults 15-64	-0.0787***	-0.0823***	-0.0776***	-0.0783***	-0.0815***	-0.0779***
	(0.00546)	(0.00658)	(0.00910)	(0.00546)	(0.00660)	(0.00910)
Nbr adult 65+	-0.0538**	-0.0285	-0.0610*	-0.0529**	-0.0303	-0.0580*
	(0.0233)	(0.0322)	(0.0343)	(0.0233)	(0.0322)	(0.0344)
Woman head	-0.0125	0.00814	-0.0627*	0.0469	-0.00278	0.0653
	(0.0221)	(0.0271)	(0.0362)	(0.0525)	(0.0835)	(0.0715)
Age head	0.0143***	0.00499	0.0224***	0.0135***	0.00466	0.0214***
	(0.00363)	(0.00481)	(0.00569)	(0.00368)	(0.00489)	(0.00578)
Age head squared	-0.000126***	-2.22e-05	-0.000205***	-0.000120***	-1.97e-05	-0.000200***
	(3.61e-05)	(4.98e-05)	(5.47e-05)	(3.63e-05)	(5.03e-05)	(5.50e-05)
=1 if household receives private transfers (excluding remittances)	-0.0230	-0.0364*	0.00289	-0.0235	-0.0359*	0.00139
	(0.0165)	(0.0210)	(0.0260)	(0.0165)	(0.0210)	(0.0260)
=1 if Household receives remittances	0.190***	0.133***	0.268***	0.189***	0.133***	0.269***
	(0.0187)	(0.0218)	(0.0325)	(0.0187)	(0.0218)	(0.0326)
Education of head (omitted: None)						
Primary not completed	0.192***	0.192***	0.159***	0.194***	0.193***	0.163***
	(0.0226)	(0.0321)	(0.0332)	(0.0226)	(0.0321)	(0.0332)
Primary compl. & Sec1 not completed	0.292***	0.259***	0.291***	0.292***	0.258***	0.291***
	(0.0263)	(0.0331)	(0.0431)	(0.0263)	(0.0332)	(0.0432)
Sec1 completed & Sec.2 non-com.	0.362***	0.307***	0.414***	0.363***	0.309***	0.411***
	(0.0295)	(0.0356)	(0.0533)	(0.0295)	(0.0357)	(0.0533)
Sec2 completed & university	0.619***	0.584***	0.626***	0.615***	0.587***	0.604***
	(0.0441)	(0.0484)	(0.0978)	(0.0442)	(0.0486)	(0.0982)
Activity of head (omitted: employed)						
Unemployed	-0.260***	-0.311***	-0.152	-0.263***	-0.315***	-0.162
	(0.0887)	(0.102)	(0.221)	(0.0887)	(0.102)	(0.221)
Inactive	-0.337***	-0.348***	-0.259	-0.339***	-0.353***	-0.258
	(0.0894)	(0.106)	(0.219)	(0.0894)	(0.106)	(0.219)
Socioeconomic group, head (omitted: executive)						
Skilled worker	-0.0958	-0.0563	-0.186	-0.102	-0.0650	-0.188
	(0.0740)	(0.0726)	(0.192)	(0.0741)	(0.0727)	(0.192)

Unskilled worker	-0.191**	-0.164**	-0.165	-0.192**	-0.165**	-0.179
	(0.0790)	(0.0784)	(0.199)	(0.0790)	(0.0785)	(0.200)
Laborer	-0.255***	-0.228***	-0.251	-0.257***	-0.233***	-0.245
	(0.0824)	(0.0837)	(0.201)	(0.0824)	(0.0838)	(0.202)
Owner	0.0505	0.137	0.0161	0.0484	0.132	0.0171
	(0.0863)	(0.0914)	(0.200)	(0.0863)	(0.0914)	(0.200)
Self employed	-0.0326	-0.0469	-0.00576	-0.0354	-0.0541	-0.00533
	(0.0867)	(0.0912)	(0.201)	(0.0867)	(0.0913)	(0.201)
Family aide	-0.0171	-0.114	0.00750	-0.0254	-0.109	0.0129
	(0.124)	(0.230)	(0.228)	(0.124)	(0.230)	(0.229)
Type of industry of head (omitted: agriculture)						
Industry/construction	0.174***	0.163**	0.165**	0.173***	0.164**	0.161*
	(0.0468)	(0.0707)	(0.0824)	(0.0469)	(0.0709)	(0.0824)
Trade	0.155***	0.102*	0.246***	0.155***	0.103*	0.255***
	(0.0320)	(0.0613)	(0.0494)	(0.0321)	(0.0617)	(0.0494)
Transportation	0.272***	0.272***	0.314**	0.267***	0.272***	0.316**
	(0.0609)	(0.0797)	(0.136)	(0.0609)	(0.0801)	(0.136)
Education/health	-0.145**	-0.194**	-0.0837	-0.145**	-0.190**	-0.0813
	(0.0611)	(0.0802)	(0.136)	(0.0610)	(0.0804)	(0.136)
Other services	0.143***	0.153**	0.0209	0.142***	0.153**	0.0264
	(0.0382)	(0.0637)	(0.0673)	(0.0382)	(0.0640)	(0.0673)
Type of institution, head (omitted: public sector)						
Large private enterprise	0.0672	0.0538	0.0576	0.0665	0.0516	0.0547
	(0.0570)	(0.0567)	(0.139)	(0.0570)	(0.0567)	(0.139)
Small formal	-0.0519	-0.159	0.139	-0.0440	-0.150	0.135
	(0.0970)	(0.103)	(0.202)	(0.0970)	(0.103)	(0.202)
Small informal	-0.256***	-0.297***	-0.154	-0.257***	-0.298***	-0.159
	(0.0672)	(0.0706)	(0.147)	(0.0672)	(0.0706)	(0.147)
Association, NGO	-0.0524	-0.0487	0.0114	-0.0532	-0.0456	0.00703
	(0.0722)	(0.0754)	(0.160)	(0.0722)	(0.0754)	(0.160)
Household	-0.186***	-0.233***	-0.0893	-0.191***	-0.236***	-0.0966
	(0.0713)	(0.0726)	(0.163)	(0.0713)	(0.0727)	(0.163)
Matrimonial status, head (omitted: married)						
Placé	-0.0574***	-0.00602	-0.0828**	-0.0643**	-0.00832	-0.0797**
	(0.0219)	(0.0298)	(0.0329)	(0.0260)	(0.0360)	(0.0380)
Cohabiting	-0.000993	0.0195	-0.00587	0.0959	0.102	0.121
	(0.0417)	(0.0498)	(0.0713)	(0.0587)	(0.0697)	(0.101)
Single	-0.0493	-0.0382	-0.0419	-0.0791	-0.0430	-0.0585
	(0.0406)	(0.0497)	(0.0669)	(0.0528)	(0.0668)	(0.0836)
Divorced	0.456***	0.430***	0.302	0.822***	0.783***	0.153
	(0.155)	(0.140)	(0.984)	(0.223)	(0.198)	(0.986)
Séparé après mariage	-0.142**	-0.160**	-0.0837	-0.114	-0.0878	-0.0784
	(0.0627)	(0.0736)	(0.107)	(0.0961)	(0.123)	(0.150)
Séparé après plaçage	-0.0834**	-0.131***	0.0182	-0.132*	-0.110	-0.0866
	(0.0395)	(0.0468)	(0.0679)	(0.0735)	(0.101)	(0.109)

Veuf / Veuve	-0.107***	-0.112**	-0.0742	-0.161***	-0.0893	-0.185**
	(0.0382)	(0.0495)	(0.0596)	(0.0567)	(0.0865)	(0.0809)
Demographic of spouse						
Spouse in the household	-0.164	-0.319**	0.0552	-0.190	-0.313*	0.00535
	(0.121)	(0.162)	(0.183)	(0.123)	(0.166)	(0.186)
Age of spouse	0.00728	0.00526	0.00479	0.00763	0.00489	0.00600
	(0.00482)	(0.00678)	(0.00711)	(0.00489)	(0.00691)	(0.00720)
Age of spouse squared	-6.47e-05	-6.24e-06	-6.11e-05	-6.61e-05	-2.24e-06	-6.83e-05
	(5.11e-05)	(7.50e-05)	(7.36e-05)	(5.15e-05)	(7.57e-05)	(7.41e-05)
Education of spouse (omitted: none)						
Primary non-completed	0.108***	0.0977**	0.105**	0.107***	0.0939**	0.106**
	(0.0302)	(0.0457)	(0.0428)	(0.0302)	(0.0457)	(0.0429)
Primary completed & Sec1 non-compl.	0.174***	0.231***	0.148***	0.175***	0.225***	0.153***
	(0.0346)	(0.0473)	(0.0543)	(0.0347)	(0.0476)	(0.0545)
Sec1 completed & Sec.2 non-com.	0.197***	0.229***	0.243***	0.198***	0.221***	0.251***
	(0.0380)	(0.0479)	(0.0767)	(0.0384)	(0.0488)	(0.0769)
Sec2 completed & university	0.484***	0.551***	0.518***	0.485***	0.540***	0.526***
	(0.0585)	(0.0645)	(0.150)	(0.0588)	(0.0651)	(0.150)
Activity of spouse (omitted: employed)						
Unemployed	-0.161***	-0.113	-0.168	-0.159***	-0.110	-0.156
	(0.0600)	(0.0723)	(0.109)	(0.0600)	(0.0724)	(0.109)
Inactive	-0.131***	-0.0796	-0.176**	-0.128***	-0.0704	-0.187**
	(0.0488)	(0.0648)	(0.0732)	(0.0492)	(0.0652)	(0.0745)
Matrimonial status, head * woman head						
Marié * Femme				-0.0738	0.0383	-0.163*
				(0.0630)	(0.0939)	(0.0906)
Placé * Femme				-0.0497	0.0345	-0.162*
				(0.0616)	(0.0925)	(0.0889)
En union libre * Femme				-0.241***	-0.107	-0.386***
				(0.0857)	(0.114)	(0.140)
Célibataire * Femme				-0.0280	0.0377	-0.151
				(0.0723)	(0.101)	(0.117)
Divorcé * Femme				-0.770**	-0.661**	
				(0.308)	(0.282)	
Séparé après mariage * Femme				-0.122	-0.0764	-0.176
				(0.126)	(0.162)	(0.205)
Séparé après plaçage * Femme				-0.0151	0.000657	-0.0141
				(0.0881)	(0.127)	(0.131)
Veuf / Veuve * Femme				0	0	0
				(0)	(0)	(0)
Capital						
Land cultivated	0.00149**	-0.00207	0.00216**	0.00153**	-0.00202	0.00234***
	(0.000737)	(0.00300)	(0.000888)	(0.000739)	(0.00300)	(0.000894)
Land cultivated squared	8.27e-07	2.58e-06	-8.85e-07	6.17e-07	2.81e-06	-1.28e-06
	(2.60e-06)	(2.54e-05)	(3.01e-06)	(2.60e-06)	(2.54e-05)	(3.02e-06)

Area of residence (omitted: urban)						
Rural	-0.234***			-0.233***		
	(0.0211)			(0.0211)		
Department (omitted: Artibonite)						
Centre	-0.0943***	-0.0400	-0.106**	-0.0956***	-0.0431	-0.108**
	(0.0360)	(0.0659)	(0.0470)	(0.0360)	(0.0659)	(0.0471)
Grand'Anse	-0.158***	-0.267***	-0.123**	-0.157***	-0.263***	-0.128**
	(0.0437)	(0.0777)	(0.0570)	(0.0437)	(0.0786)	(0.0570)
Nippes	-0.0537	-0.313***	-0.0148	-0.0571	-0.319***	-0.0211
	(0.0469)	(0.0947)	(0.0594)	(0.0469)	(0.0953)	(0.0594)
Nord	-0.147***	-0.160***	-0.177***	-0.151***	-0.163***	-0.181***
	(0.0327)	(0.0433)	(0.0500)	(0.0328)	(0.0435)	(0.0500)
Nord-Est	-0.333***	-0.370***	-0.323***	-0.333***	-0.371***	-0.319***
	(0.0469)	(0.0609)	(0.0718)	(0.0469)	(0.0610)	(0.0719)
Nord-Ouest	-0.283***	-0.315***	-0.260***	-0.283***	-0.317***	-0.257***
	(0.0374)	(0.0605)	(0.0509)	(0.0374)	(0.0606)	(0.0509)
Ouest	0.0495**	-0.0113	0.105**	0.0476*	-0.0116	0.105**
	(0.0246)	(0.0309)	(0.0429)	(0.0247)	(0.0310)	(0.0430)
Sud	-0.0536	-0.144**	-0.0379	-0.0579	-0.145**	-0.0441
	(0.0360)	*(0.0642)*	*(0.0475)*	*(0.0361)*	*(0.0642)*	*(0.0477)*
Sud-Est	*-0.0331*	*-0.209****	*0.0178*	*-0.0343*	*-0.214****	*0.0177*
	(0.0380)	*(0.0788)*	*(0.0486)*	*(0.0380)*	*(0.0788)*	*(0.0485)*
Constant	*0.281***	*0.625****	*-0.305*	*0.321***	*0.628****	*-0.247*
	(0.137)	*(0.168)*	*(0.273)*	*(0.139)*	*(0.172)*	*(0.276)*
Statistics						
Observations	*4,928*	*2,651*	*2,277*	*4,928*	*2,651*	*2,277*
R-squared	*0.506*	*0.469*	*0.412*	*0.508*	*0.471*	*0.414*

Note: Standard errors are shown in parentheses.
**** p<0.01. ** p<0.05. * p<0.1.*

Appendix G. Correlates of poverty and food security

Table G.1. Correlates of poverty and food security

Dependent variable	*Rural households*		*Farm households*	
	Nonpoor	Food secure	Nonpoor	Food secure
Nonfarm activity				
Nonfarm enterprise	0.119***	0.584***	0.0995***	0.0710**
	(0.0242)	(0.112)	(0.0276)	(0.0304)
Nonfarm wage	0.000438	−0.214	−0.00638	−0.0674
	(0.0296)	(0.154)	(0.0361)	(0.0552)
Farm activity				
Value of harvest, per hectare	−0.00125	−0.0199	−0.000935	−0.00344
	(0.00473)	(0.0239)	(0.00433)	(0.00608)
Ownership of land	−0.0294	−0.295	−0.0150	−0.0711*
	(0.0369)	(0.189)	(0.0322)	(0.0419)
Livestock	0.0291	0.484***	0.0225	0.115***
	(0.0272)	(0.130)	(0.0208)	(0.0323)
Share of sales value/total production value	0.0466	0.467**	0.0271	0.0954*
	(0.0467)	(0.232)	(0.0369)	(0.0528)
Number of crops grown	0.0125*	0.0896**	0.0101*	0.0202**
	(0.00692)	(0.0356)	(0.00549)	(0.00812)
Cash crop	0.0252	0.177	0.0205	0.0349
	(0.0284)	(0.138)	(0.0215)	(0.0313)
Other income				
Remittances from Haiti	−0.00346	0.110	0.0189	0.0562*
	(0.0220)	(0.116)	(0.0228)	(0.0317)
Remittances from abroad	0.0904***	0.105	0.0493	0.0179
	(0.0292)	(0.136)	(0.0306)	(0.0393)
Pension and other welfare	−0.109	0.659	−0.121***	0.0328
	(0.105)	(0.960)	(0.0453)	(0.0864)
Real estate	0.0405	0.217	0.0157	0.0797
	(0.0615)	(0.333)	(0.0548)	(0.0562)
Other	0.0617	0.279	0.0504	−0.0149
	(0.0469)	(0.225)	(0.0471)	(0.0316)
Household head				
Woman	0.00303	−0.0486	−0.0263	−0.0149
	(0.0225)	(0.115)	(0.0208)	(0.0316)
Age	0.0105***	0.0200	0.00639	0.00138
	(0.00365)	(0.0192)	(0.00403)	(0.00592)
Age, squared	−9.23e−05***	−0.000248	−5.43e-05	−1.89e-05
	(3.47e−05)	(0.000181)	(3.78e-05)	(5.55e-05)
Years education	0.0127***	0.0764***	0.0109***	0.0150***
	(0.00303)	(0.0180)	(0.00324)	(0.00552)
Committed relationship	−0.0304	−0.0489	−0.0309	0.0392
	(0.0232)	(0.118)	(0.0241)	(0.0340)

Household composition				
Working-age men, number	−0.0758***	−0.0597	−0.0480***	-0.0166
	(0.0104)	(0.0479)	(0.00985)	(0.0129)
Working-age women, number	−0.0707***	0.143**	−0.0601***	0.0233
	(0.0118)	(0.0558)	(0.0115)	(0.0152)
Dependants, number	−0.0872***	0.0919***	−0.0626***	0.0203**
	(0.00687)	(0.0308)	(0.00650)	(0.00811)
Asset-based wealth index	0.0124***	0.0541***	0.0107***	0.0156***
	(0.00132)	(0.00766)	(0.00166)	(0.00312)
Observations	*2,261*		*1,505*	

*Note: The table shows logit regressions with department-fixed effects. The control variable for department-fixed effects is not shown Marginal effects are reported with standard errors in brackets. *** p <0.01 ** p <0.05 * p<0.1*

Appendix H. Definition of concepts

Working-age population: Population of 15 years of age or older. While labor questions are being asked to all household members above age 10, in the urban context, the age of 15 is deemed more appropriate, notably to avoid capturing in employment indicators child labor. Haiti's Labor Code (Article 335) states that the minimum employment age in all sectors is 15 years, except in the case of children working in domestic service. The Labor Code (Article 341) sets the minimum employment age for domestic work at 12 years of age. All working children between the ages of 15 and 18 must be registered with the Ministry of Social Affairs and Labor. The Labor Code prohibits minors from working under dangerous conditions and prohibits children under the age of 18 from working at night in industrial enterprises

Employed or occupied: People in the working-age population that worked for at least an hour the week before the survey or that did not work that week but have a job that will resume in less than a month.

Unemployed:

- **Definition of the International Labour Organization (ILO):** People in the working-age population that don't have a job but are looking for one and are immediately available to work if they find one.
- **Extended:** Contains all unemployed people under the ILO definition, plus those individuals that are not actively looking for a job either because they are discouraged of searching for a job and not finding one, are waiting for a job answer, or are in retirement or sick, but are available to work immediately if they were offered a job.

Active population (or labor force): People in employment or unemployment.

Labor force participation rate (or economic activity rate): Percentage of the working age population who are in the labor force.

Employment rate: Percentage of employed people in the working age population

Unemployment rate: Percentage of unemployed people in the labor force (for both the ILO definition and extended unemployment).

Underemployment:

- **Time-related underemployment:** Employed people that work less than 35 hours per week, would like to work more hours and are willing and available to do so in the case they get a job offer.
- **Invisible underemployment:** Employed individuals who earn less than a minimum amount of money an employee should earn. (In this case, G 250 per day = G 7,500 monthly. This was the minimum wage before October 2012).

Invisible underemployment rate: Percentage of invisible underemployed people in the employed population

Time-related underemployment rate: Percentage of time-related underemployed people in the employed population.

Informal sector: Unincorporated enterprises (household businesses) that are not registered or do not keep formal accounts and are not in the primarysector (agriculture).

Informal employment: all contributing family workers, all independent workers in the informal sector, and all employees without written contracts and not benefiting from social protection - Not in the primary sector (agriculture).

Demographic dependency ratio: Ratio of the number of demographic dependent people (population younger than 15 years of age or older than 70) and the number of demographic independent people (population between the ages of 15 and 70).

Economic dependency ratio: Ratio of the number of economically dependent people (population economically inactive between the age of 15 and 70) and the number of economically independent people (population economically active between the age of 15 and 70).

Childcare ratio: number of children under age 15 in a given household; variable to the used as a control variable in analysis related to female labor force participation.

Decent work: ILO defines decent work as the expression of the aspirations of people in their working lives. It involves opportunities for work that is productive and delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration, freedom for people to express their concerns, organize and participate in the decisions that affect their lives and equality of opportunity and treatment for all women and men.

Appendix I. Correlates of labor income, unemployment, underemployment, and informality in urban areas

Table I.1. Correlates of labor income, unemployment, underemployment, and informality in urban areas, Haiti

Independent variables	*Log of hourly wage*	*Unemployed*		*Invisible underemployment*		*Informal employment*	
	OLS (1)	*OLS (2)*	*Probit (3)*	*OLS (4)*	*Probit (5)*	*OLS (6)*	*Probit (7)*
Gender = woman	−0.318***	0.175***	0.493***	0.0635**	0.170**	0.0618**	0.311***
	(0.0290)	(0.0253)	(0.0740)	(0.0265)	(0.0709)	(0.0217)	(0.0942)
Age 15–24	−0.110	0.0360	0.0707	0.132**	0.379**	0.0513**	0.236**
	(0.0737)	(0.0782)	(0.206)	(0.0486)	(0.169)	(0.0179)	(0.103)
Older than 55	−0.159	0.132***	0.378***	0.0297	0.0440	−0.00823	−0.00720
	(0.123)	(0.0314)	(0.0970)	(0.0395)	(0.122)	(0.0147)	(0.0850)
Primary completed, lower secondary not	0.279***	−0.00666	−0.0344	−0.0616***	−0.172***	−0.0445**	−0.287***
	(0.0470)	(0.0137)	(0.0375)	(0.0179)	(0.0514)	(0.0168)	(0.0956)
Lower secondary completed, upper secondary not	0.465***	−0.0669***	−0.202***	−0.137***	−0.376***	−0.113***	−0.548***
	(0.0533)	(0.0118)	(0.0321)	(0.0166)	(0.0475)	(0.0148)	(0.105)
Upper secondary completed, university	1.250***	−0.153***	−0.448***	−0.313***	−0.848***	−0.374***	−1.252***
	(0.139)	(0.0159)	(0.0444)	(0.0261)	(0.0747)	(0.0593)	(0.135)
Experience	0.0289***	−0.0154***	−0.0434***	−0.00771***	−0.0262***	−0.00254**	−0.00935
	(0.00705)	(0.00302)	(0.00842)	(0.000981)	(0.00356)	(0.00110)	(0.00699)
Experience^2	−0.000362***	9.78e−05**	0.000271***	0.000101***	0.000373***	1.80e−05	6.35e−05
	(0.000102)	(3.79e−05)	(0.000104)	(1.48e−05)	(7.81e−05)	(1.53e−05)	(0.000132)
Controls							
Household size	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of children	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry of activity	Yes	No	No	Yes	Yes	Yes	Yes
Constant	1.949***	0.526***	0.0953	0.931***	1.285***	0.186***	−1.009***
	(0.106)	(0.0358)	(0.0945)	(0.0413)	(0.146)	(0.0512)	(0.260)
Observations	2,841	5,242	5,242	3,141	3,141	3,141	3,141
R-squared	0.177	0.109		0.121		0.393	

Source: *ECVMAS 2012; World Bank and ONPES calculations. Note: The economically active population includes people over 15 years of age only. Informal employment is defined as all contributing family workers, all independent workers in the informal sector, and all employees without written contracts and not benefiting from social protection. Invisible underemployment is defined as employees earning less than the minimum wage, which is set at G 250 a day = G 7,500 a month. The proxy of labor market experience is equal to the age, minus the age assumed for the last level of education completed, minus 5. Reference variables: age = people 25–55 years of age; education = no education and incomplete primary school. Standard errors are shown in parentheses. OLS = ordinary least squares. *** p <0.01 ** p <0.05 * p <0.1*

Appendix J. Mincer earnings function and Oaxaca-Blinder decomposition: a methodological clarification

Mincer earnings function

The Mincer earnings function is an equation named after Jacob Mincer (1958) that explains the correlation between labor earnings and the levels of education and work experience. This equation takes the following form:

$$\ln y = c + \alpha EDU + \beta EXP + \Theta EXP^2 + \gamma X + \varepsilon \quad I.1$$

Where lny represents the natural logarithm of labor income, in this case hourly labor income, EDU EXP2 represents the level of education, is the number of years of work experience and is its squared value. We can also include other individual characteristics on the right-hand side of the equation in order to obtain more precise estimates of the value of the correlations, represented by the value of their coefficients in the equation. These individual characteristics are represented by and can include variables such as gender, age, industry of labor activity, among others.

We used the information of the ECVMAS 2012 in order to run the Mincer equation and find out the main correlates of labor income in urban areas in Haiti. The results, shown in Table M, confirm the existence of a gender gap in terms of hourly labor earnings, even after controlling for individual characteristics. In particular, women that share the same individual characteristics than men (such as level of education, experience, age, geographical location, household size, number of young children in the household and industry of labor activity) earn in average 32 percent less. Table M also shows that the youngest group of workers earn in average around 14 percent less than workers in the middle age group (i.e. workers between 25 and 54 years of age, who are the reference group), holding everything else constant.

Education also plays an important role in determining labor earnings. All education variables are significant and the magnitude of their coefficients is as expected. In particular, a higher level of education is correlated to a higher labor income. Holding everything else constant, someone with primary education completed is expected to earn in average 26 percent more than someone with no education at all. In line with these results, people with a first or second level of secondary completed, or a university-level of education are respectively expected to earn in average 43 percent and 119 percent more than someone without education.

Labor experience affects labor income in a positive but concave way, that is, every additional year of experience increases labor income in a magnitude lower than the previous additional year of experience. Given that the relationship between labor income and labor experience is not expected to be linear, we include the

squared of the level of experience in the equation and thus we have to consider its coefficient when calculating the marginal effect of labor experience on hourly labor income. After doing so, holding everything else constant, one extra year of labor experience is associated to an increase of 2.65 percent in hourly labor income.[159]

Table J.1. Mincer equation results, urban areas, Haiti

Dependent variable: Logarithm of hourly labor income	
Independent variable	Coefficient
Woman	−0.320***
	(0.0332)
Age: 15–24	−0.139*
	(0.0702)
Age: older than 55	−0.160
	(0.125)
Primary completed	0.263***
	(0.0342)
Lower secondary completed	0.430***
	(0.0392)
Upper secondary completed or university	1.192***
	(0.138)
Work experience	0.0268***
	(0.00613)
Work experience squared	−0.000331***
	(8.86e−05)
Controls	Yes
Constant	2.014***
	(0.0763)
Observations	2,869
R-squared	0.169

Source: ECVMAS 2012. Note: The control variables include number of children (younger than 15) in the household, household size, a dummy variable that indicates whether the household is or is not in Port-au-Prince, and the industry of labor activity. Reference variables: age: between 25 and 55 years; education: no education and incomplete primary school.

Oaxaca-Blinder decomposition

We use the Oaxaca-Blinder decomposition to study the difference between male and female hourly labor income in urban areas in Haiti. In table I.2, we can see that the hourly labor income for females is around 87 percent of that of males. In total,

159 The marginal effect of labor experience on labor income is given by the derivative of over , which considering the coefficients is equal to 0.0268-*0.000331. When analyzing the effect of an extra year of labor experience we replace by 1, and the result is 0.0265.

the difference between men's and women's earnings is about 0.46 gourdes per hour worked. This difference in wages might be, at some extend, explained by differences in individual characteristics between men and women. For instance, if men are in average better educated than women, it is expected to find a higher hourly labor income for men than for women. However, if we control for those characteristics, the labor earnings for women and men should be the same under no gender discrimination. The Oaxaca Blinder decomposition helps us find out which part of the gender earnings gap is explained by observable and unobservable characteristics.

Table J.2. Average hourly labor income, urban areas, Haiti

Men	*Women*	*Difference*
3.46	3.00	0.46

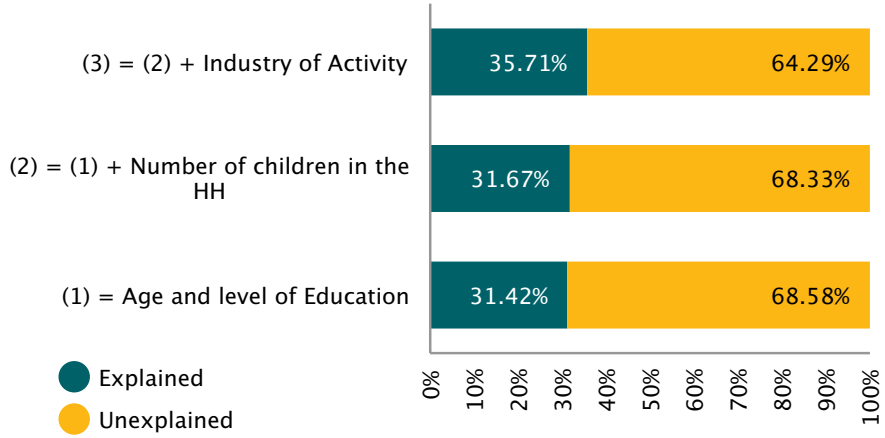
We have calculated the Oaxaca-Blinder decomposition using three different specifications. The first specification includes age and level of education as the individual characteristics that could explain the gender earnings gap; the second specification includes the same observable characteristics as the first one plus the number of children in the household; while the third specification includes those included in the second one plus dummies for the industry of activity.

The results are summarized in table I.3 and figure I.1. The first and second specifications suggest that differences in the observable characteristics (or endowments) account for about 32 percent of the gender wage gap, while the other 68 percent remains unexplained. The industry of activity (third specification) explains a little bit more of the gender wage gap. In particular, according to the third specification, characteristics such as age, the level of education, the number of children in the household and the industry of activity explain almost 36 percent of the gender wage gap, but the other 64 percent remains unexplained.

Table J.3. Gender earnings differentials, Oaxaca- Blinder decomposition, urban areas, Haiti

	a. Age and level of education	*b. = a + number of children in the household*	*c. = b + industry of activity*
Explained	0.14	0.14	0.16
Unexplained	0.32	0.32	0.30
Total	*0.46*	*0.46*	*0.46*

Figure J.1. Blinder-Oaxaca decomposition for different specifications, urban areas, Haiti



An important caveat of these results is that they might include some selectivity bias in the sense that the gender gap is calculated only for people working, thus selected into the labor market, as well as a high probability of auto-selection into particular industries of activity. Anyhow, the magnitude of the gender earnings gap unexplained by observable characteristics suggests a worrying presence of gender discrimination in the labor market.

The fraction of the gender wage gap unexplained by observable characteristics in Urban Haiti is higher than in African and LAC countries. According to Ñopo (2012), the part of the gender wage gap attributed to differences between men and women that cannot be explained by observable characteristics in LAC countries is in average around 18 percent (for circa 2007). There is, however, a large variation of this result across LAC countries, for instance the highest reported is Nicaragua with 28 percent and the lowest is Colombia with 7.3 percent, but none is higher than in urban Haiti. On the other hand, Nordman et al (2013) shows that for the main cities of 7 African French-speaking countries in 2001/2002, these results range from 40 to 67 percent, which are a bit closer to the urban situation in Haiti in 2012. For example, the unexplained part of the gender gap in Lomé (Togo) is around 45 percent after controlling for sector dummies, while for Ouagadougou (Burkina Faso) it is 67 percent.

Appendix K. Correlates of enrollment and progress in school

Table K.1. Correlates of enrollment and progress in school

Variable	*Marginal effect*	
	Dependent variable: at least two years overage for current grade	Dependent variable: currently in school
Age	0.194	0.035***
	(−0.196)	(0.012)
Age squared	−0.004	−0.002***
	(−0.008)	(0.001)
Gender (1 = man)	0.079***	−0.004
	(−0.028)	(0.008)
Child of household head	−0.206***	0.026*
	(−0.045)	(0.014)
Disabled	0.231	−0.499***
	(−0.167)	(0.109)
Total number of children in household age 0–18	0.052***	0
	(−0.013)	(0.004)
Annual household consumption per capita, per G 1,000	−0.0030***	0.002***
	(−0.001)	(0.001)
Household head attended, but did not complete primary	−0.084**	−0.011
	(−0.039)	(0.013)
Household head completed primary	−0.234***	0.038***
	(−0.042)	(0.013)
Household head completed lower-secondary or above	−0.285***	0.050***
	(−0.045)	(0.010)
Urban area of residence	−0.192***	0.020*
	(−0.036)	(0.012)
Artibonite	−0.175**	0.047***
	(−0.074)	(0.012)
Centre	−0.057	0.009
	(−0.078)	(0.018)
Grand'Anse	0.034	0.025*
	(−0.077)	(0.014)

Nippes	−0.105	0.059***
	(−0.078)	(0.007)
Nord	−0.084	0.022
	(−0.074)	(0.014)
Nord-Ouest	−0.254***	0.015
	(−0.070)	(0.021)
Ouest	−0.115*	0.031**
	(−0.066)	(0.015)
Sud	−0.164**	0.02
	(−0.081)	(0.016)
Sud-Est	−0.04	0.047***
	(−0.082)	(0.012)
Mean value of dependent variable	0.5165	0.9065
Observations	2,380	4,939

*Note: The regression is estimated for children aged 10–14 for overage and 6–14 for enrollment. The marginal effects are evaluated at the sample means. Omitted household head education level = no schooling. Omitted department = Nord-Est. Robust standard errors are clustered at the household level. Significance level: * = 10 percent, ** = 5 percent, *** = 1 percent.*

Appendix L. Descriptive statistics on the shocks reported by households

Table L.1. Idiosyncratic economic shocks affecting households

Shock	*Description*
Health	Illness or serious accident of a household member
	Cholera
Household composition	Death of family member
	Care of a new household member
Agricultural	Disease in animals
	Disease in plants
	Broken agricultural equipment or tools
Economic activity	Failure of a family nonagricultural business
	Loss of salary/income of household (not due to illness/accident)
Decrease in outside help	Termination of aid (transfers) from family/friends
	Termination of aid (transfers) from government
Crime	Theft of goods or harvest
Economic shocks affecting the community	Food shortages in stores
	Increase in the price of seed or fertilizer
Weather-climatic shocks	Hurricanes and floods
	Drought
	Irregular rains

Note: The questionnaire contained an additional question on the death of a nonfamily household member, but responses were not reported.

Table L.2. Prevalence of types of shocks faced by households, by location

Type of shock	*Port-au-Prince*	*Other urban*	*Rural*
No shocks	0.22	0.11	0.06
Idiosyncratic household shock	0.63	0.75	0.76
Health	0.36	0.50	0.48
Household composition	0.11	0.14	0.12
Agricultural	0.02	0.16	0.38
Economic activity	0.19	0.16	0.10
Decrease in outside help	0.15	0.12	0.07
Crime	0.18	0.17	0.17
Covariate shock	0.51	0.58	0.79
Economic shock affecting the community	0.32	0.32	0.33
Weather/climatic shock	0.34	0.44	0.73
Number of observations	1,794	858	2,269

Source: ECVMAS 2012; World Bank and ONPES calculations

Table L.3. Impact of three main types of shocks, by household poverty status

Type of shock	*In extreme poverty*	*In poverty, but not extreme*	*Vulnerable, but not poor*	*Resilient*
Shock 1				
None	0.04	0.09	0.10	0.16
Idiosyncratic	0.57	0.59	0.61	0.60
Covariate	0.39	0.32	0.30	0.25
Shock 2				
None	0.23	0.33	0.30	0.41
Idiosyncratic	0.36	0.32	0.37	0.29
Covariate	0.41	0.35	0.32	0.30
Shock 3				
None	0.47	0.53	0.53	0.60
Idiosyncratic	0.24	0.18	0.20	0.18
Covariate	0.29	0.29	0.27	0.22

Source: ECVMAS 2012; World Bank and ONPES calculations

Appendix M. Coping mechanisms

Table M.1. Shocks: main coping mechanisms

Mechanism	*Description*
Financial help	Use of savings Monetary help from friends and family Monetary help from central or local government Monetary help from religious organizations or NGOs
Nutritional help	Nutritional help from relatives or friends Nutritional help from central or local government Nutritional help from religious organizations or NGOs Work-for-food
Change in nutritional inputs	Decreased quantity of food, number of meals consumed Decreased quality of food consumed Consume premature harvest Consume foods gathered in the wild Consume seeds
Change in labor output	Active members of household engage in additional work Inactive, unemployed members engage in work
Change in household composition	Migration of one or more household members Sending children to another household
Decrease in household expenditures	Decrease in nonfood spending Decrease in health spending
Pulling children out of school	Pulling children out of school
Debt	Borrowing from family or friends Borrowing from lenders or merchants
Sale of assets	Sale of agricultural assets Sale of household durable goods (work tools, equipment) Sale of land, real estate Sale of agricultural produce, seeds Sale of cattle Sale of equipment, tools used for revenue generation
Use of (common) resources	Fishing more frequently Cut wood, make charcoal Increase harvest and sell natural resources
Other mechanisms	Engage in spiritual activities Begging Other strategy
No strategy	No strategy

Table M.2. Coping mechanisms to address the most important shocks, by type of shock

Strategy	*All shocks*	*Idiosyncratic economic shock*						*Covariate economic shock*	*Climatic shock*
		Health	Household composition	Agricultural	Economic	Decrease in outside help	Crime		
None	0.15	0.08	0.11	0.17	0.18	0.13	0.28	0.12	0.27
Monetary help	0.27	0.41	0.33	0.12	0.31	0.26	0.24	0.12	0.15
Nutritional help	0.05	0.05	0.02	0.03	0.07	0.08	0.05	0.05	0.05
Change in nutritional inputs	0.16	0.05	0.06	0.19	0.05	0.12	0.05	0.48	0.24
Change in labor output	0.01	0.00	0.00		0.01	0.04	0.01	0.00	0.00
Change in household composition	0.00	0.00	0.00	0.00	0.01	0.00	0.00		0.00
Decrease in household expenditures	0.05	0.05	0.02	0.08	0.07	0.09	0.03	0.06	0.02
Removal of child from school	0.00	0.00	0.02	0.01	0.00	0.03	0.01		0.00
Debt	0.14	0.16	0.25	0.12	0.20	0.13	0.13	0.08	0.10
Sale of assets	0.07	0.10	0.14	0.13	0.03	0.00	0.06	0.02	0.04
Use of (common) natural resources	0.01	0.00	0.00	0.03	0.00		0.01	0.01	0.02
Other mechanism	0.09	0.09	0.06	0.12	0.07	0.11	0.14	0.06	0.09
Observations	4,324	1,487	302	296	364	182	251	558	879

Source: *ECVMAS 2012; World Bank and ONPES calculations*

Table M.3. Coping mechanisms for the most important shocks, households in extreme poverty

Strategy	*All shocks*	*Idiosyncratic economic shock*						*Covariate economic shock*	*Climatic shock*
		Health	Household composition	Agricultural	Economic	Decrease in outside help	Crime		
None	0.12	0.08	0.11	0.08	0.19	0.20	0.28	0.06	0.16
Monetary help	0.16	0.26	0.15	0.12	0.24	0.18	0.11	0.03	0.11
Nutritional help	0.06	0.08	0.04	0.06	0.07	0.02	0.15	0.05	0.05
Change in nutritional inputs	0.23	0.06	0.10	0.25	0.10	0.29	0.04	0.58	0.34
Change in labor output	0.01	0.01	—	—	—	—	0.02	—	0.01
Change in household composition	0.01	0.01	—	0.01	0.03	—	—	—	0.01
Decrease in household expenditures	0.04	0.03	0.02	0.05	0.14	0.03		0.03	0.04
Removal of child from school	0.01	0.00	0.01	0.01	0.01	0.04	0.05	—	0.01
Debt	0.16	0.19	0.39	0.13	0.14	—	0.19	0.06	0.13
Sale of assets	0.10	0.17	0.14	0.18	—	—	0.02	0.02	0.05
Use of (common) natural resources	0.02	0.01	0.01	0.04	0.03	—	—	0.03	0.04
Other mechanism	0.09	0.11	0.03	0.08	0.07	0.24	0.14	0.13	0.07
Observations	874	290	69	87	43	20	25	83	257

Source: *ECVMAS 2012; World Bank and ONPES calculations Note: — = not available.*

Table M.4. Coping mechanisms for the most important shocks, resilient households

Strategy	*All shocks*	*Idiosyncratic economic shock*						*Covariate economic shock*	*Climatic shock*
		Health	Household composition	Agricultural	Economic	Decrease in outside help	Crime		
None	0.16	0.06	0.12	0.33	0.23	0.07	0.30	0.17	0.25
Monetary help	0.38	0.54	0.49	0.18	0.36	0.34	0.33	0.17	0.21
Nutritional help	0.04	0.04	0.02	0.02	0.07	0.11	0.02	0.03	0.06
Change in nutritional inputs	0.10	0.03	0.04	0.07	0.03	0.12	0.02	0.36	0.18
Change in labor output	0.01	0.00	0.01	—	0.01	0.06	—	0.01	—
Change in household composition	0.00	0.00	0.01	—	—	—	0.01	—	—
Decrease in household expenditures	0.05	0.05	0.02	0.04	0.06	0.05	0.04	0.07	0.03
Removal of child from school	0.00	—	0.01	—	—	0.02	0.01	—	0.01
Debt	0.12	0.13	0.18	0.08	0.17	0.12	0.10	0.10	0.07
Sale of assets	0.04	0.05	0.07	0.09	0.01	—	0.05	0.02	0.03
Use of (common) natural resources	0.01	0.00	0.01	0.03	—	—	—	—	0.02
Other mechanism	0.10	0.10	0.06	0.18	0.05	0.09	0.12	0.07	0.14
Observations	1,691	595	124	67	185	91	134	231	264

Source: *ECVMAS 2012; World Bank and ONPES calculations Note: — = not available.*

Appendix N. Results of the multivariate analysis of shocks

Table N.1. Correlations of the main shocks experienced by households

Dependent variable: per capita expenditure, ln	*Only shocks*	*Interactions, all*	*Interactions, extreme poverty*	*Interactions, resilient*
Main shock				
Idiosyncratic household shock	−0.039			
	(0.038)			
Covariate economic shock	−0.117***			
	(0.045)			
Covariate weather shock	−0.151***			
	(0.046)			
Main shock: idiosyncratic				
No coping mechanism		0.016	0.104	−0.024
		(0.057)	(0.099)	(0.058)
Monetary and nutritional help		−0.013	0.152*	−0.109**
		(0.043)	(0.086)	(0.052)
Change in nutritional inputs		−0.248***	0.146	−0.271***
		(0.060)	(0.091)	(0.073)
Debt		−0.057	0.185**	−0.062
		(0.048)	(0.083)	(0.056)
Sale of assets		−0.070	0.201**	−0.014
		(0.053)	(0.092)	(0.079)
Other strategy		−0.063	0.196**	−0.167***
		(0.045)	(0.077)	(0.055)
Main shock: covariate economic				
No coping mechanism		0.093	0.291**	0.029
		(0.084)	(0.120)	(0.101)
Monetary and nutritional help		−0.067	0.223**	−0.078
		(0.064)	(0.109)	(0.076)
Change in nutritional inputs		−0.234***	0.053	−0.234***
		(0.061)	(0.107)	(0.065)
Debt		−0.005	0.047	−0.108
		(0.126)	(0.248)	(0.120)

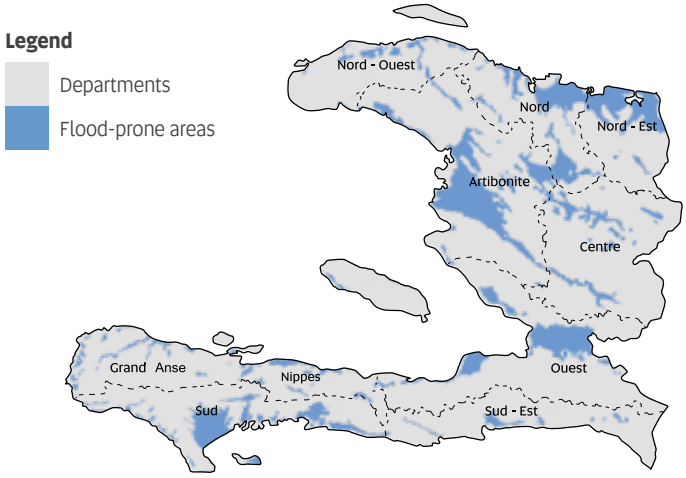
Sale of assets		0.134	0.043	−0.156
		(0.181)	(0.085)	(0.147)
Other strategy		−0.099	0.140	−0.128
		(0.082)	(0.184)	(0.089)
Main shock: covariate weather				
No coping mechanism		−0.058	0.165*	−0.034
		(0.060)	(0.094)	(0.078)
Monetary and nutritional help		−0.088	0.120	−0.119*
		(0.062)	(0.095)	(0.071)
Change in nutritional inputs		−0.307***	0.087	−0.256***
		(0.057)	(0.094)	(0.072)
Debt		−0.244***	0.146	−0.171*
		(0.091)	(0.107)	(0.096)
Sale of assets		−0.150	0.247**	0.134
		(0.148)	(0.106)	(0.111)
Other strategy		−0.164**	0.120	−0.085
		(0.079)	(0.096)	(0.124)
Household characteristics				
Number of 0- to 4-year-olds	−0.218***	−0.219***	−0.044**	−0.126***
	(0.014)	(0.014)	(0.018)	(0.017)
Number of 5- to 14-year-olds	−0.154***	−0.152***	−0.039***	−0.089***
	(0.008)	(0.008)	(0.010)	(0.012)
Number of adults aged 15–64	−0.070***	−0.068***	−0.005	−0.051***
	(0.007)	(0.007)	(0.008)	(0.007)
Number of adults 65+	−0.094***	−0.092***	0.027	−0.029
	(0.027)	(0.027)	(0.027)	(0.028)
Household head is a woman	0.078***	0.072***	−0.011	0.002
	(0.021)	(0.021)	(0.031)	(0.024)
Age of head	0.003***	0.003***	−0.001	0.002*
	(0.001)	(0.001)	(0.001)	(0.001)
Incomplete primary	0.245***	0.236***	0.036	0.077*
	(0.028)	(0.028)	(0.030)	(0.040)
Completed primary	0.376***	0.369***	0.087**	0.127***
	(0.031)	(0.030)	(0.043)	(0.034)
Completed lower secondary	0.539***	0.526***	0.121***	0.213***

	(0.033)	(0.033)	(0.043)	(0.035)
Completed upper secondary	0.975***	0.956***	0.053	0.558***
	(0.095)	(0.092)	(0.125)	(0.105)
Unemployed	−0.134***	−0.138***	0.028	−0.016
	(0.027)	(0.027)	(0.037)	(0.026)
Inactive	−0.140***	−0.141***	−0.001	−0.037
	(0.034)	(0.034)	(0.042)	(0.033)
2. Milieu	−0.131***	−0.127***	−0.064	−0.080**
	(0.040)	(0.038)	(0.055)	(0.033)
3. Milieu	−0.394***	−0.376***	−0.179***	−0.084**
	(0.039)	(0.039)	(0.047)	(0.037)
Constant	10.713***	10.718***	9.387***	11.141***
	(0.066)	(0.067)	(0.103)	(0.064)
Observations	4,912	4,912	918	2,061
R-squared	0.448	0.458	0.100	0.260

*Note: The reference individual for the full model is a the head of a man-headed household with no formal education, but employed; the household is in Port-au-Prince and has not experienced any of the shocks considered. The access to some of the coping mechanisms is potentially correlated with income. If such a relationship exists and given that the variance in per capita expenditures is much larger among the resilient population than among the population in extreme poverty, the coefficients reflect opportunities, not merely the actual correlation with the particular strategy. To make the results more tractable, we have aggregated the shocks into three shock categories: idiosyncratic household shocks, covariate economic shocks, and covariate weather shocks. Similarly, we have aggregated the coping strategies into three categories based on frequency of use: no coping mechanism used; monetary and nutritional help; and changes in nutritional inputs, debt, sale of assets, and other strategies utilized. The first column presents the results if only shocks are included. The second column presents the results if the shocks and coping strategies are introduced. The third and fourth columns present the results for the sample of households in extreme poverty and for resilient households, respectively. Standard errors are in parentheses. *** p <0.01 ** p <0.05 * p <0.1*

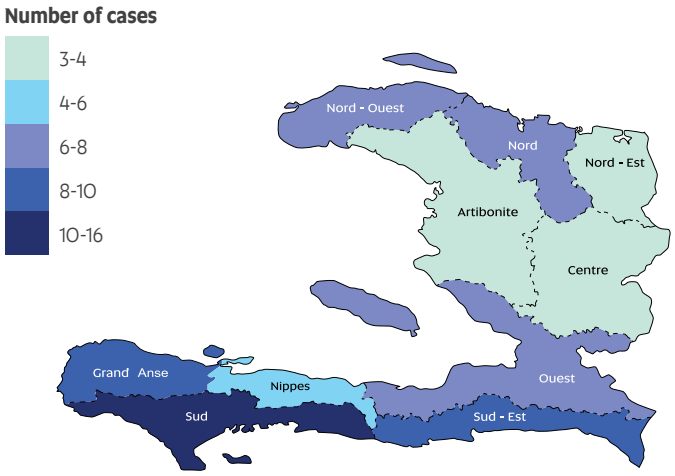
Appendix O. Incidence maps of weather events

Map O.1. Flood-prone areas, Haiti



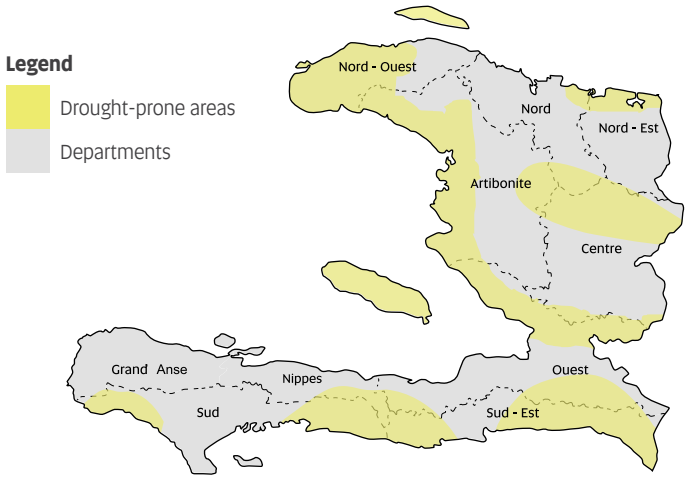
Source: Based on data of "Shakemap us2010rja6," Earthquake Hazards Program, United States Geological Survey, Reston, VA, http://earthquake.usgs.gov/earthquakes/shakemap/global/shake/2010rja6/. Note: Flood-prone areas were identified by the United Nations Institute for Training and Research in May 2010.

Map O.2. Hurricanes, depressions, and tropical storms, by department, 1954–2001



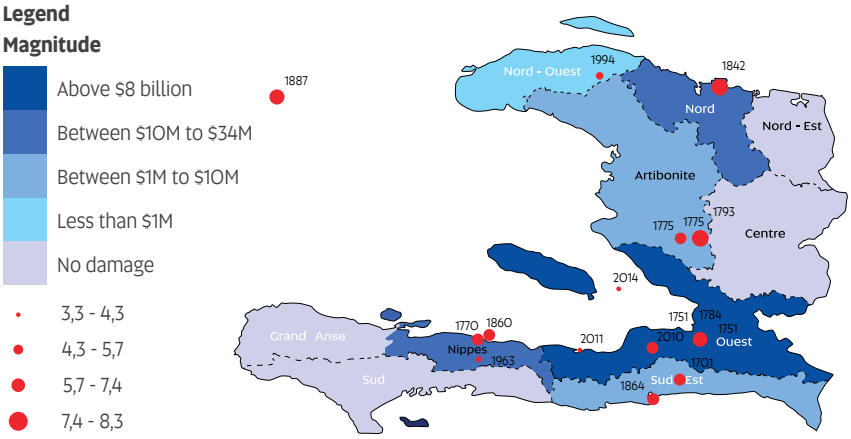
Sources: Based on Mathieu et al. 2003; "Shakemap us2010rja6," Earthquake Hazards Program, United States Geological Survey, Reston, VA, http://earthquake.usgs.gov/earthquakes/shakemap/global/shake/2010rja6/.

Map O.3. Drought-prone areas, Haiti



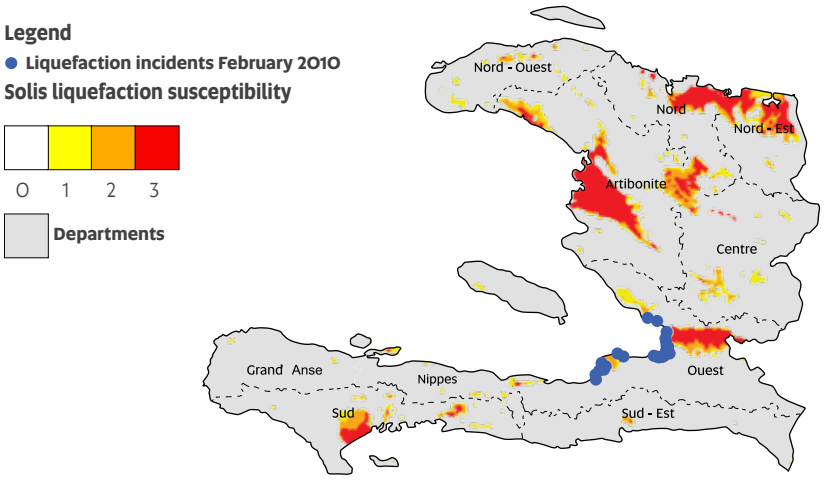
Source: Based on data of "Shakemap us2010rja6," Earthquake Hazards Program, United States Geological Survey, Reston, VA, http://earthquake.usgs.gov/earthquakes/shakemap/global/shake/2010rja6/. Note: Haiti´s drought zones were identified through the NATHAT Project, using information from the Centre National de Météorologie of Haiti, in May 2010.

Map O.4. Earthquakes, by magnitude, intensity, and economic damage, Haiti, 1701–2014



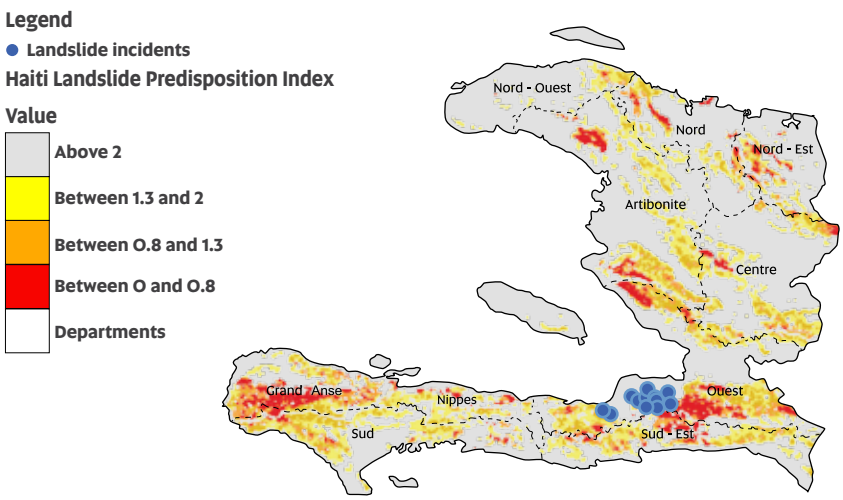
Sources: Based on data of "Shakemap us2010rja6," Earthquake Hazards Program, United States Geological Survey, Reston, VA, http://earthquake.usgs.gov/earthquakes/shakemap/global/shake/2010rja6/; Earthquake Data and Information (database). National Geophysical Data Center, Boulder, CO, http://www.ngdc.noaa.gov/hazard/earthqk.shtml.

Map N.5. Soil Liquefaction incidents, February 2010



Source: Based on data of "Shakemap us2010rja6," Earthquake Hazards Program, United States Geological Survey, Reston, VA, http://earthquake.usgs.gov/earthquakes/shakemap/global/shake/2010rja6/. Note: Data on the susceptibility to the soil liquefaction hazard in Haiti and on liquefaction (landslide) incidents in Haiti during and after the earthquake of January 12, 2010, were collected through the NATHAT project in, respectively, February and May 2010.

Map O.6. Landslide incidents during and after the earthquake of January 12, 2010



Source: Based on data of "Shakemap us2010rja6," Earthquake Hazards Program, United States Geological Survey, Reston, VA, http://earthquake.usgs.gov/earthquakes/shakemap/global/shake/2010rja6/. Note: A map of landslide incidents was created through the NATHAT Project in February 2010. The landslide predisposition index built for the rainy season in the absence of an earthquake was created through the NATHAT project according to the CIPEA method in May 2010.

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