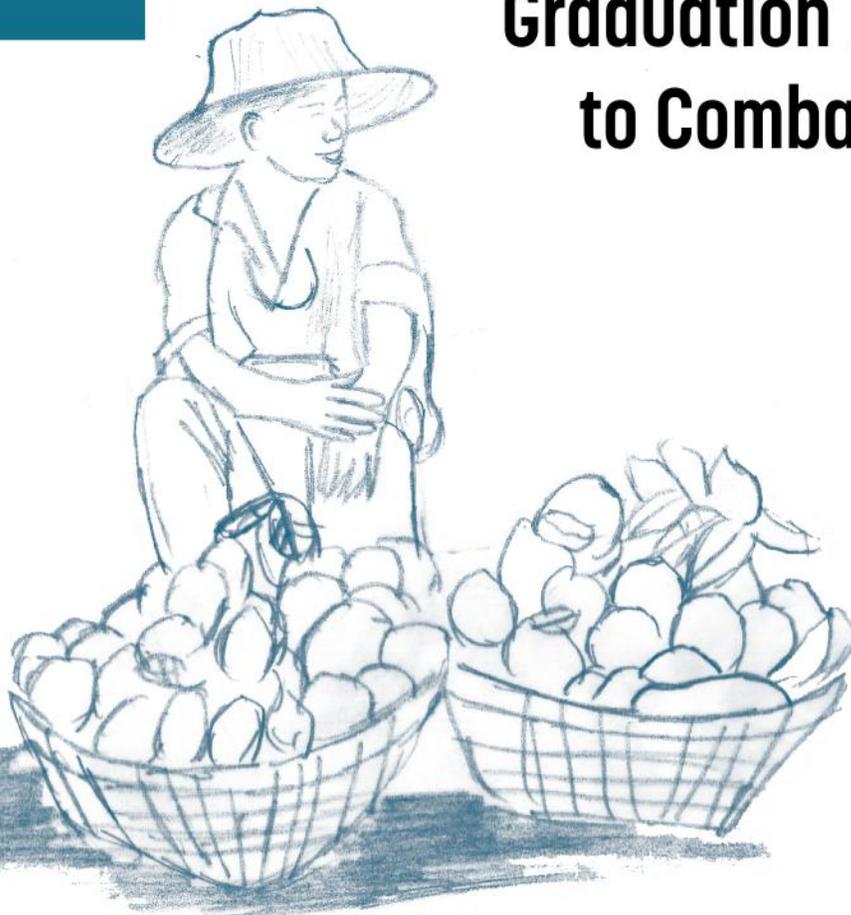


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Benefit-Cost Analysis

# Cost-benefit Analysis of Expanding Microfinance and Graduation Programs to Combat Poverty



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# COST-BENEFIT ANALYSIS OF EXPANDING MICROFINANCE AND GRADUATION PROGRAMS TO COMBAT POVERTY

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Haiti Priorise

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Translated from French by Lauren Grace, professional translator.

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## Abstract

An expansion of the graduation and microfinance program is deemed to be desirable in Haiti, despite limited evidence on the impacts of microfinance in terms of poverty reduction in the long run, as it is in many low-income countries (Chemin, 2008 et Jameel, 2015). In fact, the lack of secondary data on the revenue generated by the graduation program in Haiti has not enabled to demonstrate a more rigorous approach in the estimates of the costs and benefits, in contrast with Bangladesh case. However, in manipulating data from a previous evaluation of the program conducted by Concern Worldwide and Fonkoze (2014), and in adding other benefits related to education and health, other than those considered by Banerjee et al.(2015), we find a benefit cost ratio (BCR) between 1.34 to 5.75, with the best estimate of 3.66 from a realistic scenario, whereby we assume that all benefits last over a five year period. This proves in Haiti, likewise in other countries studied, the evidence of the graduation program effectiveness in extreme poverty reduction, although the costs are relatively higher in Haiti (Sinha and Roy, 2010; Simanowitz and Huda, 2009). From another side, with an average loan of 10,000 HTG per beneficiaries in a microfinance program, and in considering a scenario whereby there is a modest benefit of 2.8% on every gourde borrowed (based on Chemin, 2008), the BCR is between 1.08 and 1.18, depending on the discount rate. Thus, the BCR in the microfinance remains close to 1. This could confirm that microcredit program, in the case of Haiti, does not have transformative impacts on poverty, as it is the case in several low-income and middle-income countries such as Ethiopia, India, Mongolia, Mexico, Philippines, Bosnia- Herzegovina, Morocco (Jameel, 2015). Nevertheless, the spillover effects and the non-measurable impacts of microcredit in terms of women financial autonomy, among others, should not be neglected.

## Policy Summary

### Contextual Setting

#### Issue

In September 2015, Haiti made a set of commitments to the UN to achieve sustainable development goals (SDGs), including the eradication of poverty in all its aspects. Achieving SDGs undoubtedly requires that strategic and effective public policies be put in place in an atmosphere of, clearly, stability over the next 15 years.

In fact, the reduction of poverty in Haiti, which affects almost 60 percent of the population, must remain the central goal of any government policy. However, the slowdown in economic activity these past few years, combined with the deterioration of some economic indicators like inflation and the exchange rate and the deterioration of food security, both in rural and in urban areas, especially in the wake of Hurricane Matthew at the beginning of the fiscal year 2016-2017, tends to reinforce the evidence of an increase in the level of extreme poverty in the country. Indeed, inflation has more than doubled in the economy from May 2015 to May 2016 from 6.6% to 15.1%. While the rate of exchange, for its part, has increased by more than 25% over the same period. From another perspective, the latest report of the Coopération Nationale de la Sécurité Alimentaire (CNSA, 2015) reveals that the number of people in food insecurity in urban areas has reached 30%.

Despite some efforts, which resulted in some reduction in extreme poverty in Haiti from 31 to 24% between 2000 and 2012 (World Bank, 2015), this rate remains the highest in the region with strong inequalities. Social protection, microfinance and graduation programs carried out by NGOs, governments or financial institutions have not yet had the expected impact. Therefore, the fight against extreme poverty is essential for reducing inequalities and improving the living conditions of more than 2.5 million Haitians who are stuck in very precarious conditions and who live on less than 1 American dollar per day. It is in this context that the Haitian Government, through the Strategic Plan for the Development of Haiti (PSDH), intends to address this phenomenon, in line with objective one of the 2030 Agenda for Sustainable Development (ASD-2030). It is in this context that the Copenhagen Consensus Center wants to conduct analyses on the costs and

benefits of an expansion of the graduation program and microfinance as part of its "Haiti Priorise" project which seeks strategic and intelligent solutions to reduce poverty at different levels and improve living conditions in Haiti.

### Interventions

Interventions recommended in this study to address the issue of the fight against poverty and extreme poverty, consist of two elements:

- a) An expansion of the program of *graduation*;
- b) An expansion of *microfinance*.

### Graduation

This intervention is an expansion of the Fonkoze and BRAC financial institutions' pilot experiment but with a wider coverage over a longer period for more significant impacts. It is a set of interventions that enable beneficiary families in the most vulnerable areas to graduate from an extreme level of poverty to a level that will allow them not only to be eligible to participate in microcredit but also to develop sustainable livelihoods. This graduation program, which should affect 10,000 beneficiary families over 10 years, includes:

- a) Short-term support in the form of cash for food during the gestation period, until the activity can generate capital in the form of physical assets for income generation;
- b) Access to savings services;
- c) Training sessions on the organization and how to undertake income-generating activities;
- d) Additional support such as palliative and preventative health care.

The cost data are taken from the assessment of the costs of a mini-expansion of the Fonkoze Chimen Lavi Miyò (CLM) graduation program made by Grameen Foundation and revised by Sinha and Roy (2010) on behalf of M-CRIL. The evaluation indicates a cost of \$1,492 per beneficiary (2009), which this study has inflated in local currency (2015). With a rate of graduation of 97% in 2013 (Fonkoze, 2014) and almost 100% in previous years, it is estimated that by 2025 more than 9,500 families will leave the circle of extreme poverty through this program.

## Microfinance

This intervention calls for an expansion of the microcredit program at a preferential rate, which will benefit women heads of households. It concerns both those already exercising a gainful activity (existing entrepreneurs) and those who wish to and who have the ability to conduct an economic activity (new entrepreneurs) rather than receive monthly subsidies in the form of cash transfers for food and other transfers.

In exercising her own economic, income-generating activities, the woman, the head of the family, will be better able to protect herself against inflation than when receiving a monthly allowance, the value of which diminishes with each wave of inflationary pressure on a monthly basis, if there are no adjustments in this regard. The loan amount will be 10,000 gourdes and repayment will be spread over a period not exceeding six months with an interest rate of 35% per year. This intervention will be carried out in the areas with the highest percentage of households in food insecurity in the country's 10 departments. The objective of this intervention is to reach about 4% of the poor population over 10 years at a rate of 2,500 families a year. Street cookery, frying, trade in food supplies, haute couture and fishing are, among other things, economic activities that could generate significant revenues to women micro-entrepreneurs. The cost data are calculated from the 2006-2010 census data on the microfinance industry in Haiti conducted by USAID (2011) identifying the different types of costs associated with running a microcredit program in terms of the percentage of the credit portfolio or percentage of the average credit granted to a beneficiary.

## Factors of Implementation of Targeted Interventions

### Graduation Expansion Costs

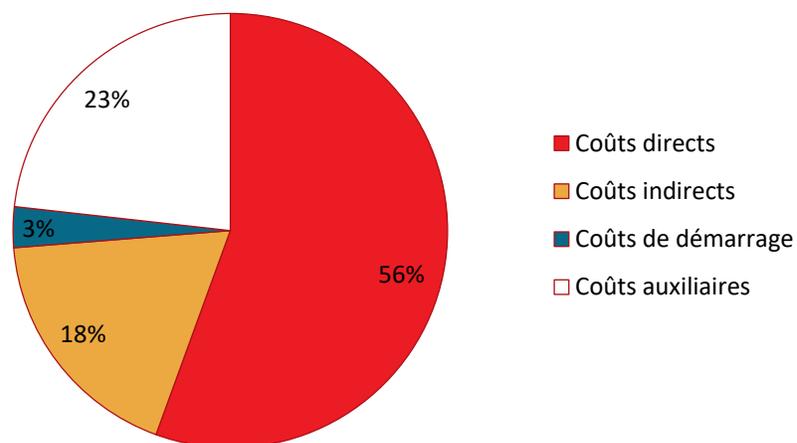
Implementation of the graduation program in Haiti is linked to a whole range of costs, as is the case in other developing and low-income countries where the pilot program has been implemented as part of this overall CGAP-Ford Foundation effort to understand how social safety nets, livelihoods and microfinance can be synchronized to create paths to exit the poorest extreme poverty.

Using the data from the Grameen Foundation in 2009, Sinha and Roy (2010, p. 4) identify three categories of costs associated with the implementation of the graduation program, namely:

- a) Direct costs: Those related to support and direct granting of economic assets such as goats, poultry and merchandise to generate income for each beneficiary. These costs account for 55% of the total program implementation costs.
- b) Indirect costs: Those relating to administrative expenses and contingencies at the head office level. These costs account for 18% of total costs.
- c) Start-up costs: Those related to preliminary investigations and the process of selection of beneficiaries. These costs represent 3% of the total costs.
- d) Auxiliary costs: Those related to the provision of health services and other social development activities. These costs represent 23% of the total costs.

The expansion of the graduation program has a total cost per beneficiary in the order of 77,559 HTG with a 5% reduction rate and taking into account the 2015 cost data calculated from cumulative inflation since 2009.

Figure 1: Segmentation of the Costs of Expansion of the Graduation Program



### Microfinance Expansion Costs

Unlike the graduation program, the three types of costs facing microcredit institutions are:

- a) Operating costs: These costs include staff costs, depreciation, amortization, and administrative expenses. They represent on average about 35% of the total credit per beneficiary.

- b) Financing costs: These costs are associated with interest or potential fees paid to sources of funding or donors. These costs represent on average about 4% of the total cost of the total credit per beneficiary.
- c) Default costs: These costs refer to the costs associated with the percentage of the loan portfolio that are not reimbursed. They are estimated at about 2% of total credit per beneficiary.

Using data from 2006 to 2010 on the USAID Haitian Microfinance Industry Census (2011), the implementation of an expansion of the microfinance program in Haiti shows a total cost per beneficiary on the order of 4,074 gourdes out of every 10,000 gourdes of credit allocated.

### Justification for the Intervention

#### The Benefits of an Expansion of the Graduation Program

The experiment made with the pilot program in Haiti (2007-2008), followed by a mini-expansion in 2009 by Fonkoze, demonstrates the capacity of the graduation program to raise a good part of the population from this vicious circle of extreme poverty (Simanowitz and Huda 2009). The benefits of the graduation program are not only economic but also, and above all, social.

In fact, the economic benefits include ownership of productive assets, yields on productive assets such as goats and poultry, and possession of other financial and economic assets. Whereas social benefits are those related to better living conditions, such as better access to housing, access to health and education for children, improved sanitation and improved food security. In a neutral or realistic scenario, and assuming that all the benefits last for 5 years, benefits by beneficiary are estimated between 92,872 gourdes and 460,816 gourdes, depending on the discount rate.

Table 1: Breakdown of Benefits by Beneficiary Estimated with a Discount Rate of 5% Over the 5 Years Following Graduation (in HTG)

	Year 1	Year 2	Year 3	Year 4	Year 5
Continuous/current benefits - Average income - Better housing - Food security - Non-malnourished child - Improved sanitation	5,379.39	-	9,165.37	-	6,237.42
Static benefits - Productive assets - Savings - Bed - House	-		-	-	26,129.60
Long-term benefits - Child education	33,689		61,378		48,641

### Benefits of an Expansion of Microfinance

While some researchers and analysts believe that an expansion of microcredit does not really allow beneficiaries to increase their income substantially (Jameel, 2015), notwithstanding an expansion of the company's activities, other institutions such as the World Bank, the IMF and Grameen Bank argue that microfinance is a promising sector capable of overcoming the vicious circle of extreme poverty.

Benefits of an expansion of microfinance in Haiti are estimated at two levels:

- a) Benefits to the microfinance institution: This is a question of the revenue earned by microfinance institutions from the interest rate on loans and other benefits related to service charges or late payments. Using the data from USAID (2011, p. 27) from 2006 to 2010, the average rate of return on the credit portfolio is 48%, which shows an estimated benefit per beneficiary between 4.126 and 4.487 gourdes to the institution on every 10,000 gourdes of credit granted, depending on the discount rate (Appendix 3).
- b) Benefits to beneficiaries: This refers to returns on loans contracted by beneficiaries calculated on each borrowed gourde, using the Chemin (2008) model applied in the case

of Bangladesh. We consider this model due to the fact that in the case of Haiti consumption gains are assumed not to be zero, and this is what drives many micro-entrepreneurs to find access to credit, for which average borrower growth per year is 2.93% (USAID, 2011, p.38). According to this model, on each gourde borrowed the beneficiary earns about 2.8%. This explains that, in a scenario where the consumption benefits are not zero, the benefits per beneficiary are estimated between 4,376 and 4,759 gourdes for each 10,000 gourdes of credit contracted.

### Description of Beneficiaries and Unmeasured Benefits

#### a) Profile of Beneficiaries

One of the first characteristics of the beneficiary of the graduation program is that she is a woman, head of household, living in extreme poverty, that is to say on less than one US dollar per day. In addition, the beneficiary of the graduation program meets the following profile:

- Having no income generating assets;
- Having no school-age children attending school;
- Having no free access to food and often being hungry;
- Having no access to health care or not knowing how to access it, and;
- Receiving no assistance from any NGO

This is a question of identifying the poorest of the poor, through a small survey, to boost them to a level where they can participate in microcredit programs.

Unlike the graduation program, microfinance program beneficiaries are women, heads of households, living in poverty, that is to say on less than \$2 per day, and also women already engaged in income-generating economic activity, such as street cookery, small trade, haute couture, fishing, etc. In addition, the recipient of the microfinance program meets the following profile:

- Having at least one child with difficulty in accessing education;
- Being unable to eat three times a day and having a habit of being hungry;
- Having no access to health care, and;

- Receiving no assistance from any NGO

The identification of these beneficiaries will be made from an analysis of their files, in accordance with the form as specified by the credit institution.

#### b) Unmeasured Benefits

It is clear that the graduate program and microfinance have a set of benefits that are not quantified and may be difficult to quantify. In addition to net job creation, these two programs undoubtedly promote the emancipation of women (Chemin, 2008, p. 482) through a framework enabling them to leave their restricted world and enter a new dynamic of socialization or social integration, of networking, thus enabling them to improve their well-being. In addition, certain program activities directly impact the training of women beneficiaries on a professional level in terms of business skills, which they can even pass on to their offspring.

Among other things, studies have shown that the graduation program and microfinance generate a series of positive externalities in the villages or localities of intervention. However, in the case of Haiti it would take much more research to better understand the different dimensions and extent of these unmeasured benefits.

**Table 2 : Costs and Benefits by Beneficiary**

Interventions	Benefit (HTG)	Cost (HTG)	Benefit-cost ratio	Data quality
Graduation	283,649	77,559	3.66	Strong
Microfinance	4,673	4,668	1.15	Average

*Notes: All figures are based on a discount rate of 5%*

#### **Mechanisms for Implementation of Interventions**

The implementation of an expansion of the graduation program and microfinance must be achieved through a public-private partnership, that is, between the Haitian State and a set of other private institutions. In light of the risks associated with reimbursement by the beneficiaries, the state cannot in any way assume responsibility for meddling with the possible implementation of such programs, but it could play a regulatory role in the initiative. In this sense, the experiment

already done with Fonkoze makes it the best institution that could manage and implement such programs under the supervision of the Haitian State.

Fonkoze: The largest microfinance institution in Haiti, working both as an NGO and a nonbank institution and planning to reach 90,000 borrowers by 2018 (Fonkoze, 2014, p.3). Fonkoze offers a whole range of financial products<sup>1</sup> to its clients, which make it, among other things, one of the closest microfinance institutions to the most vulnerable.

In 2007-2008, Fonkoze was the pioneer of the graduation pilot program in Haiti. This program, called Chimen Lavi Miyò (CLM), was implemented with 150 clients in three remote areas of the country, namely Boucan Carré, Pointe-à-Raquette and Trou du Nord. Since then, more than 1,000 women have graduated from this program and are participating in the Fonkoze "Ti kredi" microcredit program.

On the other hand, it is well known that the state faces enormous financial difficulties with domestic revenues which reached the bar of 65 billion gourdes for the first time in 2016 (BRH, 2016), that is, still less than a billion dollars. Private capital should therefore be sought, and it is in this context that the State could consider partnerships with development institutions such as USAID, the Caribbean Development Bank and other organizations working in the field to form a fund to support the implementation of these programs. This fund can be managed directly by the BRH or the Banque Nationale de Crédit (BNC).

### Potential Risks

- a) Institutional: The risks associated with the establishment of such programs with international or regional partners reside mostly in the weakness of our institutions in Haiti. This makes the sustainability of certain safety net programs and the inability of the State to respect its commitments to international partners difficult.
  
- b) Economic: Other risks can be analyzed from an economic perspective, insofar as even the country's economic context can affect the rate of default and increases the portion of the

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<sup>11</sup> Ti Kredi, Solidarité, Développement d'Entreprise, Prêt PME, Zafèn, Services d'Épargne, Services de Transfert, Chimen Lavi Miyò, Épargne Jeunesse and Crédit Pilot.

portfolio at risk. The more investment decreases in the economy, the more unemployment tends to increase and the more the rate of growth of consumption tends to slow down. When consumption slows, all businesses suffer with lower turnover.

- c) Political: Another risk is obviously the political upheavals which are never favorable to the success or sustainability of certain government initiatives. Political instability makes institutions weak and could put investments in both programs at risk for very low returns, both on the side of the borrowers and on the side of the lending institutions.

## List of Acronyms and Abbreviations

BCA	Benefit-Cost Analysis
BRAC	Bangladesh Rural Advancement Committee
BNC	Banque Nationale de Crédit [National credit bank]
BRH	Bank of the Republic of Haiti
ECLAC	Economic Commission for Latin America and the Caribbean
CGAP	Consultative Group to Assist the Poor
CLM	Chimen lavi miyò
CNSA	Coordination Nationale de la Sécurité Alimentaire [National food security coordination]
DALYs	Disabilities Adjusted Life Years
ECVMAS	Enquête sur les Conditions de Vie des Ménages après le Séisme [Survey on household living conditions after the earthquake]
Fonkoze	Fondasyon kole zepòl
SDG	Sustainable Development Goals
ONPES	Observatoire National de la Pauvreté et de l'Exclusion Sociale [National observatory on poverty and social exclusion]
GDP	Gross Domestic Product
CBR	Cost-Benefit Ration
TUP	Targeting the Ultra-Poor
USAID	United States Agency for International Development
NPV	Net Present Value
UN	United Nations.

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## 1. Introduction

Several international institutions and governments in the region continue to express their concern about the slowdown of efforts these past years to reduce the phenomenon of poverty in the region of Latin America and the Caribbean in an already difficult international economic context. While efforts have been made by governments, in collaboration with international partners, to reduce the extreme poverty line from 24.5% in 2003 to 11% in 2013 and lift some 76 million people out of poverty (World Bank, 2016, p.37), 39% of the population was still at risk of falling into poverty, and the expansion of the middle class has slowed down, according to World Bank experts.

Indeed, the two consecutive years of negative economic growth in the region explain how slow progress has been with respect to the reduction of poverty through wealth creation and implementation of safety net programs. After a decade of dynamic and inclusive economic growth, the Latin American and Caribbean region has entered its fifth year of economic slowdown and its second year of GDP contraction in 2016. In fact, the deterioration of the external situation, combined with the domestic difficulties, brought down regional growth to -0.7% for 2015, and economic activity is expected to fall to -1.3% in 2016 (World Bank, 2016, p. 37). On the other hand, if the poverty rate did not increase in the region in 2013 and 2014, the picture was changed in 2015, according to the projections of the UN Economic Commission for Latin America and the Caribbean (ECLAC, 2016). Indeed, according to the agency, the regional poverty rate reached 29.2% against 23.3% in 2014, equivalent to 175 million poor.

In Haiti, the situation is much more serious than in the rest of the region; nearly 60% of the population lives below the poverty line, and 24% are in extreme poverty. The increasing deterioration of the main socioeconomic indicators, the upheavals of the 2010 earthquake, which took nearly 120% of GDP, the damage caused by the latest hurricane Matthew, for which losses are estimated at 2.8 billion dollars, or about 30% of GDP and the shutdown of a set of safety net programs<sup>1</sup>, which had significant impacts on the living conditions of some

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<sup>1</sup> Ti manman cheri, Kore etidyan, panye solidarite, Kore andikape, etc.

marginalized families living in remote areas of the capital all the same (ONPES, 2013) are, among others, factors that have exacerbated the phenomenon of poverty in the country. This explains, among other things, that the percentage of households living in food security at the urban level is rising, with higher rates in Cité Soleil (66%), Gonaïves (49%) and Jérémie (48%) (CNSA, 2016). In addition, the slowdown in the pace of economic growth since 2014 shows that wealth is not created for the net creation of jobs and the improvement of living conditions in the country.

Notwithstanding the difficult economic and political context, microfinance institutions continue to try to carry on and provide services to many families as part of their contribution in the struggle for the reduction of poverty in Haiti. In fact, according to the latest census of the microfinance industry in Haiti made by USAID (2011), September 30, 2010, the credit market was valued at 4.7 billion gourdes in terms of gross portfolio, including 1.78 billion gourdes for *caisse populaires*, and the number of micro-enterprises and/or small operator beneficiaries (borrowers) of microcredit was estimated at 208,998 (about 5% of the working population), of which 48,905 are *caisse populaire* borrowers. With an average growth of 2.9% per year (USAID, 2011, p. 38), the number of borrowers should now clear the bar of 248,000 in 2016, according to our estimates.

In addition to microcredit programs, another program to combat extreme poverty was tested in Haiti with the Fonkoze "graduation," under the label "Chimen Lavi Miyò" (CLM) in partnership with Concern Worldwide, CGAP, Plan International, BRAC and Zanmi Lasante, as part of a global effort by the CGAP-Ford Foundation to raise the poorest of the circle of extreme poverty towards the possibility of coming into the microfinance sector, once past the stage of graduation. In 2013, the CLM program welcomed 610 new women beneficiaries and continued to serve 1,101 others. According to Fonkoze (2014, p. 10), 97% of women beneficiaries completed the program in 2013, allowing them to live a safer life, to provide their families at least two meals a day, to send all their children to school, to maintain a certain level of income and an active savings account, and to develop a solid plan for the future.

It is in this context that, in the framework of the search for intelligent solutions to fight against poverty and extreme poverty in Haiti, this work analyzes the costs and benefits of an expansion

of microfinance and the graduation program. The rest of the study is divided into two main parts. The first part concerns a literature review of studies on the involvement of graduate programs and microfinance in poverty reduction and the level of costs and benefits of implementing these programs through case studies.

## 2.Literature Review

### 2.1. Graduation

The limitations of microfinance as a development program have always been at the center of reflections and debates on policies to combat extreme poverty. Microfinance is criticized for not being able to reach the most vulnerable for two reasons. First, there are "few innovative approaches from NGOs, particularly for the extremely poor, and then microfinance has caused the exclusion of the poorest in non-financial interventions" (Sulaiman & Misha, 2016, p. 7). It is in this context that other more robust programs to combat extreme poverty emerged in the 2000s, notably "Targeting the Ultra-Poor" (TUP) implemented by BRAC in Bangladesh, commonly called the graduation program, led by the Consultative Group to Assist the Poor (CGAP) with financial assistance from the Ford Foundation. This graduation approach was launched as an amalgamation of the experiences of microfinance, and 10 pilot programs have been implemented in about 10 countries, namely Ethiopia, Haiti, Peru, Pakistan, Ghana, Honduras, India and Yemen since 2006.

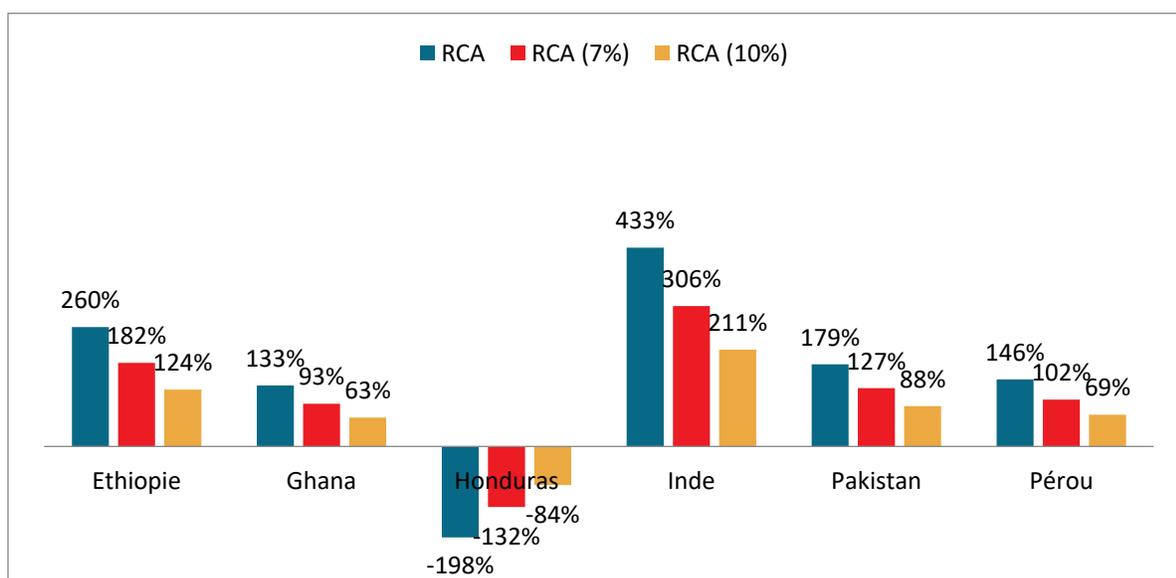
Many studies were conducted to measure the impact of graduation programs in several countries as well as the costs associated with the implementation of these programs. After an expansion of the program in Bangladesh, a randomized controlled trial was conducted to measure the direct and indirect impacts of interventions. Bandeira et al. (2013) found that the program increases the incomes of beneficiary households by 34% compared to the control group at the end of the second year of interventions. What is interesting is that the benefits are maintained two years after the interventions with treatment households having income levels 38% higher than the control group.

From another perspective, Sulaiman and Misha (2016) led an analysis of the costs and benefits of graduation programs in Bangladesh. According to their results, the cost-benefit ratios of these

programs are between 2 and 3; compared more specifically to the TUP program, including cost-benefit ratios with different reduction rate levels (3% 5%, 10%), they are between 1.21 and 5.76, while assuming different levels of continuation of consumption gains (Sulaiman and Misha, 2016, p. 25). This translates into relatively high rates of return on investment in poverty reduction.

Further, Banerjee et al. (2015) conducted randomized TUP assessments in six countries and showed evidence of positive impacts on beneficiaries' livelihoods in five of the six pilot programs at the end of the intervention with return on investment of between 133% and 433%, according to their analysis of costs and benefits (appendix 4).

**Figure 1 : Cost-Benefit Ratios of Graduation Programs in the Six RCTs**



Source : Banerjee et al. (2015)

The benefits considered in Banerjee et al. (2015) and Sulaiman and Misha's (2016) calculations concern only consumption gains, savings and productive assets. This means that the benefits to child education and health have not been considered. This is what we have added to our work and that which has enabled us to improve the cost-benefit ratios associated with an expansion of the graduation program in Haiti.

In fact, no studies have yet evaluated the impact on the formation of income of beneficiaries of the *Fonkoze "Chimen Lavi Miyò"* (CLM) graduation program in Haiti. However, to date, two major evaluations of this program have been conducted and have shown evidence of the positive

impacts of the program in improving the living conditions of the beneficiaries. The first evaluation of the pilot phase showed that 93% (140 out of 150) of beneficiaries saw their economic situation significantly improved and were eligible to participate in Fonkoze's microcredit program (Ti kredi) (Simanowitz and Huda, 2009). The second part of the evaluation conducted during the expansion phase of the program (180 beneficiaries) showed significant changes in the beneficiaries' ability to improve their livelihoods and living conditions in terms of better housing, access to goods, improved child education, income status and social status (Pain et al., 2015).

**Table 1 : Overview of the Results of the CLM Evaluations in Haiti (2007-2012)**

Benefits (Change in Condition)	Percentage of Families Benefiting	
	Pilot-2007	Expansion -2012
Improved housing	20%	43%
Straw roofing	60%	9%
Metal roofing (sheet metal)	40%	92%
Dirt floor	98%	81%
Cement floor	2%	20%
Owner of house	73%	87%
Landowner	44%	62%
Sleeping on the floor	39%	23%
Sleeping in a bed	61%	77%
Sanitation (latrine)	2%	43%
All children in school	10%	69%
Literate	18%	27%
Income improvement	-	54%
Increased food consumption	-	45%

Source: Concern Worldwide and Fonkoze (2014)

The program continued in 2013 and, according to the data provided by Fonkoze, the CLM program had 610 women beneficiaries, of whom 97% of women beneficiaries completed the program to enter the category of clients eligible for access to loans from the microcredit program (Fonkoze, 2014). However, to calculate the benefits of an expansion of microfinance, we used the data from the two evaluations mentioned above.

## 2.2 Microfinance

Microfinance is often considered to be a tool that contributes significantly to the reduction of poverty. This is the reason why many studies in this area address the evaluation of its impact on poverty reduction (De Silva, 2012, Hermes and Lensink, 2011, Rooyen et al., 2012). However, when it comes to actually determining the impact of microfinance on the reduction of poverty, the results of the studies are very divergent. In fact, some studies suggest that microfinance programs are far from raising the poorest from the circle of extreme poverty (Coleman, 2006, Takahashi et al 2010, Chemin, 2008). Whereas other actors involved in the sector and international organizations, such as the World Bank, Grameen Bank and USAID, as well as other researchers (Hiatt and Woodworth, 2006, Imai et al., 2012) maintain that poverty can be fought through a strengthening of microcredit programs in low-income and developing countries, because, according to them, the latter sector has significant impacts on poverty reduction.

In fact, randomized evaluations of seven countries around the world have shown that microcredit does not have transformative impacts on poverty, but it can provide low-income households more freedom in optimizing strategies to earn money or in the manner of consuming and investing (Jameel, 2015, p.1). These results go hand in hand with six randomized microcredit assessments conducted by Banerjee and al. (2015, p.19), which found little evidence in terms of effects of treatment in investment with periods of relatively long management, such as education and health, and also little evidence in terms of transformation impacts on social indicators.

Studies assessing the real impacts of microfinance on poverty reduction in Haiti are very rare despite the predominance of microfinance institutions in Haiti, which increased to 200 in December 2010, spread across 175 caisses populaires and about 20 NGOs/Associations/Foundations (USAID, 2011, p. 6). However, reports have shown that the sector's implications for the country's financial sector are considerable. For example, USAID (2011) is studying the socio-economic contribution of microfinance institutions in Haiti based on the direct jobs created, the direct added value generated on credit portfolios and wage incomes distributed; but, it has not investigated possible direct implications of microfinance for poverty reduction in the country. However, taken case by case, reports by microfinance institutions such

as those of Fonkoze (2014) seek to give the impression that microcredit plays a very important role in the fight against poverty, particularly in the most remote areas of the country where access to banking services is difficult. However, these reports do not constitute true research on the impact of microcredit on poverty reduction in the country.

Table 2: Breakdown of Fonkoze Microcredit Programs (2013)

Programs	# of clients	Average loan (\$US)	Credit portfolio (\$US)	Percentage of graduated clients
Ti Kredi	11,058	35	846,913	84%
Solidarité	57,149	207	23,594,998	
Developpement d'entreprise	366	3,562	1,588,823	
Prêt PME	59	28,581	3,687,175	
Zafèn	386	1,712	186,650	
Crédit pilot (Youth)	220	33	7,178	
<b>Total</b>	<b>69,238</b>			

Source: Fonkoze annual report (2014)

Fonkoze has an impact assessment team, called the "Social Impact Team," that regularly conducts evaluations of the various credit programs, including "Ti kredi" and "Solidarité" through interviews with beneficiaries. In 2013 with a sample of 197, the team's evaluation revealed that 9% of "Ti Kredi" clients left the circle of food insecurity and 9% had the ability to acquire productive assets (Fonkoze, 2010, p. 16). Regarding the "Solidarité" program, with a sample of 137 clients, the assessment team revealed that 50% of the clients were in a food security situation and 14% could send all their children to the school, with significant progress in improving their living conditions (Fonkoze, 2014, p. 17).

### 3. Literature Review on the Impact of Microcredit in Developing Countries

The microfinance experiment was undertaken for the first time in 1976 by the Bangladeshi economist Yunus, who showed the role of financial intermediation in poverty reduction and in

the generation of wealth. Microcredit is then a part of this great apparatus<sup>2</sup> which also includes microinsurance, savings and money transfers. The pioneering experiments of Grameen Bank and Banco Sol have been profitable and have contributed to rapid growth in global microfinance coverage (more than 80 million people were impacted in 2005 with projections of 100 million). This sector benefited from the support of international institutions, such as the UN, and development agencies, such as USAID. In 2004 during the 10th Francophonie Summit, many southern countries' heads of state committed themselves to supporting microfinance institutions and ensuring their integration into the traditional financial circuit.

Studying the impact of microcredit on beneficiaries first involves verifying whether the set objective is reached. Microcredit projects target poor populations who are generally not part of any formal structure of the economy. It should be remembered that the objective of microcredit is to provide loans to those who are excluded from the formal (banking) system, and the informal sector can render the monitoring of borrowers ineffective and may lead to a concentration of credit offers. So, this significantly reduces the likelihood of achieving the objective and MFIs tend to serve reliable borrowers at the expense of the poor.

The other aspect in the evaluation of a microcredit project is the scientific methodology to adopt. The first impact studies were mainly empirical studies of a country or a community, and the methodology used was mainly comparison of the socio-economic profile of beneficiaries with that of non-beneficiaries. This methodology has been the subject of criticism. Other researchers have used statistical induction methods, and the econometric complications have been considerable. Thus, could the impact of a microcredit project on a sample of borrowers be studied and their welfare situation assessed if they had not been beneficiaries of a microcredit project?

The first set of assessment tools was launched as part of the AIMS<sup>3</sup> project carried out by USAID in 1995. Although the reports for this project date back more than 20 years, it remains the undisputed tool for assessing the impact of microfinance. Five tools have been proposed which

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<sup>2</sup> Microfinance is perceived as a structure bridging the gap between financial services and those excluded from the banking sector.

<sup>3</sup> Assessing the Impact of Microenterprise Services

are quantitative and qualitative methods (impact study, client exit study, analysis of loan utilization, services and savings over time, customer satisfaction survey and client empowerment analysis).

The analysis proposed by Sebstad and Chen (1996), covering a sample of thirty-two impact studies and forty-one different projects in twenty-four countries in Latin America, Asia, and Africa, has taken into account the type of impact on the activity of microenterprises, the welfare of beneficiaries at the individual or household level, and even of the communities to which they belong. For the microcredit component, the impact is significant, referring to three of the six studies that address this issue. For the loan utilization tool, the allocation for food or basic necessities has been reduced.

Several studies in countries with different economic contexts have shown that microcredit programs for poor communities tend to have a positive effect on investment in self-employed activities but less on total consumption or overall income (Attanasio et al., 2011, Augsburg et al., 2013). However, research show that microcredit is often used for purposes other than investment. These loans also help people cope with decline in their incomes by putting at their disposal the funds needed to cope with some unpredictable shocks (death, illness, etc.).

Researchers Banerjee, Duflo, Glennerster and Kinnan (2010) analyze the impact of access to credit by randomizing the establishment of new MFI agencies for women in the Indian community of Spandana. Crépon, Devoto, Duflo and Parienté (2011) evaluate the effect of rural credit access by randomly establishing new MFI agencies in Al Amana (Morocco). Field, Pande, Papp and Rigol (2011) seek to analyze how repayment conditions affect entrepreneurship among the poor (in India). Giné, Yang and Goldberg (2011) address the impact of a personal identification system on loan repayment in Malawi.

According to Aldeghi and Lautié (2011), microcredit contributes to improvement in the budgetary situation of 75% of borrowers, who have at least a positive development in their financial situation. In other areas, 35% of people surveyed have a better quality of life (measured by improved morale and stress), 22% of people surveyed have a positive change in their professional situation, 12%, moreover, note a positive impact on housing and only 7% on access

to care. Furthermore, microcredit results in few negative impacts. 13% of people say they have encountered difficulties related to the monthly repayments. Only 4% of people surveyed noted negative impacts, and very few of them are related to deterioration of their situation that could be linked to this structure.

According to the results of a study on the social and economic impact of microcredit (in the case of an MFI in Argentina), microcredit contributes to the formation of a personal savings: 49% of beneficiaries have savings compared to 26% of the interviewees. In addition, with respect to household vulnerability, the effect of microcredit is also positive: 2% of beneficiaries had to restrict their diet during a period of the year, while 12% of non-beneficiaries of a microcredit program suffered this shock. The analysis by Zohoré (2009) shows that microcredit in South-West Cote d'Ivoire has a substantially positive impact on the empowerment of women and variable effects on households and household consumption, as well as in the areas of health and education. On the other hand, the impact of microcredit on savings cannot be confirmed.

A study led by the World Bank in the villages of Bangladesh has confirmed the positive impact of microcredit on these communities. This study, which counts more than 1,500 households from 87 communities interviewed three times over a period of 20 years, concludes that microcredit raises income levels and the level of education of children.

Pariente (2014) questioned the effectiveness of microcredit in Morocco and analyzed the impact on the living conditions of beneficiaries by an experimental approach used in five countries (Bosnia, Mexico, India, Mongolia and Ethiopia). According to the results of this study, the effects are generally limited to the level of consumption, health and education spending, with little start-up of new activities; however, there was expansion of activities. This approach has had other effects on the countries mentioned above (positive effects on food security, asset ownership, activity and income).

Although it is difficult to measure the impact of microfinance on a target population without any bias, microcredit programs around the world have a positive impact on social concerns: the living conditions of households (beneficiaries) have distinctly improved, rate of school attendance is on the rise and many more people have access to health care. From an economic point of view,

incomes have increased in some cases, and incomes have become more stable, which has a positive effect on reducing the (long-term) vulnerability of beneficiaries to external and unpredictable shocks. Also, the economy can benefit as a whole with the reduction of the informal rate.

## 4. Calculation of Costs and Benefits

### 4.1 Graduation

#### Costs

The methodology used to calculate the cost of an expansion of the graduation program is based on an estimate of the different costs of the program in Haiti made by the Grameen Foundation and revised by Sinha and Roy (2010) on behalf of M-CRIL. Data on the different cost categories mentioned above showed a total cost per beneficiary of US \$1,491 in 2009, or about 62,309 gourdes at the time. Using the cumulative inflation since 2009 (1.35), the total cost of implementing the graduation program per beneficiary is brought to 84,403 gourdes in 2015. With a counterfactual of 50% for year zero and 25% for the previous two years, the net present value (NPV) of the cost per beneficiary is between 69,521 and 80,172, depending on the rate of reduction (see table (6) summary and appendix 1).

Another point strengthening the case is that an estimate of the costs of implementing the graduation program in Haiti in purchasing power parity (PPP, 2015) shows a level (\$3,961) higher than those of India but almost similar to the average of Ghana, Ethiopia, Pakistan and Peru (\$4,209, 2015 PPP). This means that graduation programs in Haiti in the future will be no different from other programs implemented anywhere.

#### Benefits

A somewhat nuanced approach was used to calculate the benefits of expanding the graduation program. As indicated in Table 1 above, the graduation program displays a variety of benefits, divided into three categories, namely current and continuing benefits, static benefits and long-term benefits. Unlike Banerjee et al. (2015) and Chemin (2008), our work considered the

benefits to education and health. This led to a significant improvement in the cost-benefit ratio (appendix 2).

The estimation of benefits is made over a 5-year period from a base year (0), and secondary data were taken from the evaluations of the Fonkoze CLM graduation program, some of which are presented in Table 4 below, with other data taken from the Global Burden of Disease (2013), ECVMAS (2012) and the market itself. The estimation of current and continuing benefits takes into account the average income of beneficiaries calculated on gains over one year with less than \$1 per day, between \$1 and \$2 per day, and more dollars per day, while assuming a 10% decline over the entire period, since the graduation program is based on a poverty index income score. It also takes into account the gains related to better housing calculated from the CLM assessment data and the difference between the price of the two levels of home rental, and, finally, health benefits, which include better sanitation, reduction of severe malnutrition in children and food security, calculated from the DALY approach of the Global Burden of Disease with a 100% to 105% counterfactual over the entire period.

Static benefits, which include productive assets, savings and the value of a bed and a house, were calculated using data from the evaluation of the Fonkoze CLM program and the market price of a bed and of a house made from tuff and concrete with an assumption of 33% decline of the benefits at the level of productive assets and savings. And finally, the long-term benefits concerning education calculated on the basis of data from the CLM evaluation, ECVMAS (2012) and the income gains related to an increase in the number of school years.

The methodology for the estimation of benefits is structured around four phases:

- a) The first phase consists of calculating the different percentages of beneficiaries of any benefit over the period (2007-2012) from the evaluations of the Fonkoze CLM program of the pilot phase (year zero) passing through the "graduation" (2009) to the expansion phase (2012).
- b) The second phase consists of measuring the benefits over the period considered from existing data and calculated data, using the above percentages. Existing data are those related to average incomes, the value of better housing, savings and the value of the

house and bed. Whereas the calculated data are those relating to the benefits related to education for children and health, while also using the abovementioned percentages.

- c) The third phase consists of measuring the benefits over the period considered from the counterfactual scenarios on the different levels of benefits (current/ongoing, static and long term). As mentioned above, a counterfactual ranging from 100% to 105% is used over the period considered for current/ongoing benefits (income, housing, health). Whereas for static benefits (productive assets, savings, bed, house not included), a 37% counterfactual is used, assuming some degradation of these benefits after graduation (Pain et al., 2015). While for long-term benefits that relate to gains to children's education, a counterfactual ranging from 10% to 37% is used over the period.
- d) The fourth phase consists of calculating benefits per beneficiary for each benefit category over the period considered, using the results from the second and third phase by benefit. This phase then allows us to calculate the net present value of the total benefits at different discount rate levels (3%, 5%, 12%) of DALY, before arriving at the different benefit scenarios (neutral, optimistic, conservative). The conservative scenario is the one inspired by Banerjee et al. (2015), where we calculated the net present value of the benefits without taking into account the impact on education and health. This of course gives a cost-benefit ratio (1.12) lower than that found in the neutral scenario (3.66), where all the benefits have been considered (Appendix 2).

## 4.2. Microfinance

### Costs

As noted above, the various costs associated with the implementation of the microfinance program, depending on the credit portfolio, relate to operating costs (35%), financing (4%) and default (2%). The USAID data from 2006 to 2010 on the first two costs and the 2% absorption of default allow us to easily calculate the total cost per beneficiary from the credit size (HTG 10,000) per beneficiary by multiplying the amount of the credit by the different percentages of each cost. The calculations indicate a total cost per beneficiary of 4,045 on each HTG 10,000 loan.

## Benefits

The benefits of microfinance are defined at two levels: on the microfinance institution side and the beneficiary/client side. The calculation of benefits is based on the average rate of return on the amount of credit in the sector in Haiti (48%) found using USAID data (2006-2010). This is added with a default rate of 2% for a credit level of HTG 10,000. Thus, the estimate of the benefits of the microfinance institution is between HTG 4,202 and 4,487 by beneficiary depending on the rate of reduction. Whereas on the beneficiary side, two scenarios were considered to calculate the benefits. The first consists of considering that there is no consumer benefit based on the studies of six JPAL countries (2015) and the other scenario is to consider that there is a 2.8% gain on each gourde borrowed based on the model of Chemin (2008). In the first scenario, the consumer benefits are zero and are equal to those of the microcredit institution. While in the second scenario, consumer benefits are calculated from the 2.8% gain on each gourde borrowed at different discount rate levels. The total benefits of microfinance by beneficiaries are found by adding those of the beneficiary and of the microfinance institution (Appendix 3).

## 5. Conclusion

Our work dealt with analyzing the costs and benefits of an expansion of the graduation program and microfinance with a view to finding intelligent solutions in the struggle against poverty at different levels in the country. A very nuanced approach in calculating the benefits of the graduation program showed that the net present value of the benefits of an expansion of the program is estimated at 283,649 gourdes per beneficiary with costs in the order of 77,559 gourdes. This shows a cost-benefit ratio of 3.66, using a discount rate of 5%. This reflects interesting returns on investments related to the reduction of poverty. Further, the costs of the program in parity purchasing power do not differ significantly from the average for a set of other countries, which means that graduation programs in Haiti in the future will be no different from other programs implemented anywhere.

On the other hand, using data from a USAID-led census of the microfinance industry in Haiti, and assuming a 2.8% gain on each borrowed gourd, this work estimates that the benefits of an

expansion of microfinance is on the order of 4,668 gourdes at an estimated cost of 4,045 gourdes. This has a cost-benefit ratio of close to 1, which is not too convincing and which tends to confirm the theses of several researchers who believe that microfinance does not substantially increase the income of beneficiaries and has no transformation effects on poverty. If the prospects of implementing the graduation program prove to be more promising, the importance of microcredit programs in improving the living conditions of a large part of the working population cannot be overlooked. Nevertheless, this work opens the way for other studies that could explore the implications of microfinance in Haiti programs more widely, taking into account microcredit institutions other than Fonkoze in the reduction of poverty through a more rigorous and more robust approach

**Table 3: Costs and Benefits of an Expansion of Microfinance and the Graduation Program**

Interventions	Discount rate	Benefit	Cost	Benefit-cost ratio	Quality of data
Graduation	3%	460,816	80,172	5.75	Strong
	5%	283,649	77,559	3.66	
	12%	92,872	69,521	1.34	
Microfinance	3%	4,759	4,074	1.18	Average
	5%	4,668	4,074	1.15	
	12%	4,376	4,074	1.08	

Notes: The costs and benefits of graduation are taken from the neutral scenario, while those of microfinance are taken from the assumption of 2.8% gain on each gourde borrowed.

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## Annexes

### Appendix 1 : Costs of graduation programs

Direct costs	\$826.90
Indirect costs	\$274.83
Startup costs	\$44.86
Auxiliary costs	\$345.12
<b>Total average cost per beneficiary (2009, USD)</b>	<b>\$1491.71</b>
Exchange rates 2009	42.00
Total cost per beneficiary (2009, HTG)	62308.73
Cumulative inflation since 2009	1.35
<b>Total cost per beneficiary (2015, HTG)</b>	<b>84,403</b>
Cost in PPP 2015	\$3,961

### Appendix 2 : Benefits and costs of the graduation program per beneficiary with different scenarios

Scenarios	Reduction	Benefits	Costs	RCA
<b>Neutral: all benefits last 5 years</b>	3%	460,816.48	80,172.17	5.75
	5%	283,648.63	77,558.71	3.66
	12%	92,872.30	69,520.56	1.34
<b>Optimistic: Continuous benefits last indefinitely</b>	3%	579,198.93	80,172.17	7.22
	5%	373,583.82	77,558.71	4.82
	12%	117,806.39	69,520.56	1.69
<b>Conservative: following the method of Banerjee et al (2015)</b>	3%	144,396.56	84,403.20	1.71
	5%	94,357.59	84,403.20	1.12
	12%	47,819.88	84,403.20	0.57

Appendix 3: Costs and benefits of microfinance from the two scenarios considered

Scenarios	Reduction rate	Advantages on loan 10,000 Gourdes	Advantages on loan 10,000 Gourdes	RCA
No consumer benefit	3%	4491	4074	1.10
	5%	4406	4074	1.08
	12%	4131	4074	1.01
2.8% earnings on each borrowed gourde	3%	4763	4074	1.17
	5%	4673	4074	1.15
	12%	4381	4074	1.08

Appendix 4 : BCR of graduation programs 6 RCT (\$ US, PPP)

Country	Cost (\$)	Benefit (\$)	RCA	RCA (7%)	RCA (10%)
Ethiopia	4157	10805	260%	182%	124%
Ghana	5408	7175	133%	93%	63%
Honduras	3090	-6118	-198%	-132%	-84%
India	1455	6298	433%	306%	211%
Pakistan	5962	10678	179%	127%	88%
Peru	5742	8380	146%	102%	69%

Source : Banerjee et al (2015)



Haiti faces some of the most acute social and economic development challenges in the world. Despite an influx of aid in the aftermath of the 2010 earthquake, growth and progress continue to be minimal, at best. With so many actors and the wide breadth of challenges from food security and clean water access to health, education, environmental degradation, and infrastructure, what should the top priorities be for policy makers, international donors, NGOs and businesses? With limited resources and time, it is crucial that focus is informed by what will do the most good for each gourde spent. The *Haiti Priorise* project will work with stakeholders across the country to find, analyze, rank and disseminate the best solutions for the country. We engage Haitians from all parts of society, through readers of newspapers, along with NGOs, decision makers, sector experts and businesses to propose the best solutions. We have commissioned some of the best economists from Haiti and the world to calculate the social, environmental and economic costs and benefits of these proposals. This research will help set priorities for the country through a nationwide conversation about what the smart - and not-so-smart - solutions are for Haiti's future.



# Haiti Priorise

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