

**U.S. Department of Labor
Bureau of International Labor Affairs**

**Closing the Child Labor and Forced Labor
Evidence Gaps: Impact Evaluations**

***Experimental Evaluation of the
Child Labor Elimination Actions for Real Change
Phase II (CLEAR II) Program in Malawi***

Updated Evaluation Design Report

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ANNEX A. Hazardous Industries and work for children

1. INTRODUCTION

1.1 Background

According to the International Programme on the Elimination of Child Labor (IPEC) of the International Labor Organization (ILO), there are at least 168 million children between the ages of 5 and 17 years old worldwide who are child laborers, accounting for almost 11 percent of the global child population.¹ Within the population of child laborers, about half (85 million) are in hazardous work that endangers their safety, health, or morals.² The risk of child labor is highest for children in sub-Saharan Africa where one in five children is in child labor, and in the agriculture sector, which employs 59 percent of all those in child labor.

Malawi's economy is mainly agricultural, with about 80% of the population living in rural areas. In Malawi, agriculture accounts for about one-third of their gross domestic product (GDP) and 90% of the foreign exchange earnings.³ Malawi relies on tobacco as its main export product, representing over half of all exports. In 2013, Malawi was the seventh largest producer of tobacco leaves in the world.⁴

Tobacco is grown primarily in family-owned smallholder farms. Tenant farmers, employed by the smallholder farmers, commonly cultivate these farms. Usually, all members of tenant farmer families, including children, work in tobacco growing. For that reason, the U.S. Department of Labor's Bureau of International Labor Affairs (DOL/ILAB) has consistently highlighted Malawi's tobacco as a commodity produced under conditions of child labor and forced labor.⁵ The 2002 Malawi National Child Labour Survey (MCLS), which is the latest government-sponsored study on child labor undertaken by the National Statistical Office (NSO), estimated that 23.3 percent (25.4% for boys and 21.3% for girls) of all children aged between 5 to 14 years old in Malawi worked.⁶ In absolute terms, this means that 730,000 children in Malawi were working. Of these, 88.9 percent worked in agriculture, 10 percent in industry, and 0.9 percent in services.

From 2011 to 2015, the Eliminating Child Labour in Tobacco Growing Foundation (ECLT), based in Geneva, funded a holistic five-year program to eliminate child labor in the tobacco growing areas of the Ntchisi, Mchinji, and Rumphi districts in Malawi. The multi-pronged program, known as the Child Labour Elimination Actions for Real Change, or CLEAR, aimed to generate a number

¹ International Labour Office, International Programme on the Elimination of Child Labour (IPEC), (2013). *Marking progress against child labour - Global estimates and trends 2000-2012*.

² ILO defines Hazardous child labor in Article 3 of ILO Convention No. 182 as "work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children."

³ Central Intelligence Agency, (2016). *World Factbook*.

⁴ Food and Agriculture Organization of the United Nations (FAO), Statistics Division, (2016). Food and agricultural commodities production rankings.

⁵ U.S. Department of Labor, Bureau of International Labor Affairs, (2014). List of Goods Produced by Child Labor or Forced Labor. Retrieved from <http://www.dol.gov/ilab/reports/child-labor/list-of-goods/>.

⁶ In MCLS, current working children were those children who reported having worked over the past seven days. The NSO recently completed the 2015 MCLS. Data and reports are due in June 2016.

of intermediate outcomes (ultimately oriented to achieve the end outcome of reducing child labor):

- Tackle the social and economic forces that perpetuate child labor;
- Strengthen and enable local structures to sustainably eliminate various forms of child labor in tobacco growing in three Malawi districts;
- Improve access to, and quality of, basic education as well as other basic social services; and;
- Protect children who are working legally from hazardous and worst forms of child labor.

Based on the positive findings from the first phase of the CLEAR program (called CLEAR I hereafter), ECLT decided to expand the program and further the gains made during 2011 to 2015. The resulting second phase, known as CLEAR II, will be implemented from October 2016 to October 2018.

1.2 Objectives of this Report

DOL/ILAB commissioned IMPAQ International to conduct a rigorous independent experimental impact evaluation of CLEAR II using randomized controlled trial (RCT) design. In this report, we discuss IMPAQ's proposed plan to conduct an experimental evaluation of CLEAR II. This evaluation will focus on the impact of a specific intervention: Village Savings and Loan Associations (VSLA) component of CLEAR II.

VSLA is expected to reduce child labor by improving livelihoods by:

- 1) Enhancing the ability of households to buffer short-term economic shocks through credit access, and
- 2) Boosting household income by relaxing liquidity constraints that impede entrepreneurship in the medium- to long-term.

In the chapters that follow, we provide context for the evaluation and describe the planned evaluation design in detail. Chapter 2 of this report provides a review of the Malawian child labor policy context and describes the program logic and activities of CLEAR II and VSLA. In Chapter 3, we summarize findings from relevant literature about the effects of similar interventions and identify the current evidence gaps. Chapter 4 outlines the research questions that the evaluation seeks to address and describes the evaluation design and data sources. We conclude with our work plan in Chapter 5.

2. THE CHILD LABOR ELIMINATION ACTIONS FOR REAL CHANGE PROGRAM

2.1 Malawi Child Labor Policy Context

In recent years, the Government of Malawi demonstrated its commitment to eliminating child labor by ratifying International Conventions, reviewing its policies and laws, and implementing various programs and projects. The Government ratified various international legislation on child labor including: ILO Convention 138 on Minimum Age of Admission into Employment, ILO Convention 182 on the Worst Forms of Child Labor and the United Nations Convention on the Rights of the Child (CRC). Malawi is also a signatory to the Southern African Development Community (SADC) Charter on Fundamental Social Rights and, by virtue of its membership, is party to the SADC Code of Conduct on Child Labor. The provisions of these instruments have been incorporated into national laws including the Employment Act, Employment (Prohibition of Hazardous Work for Children) Order, the Malawi Constitution, and the Child Care, Protection, and Justice Act.

The Government established institutional mechanisms for the enforcement of laws and regulations on child labor. The Malawi Ministry of Labour (MOL), through the District Labor Officers (DLO), has the legal and policy mandate to handle cases of child labor. Among other duties, labor inspectors have the authority to inspect employment places, receive and maintain employment registers, and prosecute offenses relating to labor laws. However, inspections cannot occur in private homes; therefore, child domestic labor is often undetected. In addition, the MOL's limited transport capacity severely restricts the number of inspections that they can perform, especially in more remote locations. There is no written labor policy, let alone a child labor policy, in Malawi. Perhaps more importantly, there is no meaningful enforcement of any of the existing provisions in the labor legal code regarding child labor.⁷

Malawi's National Child Labor Policy, which focuses on child labor issues and provides the Government and other partners with a framework to implement child labor programs, has not yet gone into effect. Equally important is the finalization and adoption of the Tenancy Bill, which has been extremely slow so far. The tobacco tenancy system contributes greatly to child labor in Malawi. Under this system, a tenant farmer agrees to grow tobacco on land provided to him by a landlord and to sell the tobacco to the landlord. The landlord gives seeds, tools, and food supplies to the tenant, while deducting the price of these expenses from the sales of the tenant's tobacco. Landlords usually prefer to hire an entire household at the price of one farmer. In order to meet the terms of the labor contract, tenant farmers may be forced to use children in the tobacco fields, which greatly contributes to the high rates of child labor in tobacco growing.⁸ The tenancy systems also can exploit farmers due to the high levels of informality in agreements, gender or age based discrimination, and poor working conditions. The Tenancy Bill is expected

⁷ Otanez, M, M Muggli, R Hurt, and S Glantz, (2006). Eliminating Child Labour in Malawi: a British American Tobacco Corporate Responsibility Project to Sidestep Tobacco Labour Exploitation, *Tobacco Control*, 15, 224-230.

⁸ See footnote 7.

to provide improved legal protection to tenants and their families. The lack of the Tenancy Bill, along with the absence of a national child labor policy, are the main legal and policy gaps in Malawi.

There are no specific child labor targets or strategies in the Malawi Growth and Development Strategy or in sector policies. Nevertheless, the Growth and Development Strategy, with its focus on poverty eradication, contributes to tackling child labor. Key sector policies, which may also contribute to elimination of child labor, include the Education Policy and the Agricultural Sector Policy. The Agricultural Sector Policy's focus on diversification and increasing agricultural output seeks to contribute to improved livelihoods and food security and may have a potential impact on child labor.

2.2 Overview of Program Activities and Program Logic

In this section, we provide context for the evaluation by describing the CLEAR I and CLEAR II program activities, VLSA intervention, and the mechanisms through which we can expect them to affect child labor outcomes.

2.2.1 CLEAR I Program Activities

From July 2011 to December 2015, ECLT worked with the following implementing partners: Save the Children (STC), Total Land Care (TLC), Youth Net and Counselling (YONECO), and Creative Centre for Community Mobilization (CRECCOM). CLEAR I provided services conducive to the elimination of child labor in the tobacco-growing areas of Ntchisi, Mchinji, and Rumphi. The target areas of CLEAR I included 59 communities that were identified during an external baseline survey.

The 59 communities were selected based on the following criteria:

- Substantial tobacco crop output
- High prevalence of child labor
- Limited service provision and support by other actors, and
- General poverty levels

CLEAR I consisted of a 54-month intervention across the 59 communities in the Mchinji and Ntchisi districts of the Central Region and in the Rumphi district of the Northern Region. Based on the information obtained from the CLEAR I baseline survey, ECLT and its implementing partners designed an intervention to combat child labor proactively by identifying and removing minors engaged in different forms of child labor through newly created community child labor committees (CCLCs). Once removed from child labor, minors were encouraged to enroll in formal school or pursue other educational pursuits to accelerate the process of catching up with their peers in terms of basic literacy and numeracy. CLEAR I implemented a holistic approach including community awareness campaigns (with training for community and education leaders), policy

advocacy at the national and local levels, as well as interventions at the household level. CLEAR I provided targeted households with means to relax their liquidity constraints, such as financial tools to boost their livelihoods in a way that reduces the likelihood that households resort to child labor, and facilitates schooling investments in children.

During November and December of 2015, IMPAQ conducted an external independent evaluation of CLEAR I. Since the target communities of CLEAR I were selected purposively, IMPAQ designed a quasi-experimental design (QED) impact evaluation using the difference-in-differences (DID) method to compare the pre-post child labor outcomes between the CLEAR I treated communities and matched comparison communities. Combining CLEAR I baseline survey with endline data collected in December 2015, IMPAQ's impact analysis estimated that CLEAR I had been successful in reducing child labor within the three districts, with a statistically significant impact estimate of 33 percentage points (over 50% reduction in child labor). Moreover, IMPAQ's analysis found that CLEAR I increased school attendance for children aged 5 to 17 years old in the treated communities by 7 percentage points, statistically significant at the 5 percent level.

The holistic implementation approach of CLEAR I sought to address the multiple root causes of child labor. IMPAQ's qualitative implementation study of CLEAR I revealed that that VSLA was a particularly effective intervention to reduce child labor. Most VSLA groups met weekly and the members gained new access to credit to pay children's school fees, uniforms and other materials; run businesses, such as clothing and baked goods stores; build houses; sublease gardens; and buy animals, food, and fertilizers. Most groups also had an emergency fund for people with extenuating circumstances such as sickness, death, or other issues. Many parents expressed that the increase in savings and credit access, due to the VSLA intervention, reduced the need for child labor and that the financial stability allowed them to send their children to school instead of to work.

2.2.2 CLEAR II Program Activities and Village Savings and Loan Association Intervention

CLEAR II will be implemented between October 2016 and October 2018. The design of CLEAR II builds on the lessons learned from CLEAR I. CLEAR II has two overarching goals:

- Protect children (5–17 years old) from child labor in tobacco growing,⁹ and
- Protect legally working children (14–17 years old) from hazardous child labor in tobacco growing.

The CLEAR II program will be implemented in the same three tobacco-growing districts where CLEAR I was implemented. The target communities for the CLEAR II program implementation will consist of both the communities that were part of the CLEAR I interventions and communities that were not part of the CLEAR I intervention. Our impact evaluation of CLEAR II will focus on the VSLA interventions in randomly assigned communities that were not part of CLEAR I starting in October of 2016.

⁹ Including exploitative, hazardous or worst forms of child labor.

In recent years, VSLA interventions have become the method of choice for engendering financial service inclusion to poor and isolated communities. Developed in the early 1990s by Care International, VSLA model has spread to at least 73 countries with over 12 million active participants worldwide.¹⁰ VSLAs are self-selected groups of 10 to 25 members who save money through purchasing shares in the VSLA. Members can typically buy up to five shares per week. The group sets the cost of a share at a rate that allows even the poorest in the group to save. The savings are invested in a loan fund that members can borrow from and repay with a service charge added.¹¹ The cycle of savings and lending is time bound. At the end of an agreed period, the accumulated savings and service charge earnings are shared amongst the members in proportion to the amount that each member has saved throughout the cycle. Based on findings from our CLEAR I evaluation, VSLA beneficiaries expressed interest in receiving training beyond simple principles of how to save using a VSLA. Participants wished to learn more about how to establish a business and form cooperatives in order to get the best prices for their agricultural products. CLEAR II will include entrepreneurship and marketing training components as a part of the VSLA intervention. In CLEAR II communities, all households will be eligible to participate in VSLA regardless of their livelihood or engagement in child labor.

CLEAR II program will begin implementing activities starting October of 2016. These activities have limited resources and will not be provided to all communities in the target areas. In order to focus on the VSLA intervention and facilitate the rigorous RCT evaluation, implementation of these complementary activities will be limited to communities that were part of CLEAR I program and not part of our evaluation study communities.

These CLEAR II complementary activities will:

- Strengthen the child labor referral system established in CLEAR I through a toll-free line and use of YONECO FM radio;
- Establish school gardens and improve sanitary conditions in schools especially for girl child;
- Advocate for good agricultural labor practices through Theatre for Development (TfD) methodologies at community level; and
- Support the National Steering Committee and the National Technical Working Group on Child Labour to facilitate the review and development of the National Action Plan on Child Labor.

2.2.3 VSLA Program Logic

In this section, we present the theory of change of VSLA by exploring the mechanism through which VLSA intervention may affect child labor outcomes. The theory of change can be

¹⁰ These numbers are from VSL Associates, a network of VSLA practitioners (www.vsla.net).

¹¹ VSL ASSOCIATES, (2009). *Village Savings and Loan Associations Program Guide*.

considered a chain of events—with intermediate outcomes from the intervention—potentially leading to long-term impacts on the main end outcomes of reducing child labor and enhancing schooling. The mechanism underlying the expected chain of events, presented in Exhibit 1 as the logic model, will guide our approach to the evaluation.

Intermediate Outcomes

VSLAs typically have three main components: (1) savings, (2) loans and (3) a social fund. Increased access to financial instruments offered by VSLA may lead to changes in the way VSLA members manage their finances and the tools they use to finance their expenditures and investments. Exhibit 1 describes the inputs, activities, outputs and intermediate outcomes, which could materialize during the first months of VSLA membership. If these changes occur, we would expect to be able to detect intermediate outcomes between 8 months and a year following the implementation of VSLA.

VSLAs provide their group members with a commitment device for regular savings and we would expect to see the members save more on a regular basis. This may lead to increased savings capacity as well as actual savings, as shown in Exhibit 1. Although members cannot access their “share-out” until end of a cycle, VSLAs can help households to cope with economic shocks and improve food security through access to loans and access to the social fund. Most VSL implementations include a social fund, which provides members a basic form of insurance. It serves as a community safety net and may serve a number of purposes such as emergency assistance, festivals and funeral expenses.

The VSL “share-out” can help the farmers during the season when seeds and fertilizer are bought and during the beginning of the school year when education expenses are high. In addition, increased savings and access to credit from VSL can smooth household consumption during economic shocks. Thus, both channels (increased savings and increased access to loans) can lead to child labor reduction.

End Outcomes

CLEAR II VSLA intervention seeks to improve outcomes for children who are at risk of working and dropping out of school. CLEAR II VSLA will target tobacco tenant-farming households who are most vulnerable to child labor.

The RCT evaluation will assess the impact of VLSA intervention on three *end outcomes*:

- 1) Reducing child labor,
- 2) Reducing hazardous child labor in tobacco for legally working children¹², and

¹² In Malawi, all children’s work in tobacco farming is considered hazardous work. In accordance with C. 184, the Malawi Employment Act of 2000 and the Malawian tobacco industry’s Agriculture Labor Practices (ALP), no person under age 18 can perform tobacco work, as it involves many hazardous elements. Therefore, our theory of change for reducing HCL for children of between 14 and 17 years old (legally working children) would follow the exact same conceptual logic we developed for children below working age.

3) Enhancing schooling.

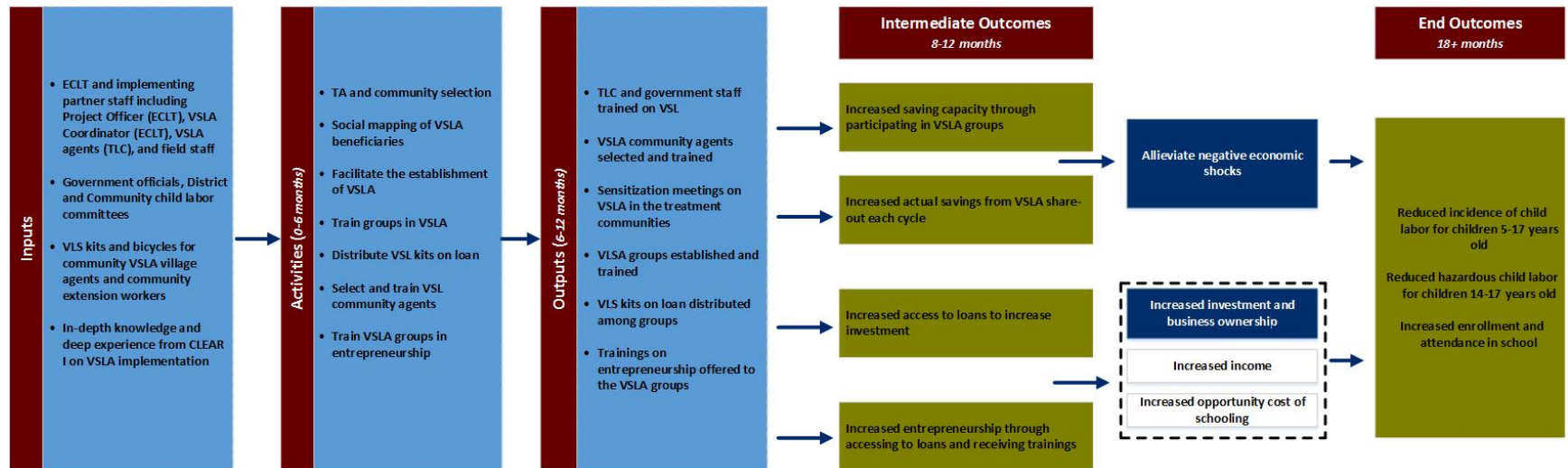
The creation of child labor impacts in the longer-term depends on the VSLA's ability to lead to relevant changes in the intermediate outcomes, such as using increased savings and access to financial services to smooth economic shocks and expenditures and to improve investments and business ownerships. On average, the VSLA cycle is between eight and twelve months. VSLA group member might reasonably take between 18 months and two years before we can observe measurable changes in child labor and schooling outcomes.

Exhibit 1 illustrates how the VSLA intervention is hypothesized to affect the child labor and schooling outcomes. To have an impact, the VSLA intervention's intermediate outcomes could potentially influence child labor and schooling outcomes through two pathways: (1) a smoothing effect and (2) an investment effect.

The short-run smoothing effect could improve child labor and schooling outcomes by alleviating the impacts of economic shocks, unforeseen health expenditures, and guaranteeing food security through increased savings and access to credit. Previous research (described in the literature review Chapter below) demonstrates that households in developing countries who experience unexpected shocks tend to increase their use of child labor. By using child labor as a substitute for, or to supplement, adult labor in household activities or other work, this leads to a decrease in school attendance. The increased savings, household assets, and access to credit that VSLAs can provide may act as buffers against these shocks. This will be expected to reduce child labor and improve educational attainment of the children.

In the medium to long-term, the CLEAR II VSLA intervention also has the potential for relaxing liquidity constraints that limit entrepreneurship. The VSLA intervention makes it possible for households to expand old businesses or create new, more profitable ones. The higher level of investments could boost household income in the long term and reduce the need for child labor. Meanwhile, if increased access to loans helps open a new business, the opportunity cost of education increases and child labor may become more desirable, as presented in Exhibit 1.

Exhibit 1. CLEAR II VSLA Intervention Logic Model



3. LITERATURE REVIEW

3.1 Summary of Existing Evidence

The RCT evaluation of the impact of VSLA intervention on child labor outcomes rests on two sets of literature:¹³

- 1) The effect of VSLA and similar schemes on household welfare and children's education and health outcomes; and
- 2) The relationship between economic shocks, access to credit, and child labor.

Evidence from an RCT study in 46 villages in northern Malawi suggests an increase of 153% in household savings and improved food security (Ksoll, Lilleør, Lønborg, and Rasmussen, 2016).¹⁴ A quasi-experimental evaluation with a matching design to build comparison communities of the VSLA intervention of CARE Malawi's Central Region Livelihood Security Project (Anyango, 2005) finds similar results.¹⁵ The difference-in-differences (DID) estimates suggest large and significant effects on household savings and income generating activities. Karlan, Thuysbaert, Udry, Cupito, Naimpally, Salgado, and Savonitto (2012) conducted three RCTs in Malawi, Uganda, and Ghana to evaluate the CARE VSLA model.¹⁶ They find that VSLAs increase overall savings levels and that average savings held by women in treatment areas is significantly higher than for women in the control group. The study also finds that VSLA interventions increase the likelihood for women to start businesses and to increase their income from those businesses significantly.

When testing if the VSLA intervention leads families to increase investment in their children's education, the authors find a significant increase of 2.3 percentage points on primary school gross enrollment for boys and a suggestive increase of 1.9 percentage points for girls. In Burundi, Bundervoet (2012) conducted a RCT evaluation of VSLA impacts with 77 self-selected groups, representing 1,595 eligible households.¹⁷ With 40 groups in the treatment group and 37 in the control group, Bundervoet finds that VSLA membership increases monthly per capita consumption expenditures by a significant 18%. The Burundi evaluation also finds that VSLA

¹³ There is no experimental evidence of the impact of VSLA intervention on child labor and hazardous child labor exist in the literature. For study Fumagalli, L. and T. Martin, (2014). Income Smoothing, Child Labor and Schooling: a Randomized Field Experiment in the Nampula Province of Mozambique, we were only able to locate the abstract, which contains no results.

¹⁴ Ksoll, C., Lilleør, H. B., Lønborg, J. H., & Rasmussen, O. D. (2015). Impact of Village Savings and Loans Associations: evidence from a clustered randomized trial. *Journal of Development Economics*.

¹⁵ Anyango, E. (2005). CARE Malawi Central Region Livelihood Security Project Impact Assessment Report on Village Savings & Loans Component (VS&L).

¹⁶ Karlan, D., Thuysbaert, B., Udry, C., Cupito, E., Naimpally, R., Salgado, E., & Savonitto, B. (2012). Impact assessment of savings groups. Findings from three randomized evaluations of CARE Village Savings and Loan Associations programmes in Ghana, Malawi and Uganda. Final report. *Innovations for Poverty Action, New Haven, USA*.

¹⁷ Bundervoet, T. (2012). Small wonders? a randomized controlled trial of village savings and loans associations in burundi. *Manuscript, International Rescue Committee*.

significantly increases households' asset holdings. In a randomized evaluation of VSLA in Mali, Beaman, Karlan, and Thuysbaert (2014) find significant improvements in food security, consumption smoothing, and buffer stock saving. However, the study does not find impacts on health, education, social capital, and female decision-making power.¹⁸

In conclusion, VSLA and similar savings group schemes are found to be associated with increases in consumption, savings, asset holding, food intake, and preventive health in a variety of settings. These studies generally find that VSLA members typically use their funds to improve their livelihoods by buffering short-term economic shocks to fund household expenses, school expenses, health expenses, building materials, fertilizer, business start-up, as well as other business expenses. Although there is no current empirical experimental evidence of the impacts of VSLA on child labor, it has been established that agricultural child labor is particularly acute where financial markets are imperfect or incomplete, such that child labor varies with fluctuations in agricultural seasonality or unforeseen shocks.

Beegle, Dehejia, and Gatti (2006) examine the relationship between household income shocks and child labor in Tanzania.¹⁹ They find a positive and significant effect on crop shocks. This means that children in households who experience shocks increased their use of child labor by approximately 30%. They also find that households with assets are able to offset about 80% of this shock, which suggests that increasing household access to credit through interventions like VSLA, will reduce child labor and increase household welfare.

With cross-country data, Dehejia and Gatti (2005) find a significant negative relationship between access to credit and child labor.²⁰ Guarcello, Mealli, and Rosati (2010) find that child labor increases in response to income shocks and self-defined credit rationing in Guatemala.²¹ In northern Mali, Dillon (2013) finds that production shocks increase the probability of children's withdrawal from school by 11% and participation in farm work by 24%.²² Using data on over 100,000 children ages 10-16 from Brazil, Duryea, Lam, and Levison (2007) ²³ find negative economic shocks, such as unemployment, are significantly associated with an increase in the probability (by at least 50%) that a child enters the labor force, drops out of school, or fails to advance in school.

¹⁸ Beaman, L., Karlan, D., & Thuysbaert, B. (2014). *Saving for a (not so) rainy day: A randomized evaluation of savings groups in mali* (No. w20600). National Bureau of Economic Research.

¹⁹ Beegle, K., Dehejia, R. H., & Gatti, R. (2006). Child labor and agricultural shocks. *Journal of Development economics*, 81(1), 80-96.

²⁰ Dehejia, R. H., & Gatti, R. (2005). Child labor: the role of financial development and income variability across countries. *Economic Development and Cultural Change*, 53(4), 913-932.

²¹ Guarcello, L., Mealli, F., & Rosati, F. C. (2010). Household vulnerability and child labor: the effect of shocks, credit rationing, and insurance. *Journal of population economics*, 23(1), 169-198.

²² Dillon, A. (2013). Child labour and schooling responses to production and health shocks in northern Mali. *Journal of African economies*, 22(2), 276-299.

²³ Duryea, S., Lam, D., & Levison, D. (2007). Effects of economic shocks on children's employment and schooling in Brazil. *Journal of development economics*, 84(1), 188-214.

3.2 Evidence Gaps that the Current Evaluation Fills

As indicated above, the literature provides ample evidence on the effect of VSLA on savings, assets, consumption smoothing, and income generating activities. The literature review also establishes an empirical relationship between household shocks, credit constraints, and child labor. There is dearth of evidence about the impact of VSLA programs on child labor, especially in the context of Sub-Saharan Africa.

The experimental evaluation of the CLEAR II VSLA intervention will contribute to fill the evidence gap between the two lines of research. Specifically, it will furnish rigorous evidence on a missing link in the literature by providing impact estimates of a VSLA intervention directly on child labor, hazardous child labor, and schooling outcomes.

4. EVALUATION DESIGN

In this chapter, we describe our proposed design for the CLEAR II VSLA RCT evaluation. We begin by listing the research questions that the evaluation seeks to address and by providing a brief overview of the proposed evaluation design, which includes an experimental impact evaluation and a qualitative implementation study. We explain in further detail these two complementary evaluation components in the following sections.

4.1 Research Questions

CLEAR I was implemented in 59 communities between 2011 and 2015 in three tobacco growing districts in Malawi: Mchinji, Ntchisi, and Rumphi. A “community” is defined as a village where child labor is prevalent and has at least one school. Due to budgetary constraints and the focus on VSLA, CLEAR II will provide services (mostly VSLA) to a subset of the CLEAR I communities. In addition, CLEAR II will implement VSLA interventions in communities that were not part of CLEAR I implementation. These non-CLEAR I communities form the set of evaluation study sites.

The RCT evaluation will assess the impact of VSLA intervention on three end outcomes, namely 1) reducing child labor, 2) reducing hazardous child labor in tobacco for legally working children, and 3) enhancing school enrollment and attendance. We seek to answer the following research question in connection to each of these end outcomes:

- What is the impact of introducing VSLA at the community level in non-CLEAR I communities?

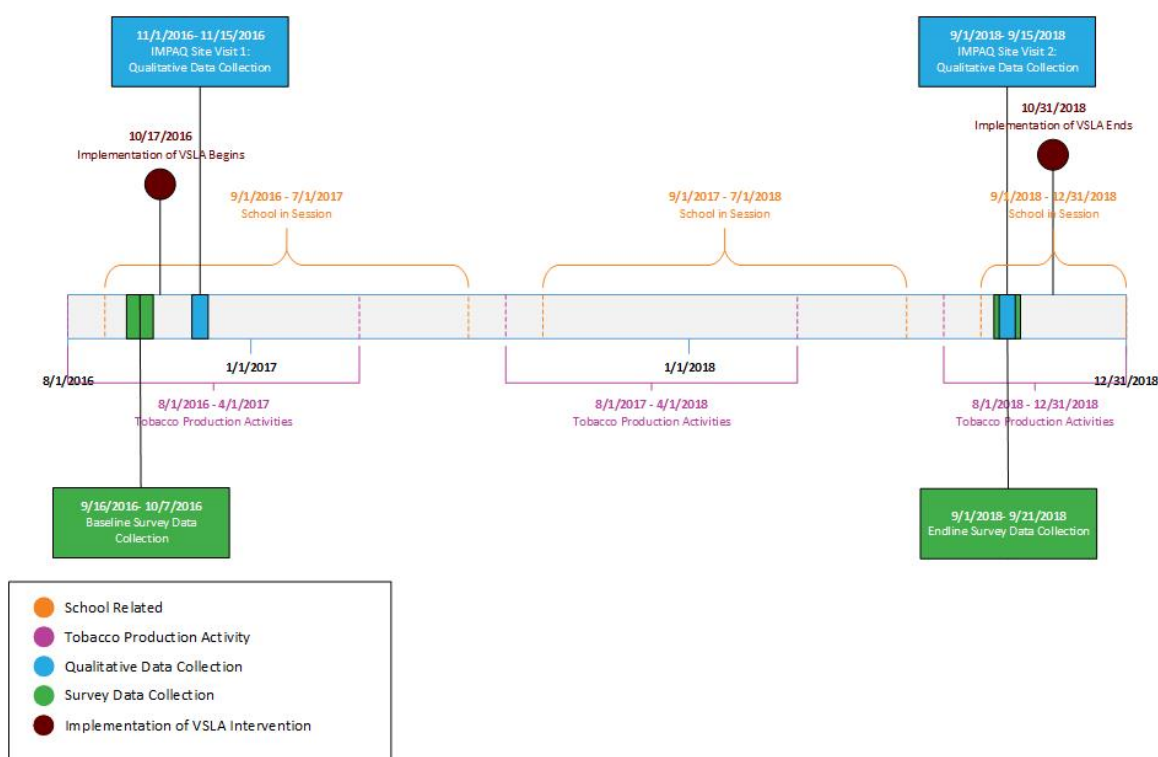
CLEAR II will recruit 18 new communities (non-CLEAR I). IMPAQ will work with the implementing partners to assign communities to treatment and control groups through a random lottery process. This will ensure that there is no selection bias based on observable and unobservable community characteristics. CLEAR II VSLA will serve approximately 12,000 participants in these randomly selected treatment communities.

To answer the key research question, we will conduct a clustered RCT impact evaluation of CLEAR II VSLA intervention. In addition, we will conduct a qualitative implementation study of the intervention. The impact analysis will focus on obtaining quantitative estimates of the effects of the VSLA intervention, using data collected from households in treatment and control communities in September 2016 (baseline) and in September 2018 (endline).

The implementation study will cover the CLEAR II activities more broadly and will rely on primary qualitative data collected from key-informant interviews and focus groups in addition to data from the program Monitoring and Evaluation (M&E) database, administrative data, and document review. To collect these implementation study data, we will conduct a series of site visits in 2016 and 2018.

Exhibit 2 summarizes the timing of VSLA implementation and the data collection activities. The timeline shows that baseline survey data collection from the 18 communities will be conducted in September 2016, before the roll-out of the CLEAR II VSLA intervention in October 2016. The baseline data collection will coincide with the labor intensive tobacco seedbeds season to accurately capture the child labor prevalence in tobacco growing areas. In addition, the baseline data will be collected when the school is in session to reduce the recall bias associated with the information on school enrollment and attendance. Moreover, we will also seek to obtain students administrative records from all the schools in the three districts to supplement enrollment and attendance information collected from our survey. Given the timeline described in the program logic in Exhibit 1, we propose to collect the endline survey data during tobacco seed-bedding season in September 2018. This will also ensure that the baseline survey and the endline survey are administered in the same calendar month. The two rounds of qualitative data collection for the implementation study will span the entire VSLA implementation period, starting one month after the intervention begins and culminating in another round which will be conducted in September 2018.²⁴

Exhibit 2. CLEAR II VSLA Evaluation Timeline



²⁴ The first round of the implementation study is scheduled at one month after the intervention begins to give enough time for start-up activities such as participants recruiting and membership registration. To maximize the cost efficiency of our data collection activity, the endline implementation study will coincide with the endline survey.

4.2 Measurement of Child Labor

The 18th International Conference of Labour Statisticians (ICLS)²⁵ provides the statistical framework for measuring child labor. ICLS structures child labor around the following elements:

- Age of the child; and
- Productive activities, including the:
 - Nature of the activities performed;
 - Conditions under which they were performed; and
 - Duration of engagement by the child in such activities.

The 18th ICLS Resolution distinguishes three categories of child labor:

- 1) Worst forms of child labor;
- 2) Employment below the minimum age specified for light work and the general minimum working age; and
- 3) Hazardous unpaid household services.

For the purpose of statistical measurement, we will classify all children (ages 5 to 17 years) into one of the three categories above or into a fourth category: not engaged in any forms of child labor. We will include the following activities when calculating working hours and estimating exposure to child labor:

- Child labor;
- Hazardous child labor; and
- Hazardous unpaid household services.

4.2.1 Age of a Child

According to the United Nations Conventions of the Rights of the Child, a child is a person under the age of 18 years. For the purposes of defining child work and labor, ILO's Statistical Information and Monitoring Programme on Child Labour (SIMPOC) defines a child as a person between the ages of 5 and 17 years old.²⁶ In accordance with ILO best practices, IMPAQ will use the age disaggregation of ages 5-11, 12-13, and 14-17.²⁷

²⁵ International Labour Organization (ILO). (2008). *Report of the Conference, 18th International Conference of Labour Statisticians*.

²⁶ International Labour Office. Statistical Information and Monitoring Programme on Child Labour (SIMPOC), (2004). *Manual for Child Labour Data Analysis and Statistical Reports*.

²⁷ ILO Child Labor Conventions and Statistical Measurement of Child Labor. Presentation presented at the ILO-USDOL Child Labor and Forced Labor Survey Methods Training on January 26, 2016.

ILO Convention No. 138 states, “the minimum age shall not be less than the age of completion of compulsory schooling and, in any case, shall not be less than 15 years.” However, ILO exempts countries “whose economy and educational facilities are insufficiently developed may, after consultation with the organizations of employers and workers concerned, where such exist, initially specify a minimum age of 14 years.” In accordance with the ILO’s exemption for developing countries, Malawi’s Employment Act (2000) and the Employment Order (2012) set the minimum age for employment at age 14.²⁸ Therefore, we will use age 14 as the minimum age for employment in Malawi. There are different activities permissible for different age groups, as shown in Exhibit 3.

Exhibit 3. Minimum Working Ages, ILO Convention 138

	The minimum age at which children can start work.	Possible exceptions for developing countries*
Hazardous Work		
Any work that is likely to harm children’s health, safety, or moral development is prohibited by anyone under the age of 18.	18 (16 under strict conditions)	18 (16 under strict conditions)
Basic Minimum Age		
The minimum age for work should not be below the age for finishing compulsory schooling, and in any case, not less than 15.	15	14
Light Work		
Children between the ages of 13 and 15 years old may do light work, as long as it does not threaten their health and safety, or hinder their education or vocational orientation and training.	13-15	12-14

*Malawi uses the lower age ranges for minimum age of employment.

4.2.2 Definition of Work

The broadest concept in relation to measuring child labor is children in productive activities, which is defined by children engaged in any activity falling within the general boundary which of the System of National Accounts (SNA). Malawi adopted the use of SNA in 2004, which is in accordance with the ILO’s definition of work. Therefore, IMPAQ will use the following framework to measure productive activities:²⁹

- Economic production: Productive activities that fall inside the SNA production boundary are defined as economic production, which includes both market and non-market

²⁸ Government of Malawi, (2000). *Employment Act No. 6* and Government of Malawi, (2012). *Employment (Prohibition of Hazardous Work for Children) Order*.

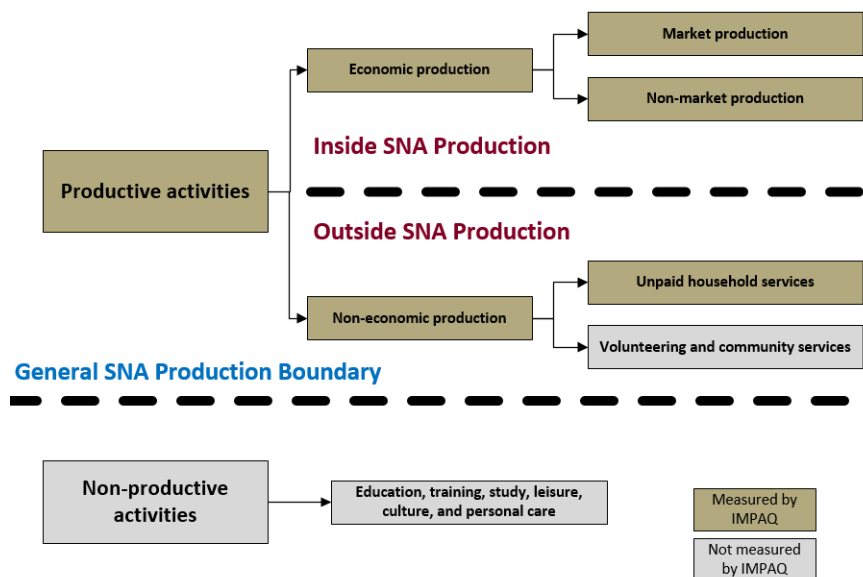
²⁹ Government of Malawi. National Statistical Office, (2015). *The Malawi national Accounts Handbook: Sources and Methods*.

production.³⁰ These two types of economic production can be performed in formal and informal settings, as well as work inside and outside of family settings.

- Non-economic production: Productive activities that fall outside of the SNA production boundary. It includes the production of unpaid personal and domestic services, usually within a child's own household.

We will measure all economic production within the SNA production boundary, as this captures children in employment. Outside the SNA production boundary, we will measure, to the extent possible, the non-economic production of unpaid household chores by hours spent and whether they were performed in hazardous conditions. We discuss the framework for classifying hazardous unpaid household services in subsection 4.2.8.³¹ Exhibit 4 highlights the productive activities we will measure.

Exhibit 4. Classification of Activities in Relation to the System of National Accounts (SNA)



4.2.3 Legally Working Children

Acceptable work is work performed by children who are of the legal working age and are performing work in accordance with the national legislation and international frameworks that include are non-hazardous, non-exploitative, and do not prevent a child from receiving education. This category also includes children doing light work below the legal working age.

³⁰ International Labour Organization (ILO), (2008), *Report of the Conference, 18th International Conference of Labour Statisticians* and International Labour Office, Statistical Information and Monitoring Programme on Child Labour (SIMPOC), (2004). *Manual for Child Labour Data Analysis and Statistical Reports*.

³¹ Another form of non-economic production that falls outside of SNA production is volunteering and community service. Due to the complexity of measuring such activities, we will not measure volunteering or community service activities. Additionally, we will not measure *non-productive activities* that fall outside the general SNA production boundary such as education, training, study, leisure, culture, or personal care.

4.2.4 Light Work

Article 7 of ILO Convention No. 138 specifies that “national laws or regulations may permit the work of persons as from 13 years of age (or 12 years in countries that have specified the general minimum working age of 14 years)³² in light work which is:

- Not likely to be harmful to their health or development;
- Not such as to prejudice their attendance at school, their participation in vocational orientation or training programs approved by the competent authority, or their capacity to benefit from the instruction received; and
- Does not exceed 14 hours in referenced week.”³³

Malawi Employment Act of 2000 specifies light work as those done in homes, vocational technical schools or other training institutions if work is

- approved and supervised by a public authority; or
- an integral part of the educational or vocational training program for which the school or institution is responsible.

4.2.5 Child Labor

Child labor, as generally defined by the ILO, is either mentally or physically harmful or dangerous to children; and interferes with their schooling because it deprives them of the ability to go to school, requires them to leave early, or requires them to attempt to attend school while working for long hours. In Malawi’s National Action Plan to Combat Child Labor (NAP), child labor is defined as, “any activity that employs a child below the age of 14 or that engages a child between the ages of 14 and 17 and prevents him or her from attending school or concentrating on school, or negatively impacts on the health, social, cultural, psychological, moral, religious and related dimensions of the child’s upbringing.”³⁴

ILO further classifies child labor, based on different age groups, as hazardous child labor and permissible light work. For the purposes of our statistical measurement in the context of Malawi, we will classify an individual as engaged in child labor if:

- An individual is between the ages of 5 and 13, and performs any work for an hour or more in the past week inside of the SNA economic production boundary, discussed above;
- An individual is between the ages of 12 and 13, and is engaged in work not classified as light work or ordinary work; and

³² Malawi’s minimum age of employment is 14. Therefore, it is acceptable for ages 12-13 to perform light work activities.

³³ ILO Convention specifies the age range for light work as 13-15, whereas Paragraph 33 of the 18th ICLS specifies the age range as 12-14. For the purposes of this evaluation, we have adopted the later category as it is closely aligned with Malawi’s national policy of allowing children aged 14 and older to work and the ILO’s exceptions for developing countries.


³⁴ Child Labour National Action Plan for Malawi, 2009-2016.


- An individual is between the ages of 14 to 17 and is engaged in any form of hazardous child labor (HCL).³⁵

Exhibit 5 summarizes the various forms of work. These forms of work are described in detail below.

Exhibit 5. Statistical Framework for Child Labor

Age Group*	General Production Boundary					
	SNA Production				Non-SNA Production	
	Light Work (1a)	Other forms of work not designated as hazardous (1b)	Worst Forms of Child Labor		Hazardous Unpaid Household Services (3a)	Other non- SNA production (3b)
Hazardous Work (2a)			Worst Forms of Child Labor other than Hazardous Work** (2b)			
Children below the minimum age for light work (5-11 years)	Employment below the minimum age for light work	Employment below the general minimum working age	Employment in industries and occupations designated as hazardous, or work for long hours and/or at night in industries and occupations not designated as hazardous	Children trafficked for work; forced and bonded child labor; commercial sexual exploitation of children; use of children for illicit activities and armed conflict.	Unpaid household services for long hours; involving unsafe equipment or heavy loads; in generous locations, etc.	
Children within the age range for specified light work (12-13 years)						
Children at or above the general minimum working age (14-17)						
Notes:	(3a) is applicable where the general production boundary is used as the measurement framework for child labor. *These ages were adjusted to the ILO's minimum age exceptions for developing countries, such as Malawi. (1b) refers to only children in employment other than those covered under columns (1a), (2a), and (2b) **Due to the complex nature of measure WFCL other than HL, IMPAQ's survey will not measure this.					

 Denotes child labor, as defined by the ILO resolutions

 Denotes activities not considered child labor

³⁵ HCL applied to children of all ages.

4.2.6 Children Engaged in Worst Forms of Child Labor (WFCL)

The U.N. Convention on the Rights of the Child (1989)³⁶ provides an overall framework for the human rights of children. Article 32 states that “parties recognize the right of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development.”

Article 3 of ILO Convention 182 defines categories of WFCL as the following:³⁷

- All forms of slavery or practices similar to slavery, such as the sale and trafficking of children, debt bondage and serfdom, as well as forced or compulsory labor, including forced or compulsory recruitment of children for use in armed conflict;³⁸
- The use, procuring or offering of a child for prostitution, for the production of pornography or for pornographic performances;
- The use, procuring or offering of a child for illicit activities, in particular for the production and trafficking of drugs as defined in relevant international treaties; and
- Work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children.

There are two distinctions made within WFCL: (1) children engaged in hazardous work and (2) those engaged in WFCL other than hazardous work. Due to the challenges associated with capturing the listed activities, either from the head of households or the children themselves, IMPAQ will measure only hazardous work under the WFCL.³⁹

4.2.7 Children Engaged in Hazardous Child Labor (HCL)

For the purposes of statistical measurement of child labor, the ICLS divides hazardous work into the engagement of children in activities that are:

- Hazardous in nature (in designated hazardous industries and occupations); and
- Hazardous work conditions (such as long hours or night work).

³⁶ UN Convention on the Rights of the Child: <http://www.ohchr.org/en/professionalinterest/pages/crc.aspx>

³⁷ International Labor Organization (ILO), (1999). Convention 182 Concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labor.

³⁸ The ILO's “Hard to see, harder to count: Survey guidelines to estimate forced labour of adults and children” says that Article 3 of the Worst Forms of Child Labour Convention, 1999 (No. 182), there is no specific definition of what constitutes forced labour of children (page 16). Therefore, for the purposes of this evaluation, forced labor will be measured through our instrument's sections on worst forms of child labor. For more information, see http://www.ilo.org/wcmsp5/groups/public/---ed_norm/---declaration/documents/publication/wcms_182096.pdf.

³⁹ For the challenges associated with measuring children engaged in other Worst Forms of Child Labor, please see the NCLS Manual produced by SIMPOC.

Hazardous Child Labor Conditions

ILO Recommendation No. 190⁴⁰ uses the following criteria to determine hazardous labor conditions:

- Work which exposes children to physical, psychological or sexual abuse;
- Work underground, under water, at dangerous heights or in confined spaces;
- Work with dangerous machinery, equipment and tools, or which involves the manual handling or transport of heavy loads;
- Work in an unhealthy environment which may, for example, expose children to hazardous substances, agents or processes, or to temperatures, noise levels, or vibrations damaging to their health; and
- Work under particularly difficult conditions such as work for long hours or during the night or work where the child is unreasonably confined to the premises of the employer.

Long Hours

While the Convention does not define a maximum amount of hours that minors are allowed to work, in general, the ILO defines regular work as under 43 hours per week, if undefined by national regulations. The Government of Malawi—through the Employment Order of 2012--prohibits children under 18 from working more than 40 hours per week, which we will consider as hazardous child labor due to long hours. In addition, the rules prohibit any persons under 18 years old enrolled in school from working more than:

- Twenty hours in a week during the school term,
- 40 hours in a week that is entirely within school holidays,⁴¹
- 3 hours on any school day followed by another school day, and
- 4 hours on a school day followed by a non-school day.

This provides us guidance on classifying hazardous child labor due to long hours for children enrolled in school.

Night Work

The Employment Order (2012) from the Malawian government does not allow children to work before 5 am or after 6 pm. Therefore, we are considering any work occurring between 6 PM and 5 AM as hazardous child labor in accordance with ILO Recommendation 190.

⁴⁰ International Labor Organization (ILO), (1999). Recommendation 190 Concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labor.

⁴¹ IMPAQ will collect baseline data from households and children during the month of August 2016, which is a school holiday.

Hazardous Occupations and Industries

The 18th ICLS states that hazardous occupations for children are to be designated by national laws or regulations, in accordance with the International Standard Classification of Occupations (ISCO). Some forms of hazardous work can also be measured by whether a child is working in a hazardous industry.

The International Standard Industrial Classification of All Economic Activities (ISIC) provides some guidance on what industries can be classified as hazardous. According to guidance issued from the ILO, the following are designated hazardous industries: mining, quarrying, and construction.⁴²

The Employment Order of 2012 of Malawi lists the prohibited work for children. IMPAQ reviewed the list of hazardous occupations and industries from the International Standard Classification of Occupations (ISCO)⁴³ with the CLEAR II implementing partners to identify which industries and occupations in the three districts are most likely to children in involve hazardous work (see Appendix A). CLEAR II implementing partners identified work in tobacco, agriculture, and the entertainment industries as the most likely to fall under the hazardous work definition.⁴⁴ While we incorporated questions about these specific industries and occupations in our survey instrument, we will also allow respondents to answer “other.” If the child is performing any work in any of the industries or occupations listed in Appendix A, we will classify this work as hazardous child labor, in accordance with Malawian legislation and ILO’s guidance.

Hazardous Work Ages

Article 16 of ILO Convention No. 184⁴⁵ prohibits children from working in agriculture, “which by its nature or the circumstances in which it is carried out is likely to harm the safety and health of young persons shall not be less than 18 years.” In addition, Article 3 of the Minimum Age Convention (No. 138) states that, “national laws or regulations or the competent authority may, after consultation with the organizations of employers and workers concerned, where such exist, authorize employment or work as from the age of 16 years on condition that the health, safety and morals of the young persons concerned are fully protected and that the young persons have received adequate specific instruction or vocational training in the relevant branch of activity.”

Currently, Section 23 of Malawi Constitution⁴⁶ states that children under age 16 are to be protected from all forms of hazardous labor, which is in accordance with the Child Care,

⁴² For more information about industries, see <http://unstats.un.org/unsd/statcom/doc02/isic.pdf>.

⁴³ For more information on occupations, see http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_172572.pdf.

⁴⁴ We incorporated questions on these specific industries on the employment questions in the survey because they are the most likely to occur. However, we also allow the respondents to answer “other” and explain any work that is not listed.

⁴⁵ International Labour Organization (ILO), (2001). Convention 184 Concerning Safety and Health in Agriculture.

⁴⁶ Government of Malawi, (2004). *Constitution of the Republic of Malawi*.

Protection, and Justice Act.⁴⁷ While that legislation provides protection for children until age 16, Section 22 of the Employment Order of 2012 provides protection until age at 18.⁴⁸ Therefore, confusion pervades about the activities that children between the ages of 16 and 17 may perform. For the purpose of this evaluation, we will use the more stringent criterion of age 18.

Malawian Guidance on Children in Tobacco Work

In accordance with C. 184, the Malawi Employment Act of 2000 and the Malawian tobacco industry's Agriculture Labor Practices (ALP), no person under age 18 can perform tobacco work, as it involves many hazardous elements.⁴⁹ This definition is further guided by the Employment Order of 2012, which established a list of hazardous materials in addition to the ILO's guidance. The ILO list banned children from being involved with tobacco work, including "topping and suckering activities or handling tobacco leaves in the harvesting process; handling or grading tobacco leaves in damp conditions or conditions of poor lighting or ventilation; [and] any other work involving tobacco in commercial tobacco estates and farms."

For the purposes of this evaluation, we will use the definition that no child under 18 can be involved in hazardous work, including all tobacco work. This is based on the legislation and current work of the tobacco companies' agricultural practices in addition to the guidance from the ILO. Furthermore, due to lack of resources, it is unlikely that children ages 16-17 would receive adequate training on methods to reduce the risk involved with hazardous work to qualify for the age exemption stated in Article 3 of C. 138.

ECLT, CLEAR II implementing partners, and the tobacco companies, developed a list of tobacco-growing activities, which are considered hazardous child labor. The list of hazardous activities is consistent with the broader list of prohibited tobacco work in the Employment Order Of 2012, it is presented in Exhibit 6.

⁴⁷ Government of Malawi, (2010). *Child Care, Protection and Justice Act*, No. 22.

⁴⁸ Government of Malawi, (2012). *Employment Act, Employment (Prohibition of Hazardous Work for Children) Order*, 2012, Cap. 55:02.

⁴⁹ Dangers to children may include carrying heavy loads, exposure to smoke or dust, pesticides and other chemicals, snakes, sharp objects, sexual abuse, wasps, and green tobacco sickness—to name a few.

Exhibit 6. Hazardous Tobacco Related Activities and Role of Children

Activity	Role of Child
1. Clearing of land; Soil preparation	Preparation of seed beds, bush knives, carrying manure in # loads (weight and distance)
2. Raising and transporting seedling tobacco plants	
3. Planting of tobacco seedling plants and watering them in	Transporting watering cans from water source to field,
4. Fertiliser application	Artificial fertiliser-Use hands-corrosive- skin irritant
5. Spraying with pesticides	Bag pack spraying- watering-
6. Weeding	By hands- using hoe -ox and plough
7. Topping and suckering by hand or by knife to remove early flowers	Use of hands and knives, application of suckerside (type of pesticide) to stop the suckers from regrowing
8. Harvesting of tobacco by hand	Periodic plucking of mature leaves and putting into basket; carrying basket of wet leaves
9. Carrying bundles of tobacco leaves to the drying area	Basket weight in kilograms, walking distance in kilometres
10. Drying and curing of tobacco leaves	Manipulating of fire; Periodic, checking of leaves in drying barn; Staying considerable lengths of time in barn
11. Packing after curing, leaves are graded and tied into bundles, which are then tied into larger bundles or packed into crates for transport	Separating leaves and tying them into bails once leaves have been graded by an older person
12. Transporting crates to the collection point - lorries, bicycles	Driving of ox carts, loading lorries, transporting bales on bicycles

4.2.8 Hazardous Unpaid Household Services

Unpaid household chores includes activities such as shopping, repairing household equipment, cooking, washing clothing, cleaning, caring for other children, sick, or elderly, or a variety of other household tasks. The ICLS (2008) defines hazardous unpaid household services by:

- Long hours;
- Unhealthy environment, involving unsafe equipment or heavy loads; and
- Dangerous locations.

The 19th ICLS (Report III) states that children, who combine household chores with employment, are less likely to be in school. It also indicated that a 20 hours a week threshold could be a useful guide to determine long hours in household chore.⁵⁰ Since there is no other guidance or Malawian national legislation to decide the definition for long hours in household services, we will present the findings using this definition of working no more than 20 hours per week on household chores when enrolled in school. Our survey instrument, in accordance with 19th ICLS, will measure separately both child labor in weekly hours of economic activities and weekly hours in household chores.

⁵⁰ International Labour Organization (ILO), (2013). Report of the Conference, 19th International Conference of Labour Statisticians.

However, the 19th ICLS recognized the difficulties of determining a threshold for children performing both household chores and employment and has not issued any guidance except that separate thresholds must be developed for the various age groups.⁵¹ IMPAQ will use the same criteria to determine hazardous household chores as the criteria listed in the hazardous work subsections above, which considered the nature, location, and hours spent.

Due to the lack of consensus on determining age groups and combining household chores with regular work, we will classify hazardous unpaid household services as hazardous child labor with the following criteria:

- Child of any age performs more than 20 hours of household chores when enrolled in school;
- Child of minimum working age who is not enrolled in school performs more than 40 hours of household chores
- Child of any age performs household chores in hazardous work conditions or locations including at night.
- Child cannot attend school because of household chores.

In the following, we present a list of operationalized specific child labor definitions for this evaluation in Exhibit 6 and a visual map of these concepts in Exhibit 8.

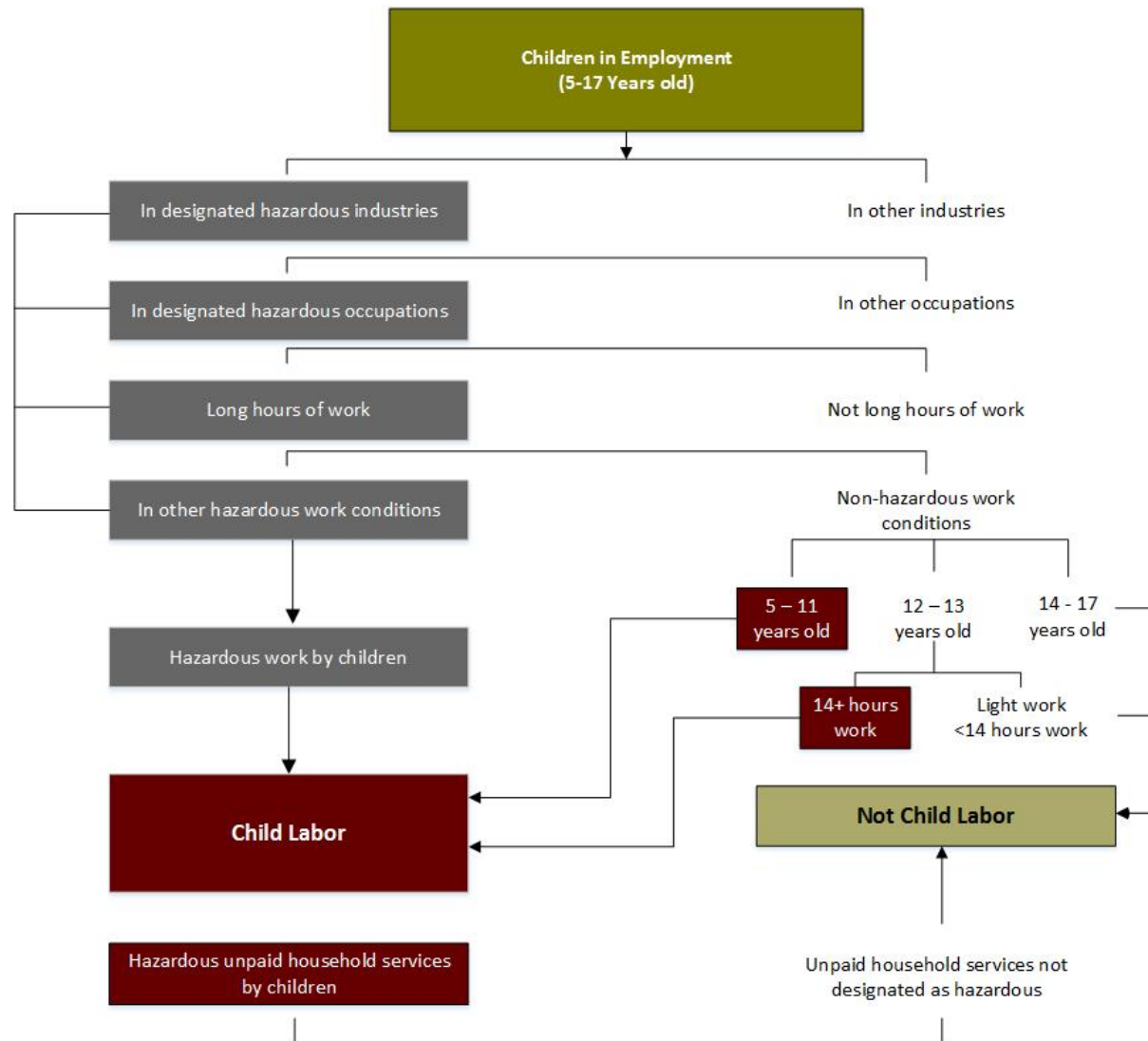
Exhibit 7. Operationalized Child Labor Definitions for CLEAR II VSLA Evaluation

Definition	Evaluation Definition
Child Labor (CL)	An individual is between the ages of 5 and 11, and performs any work inside of the SNA economic production boundary.
	An individual is between the ages of 12 and 13, and is engaged in work not classified as light work or ordinary work.
	An individual is between the ages of 5 to 17 and is engaged in any form of hazardous child labor (HCL).
Hazardous Child Labor (HCL)	<i>Hazardous Child Labor Conditions</i>
	Activity which exposes children to physical, psychological or sexual abuse;
	Activity performed underground, under water, at dangerous heights or in confined spaces
	Activity performed with dangerous machinery, equipment and tools, or which involves the manual handling or transport of heavy loads;
	Activity performed in an unhealthy environment which may, for example, expose children to hazardous substances, agents or processes, or to temperatures, noise levels, or vibrations damaging to their health
	Activity performed under particularly difficult conditions such as work for long hours or during the night or work where the child is unreasonably confined to the premises of the employer.

⁵¹ Ibid.

Definition	Evaluation Definition
	<i>Hazardous Child Labor Occupations, Industries, and Processes</i> Activity performed in industry and/or occupation that appears in Appendix A Activity that exceeds 40 hours per week Activity that exceeds 20 hours in a week during the school term, 40 hours in a week that is entirely within school holidays, 3 hours on any school day followed by another school day, and 4 hours on a school day followed by a non-school day for children enrolled in school. Activity conducted between 6 p.m. and 5 a.m.
Light Work	Work is not likely to be harmful to their health or development; Work is not such as to prejudice their attendance at school, their participation in vocational orientation or training programs approved by the competent authority or their capacity to benefit from the instruction received; Activity performed in establishments where none of the occupations or processes performed are listed in Appendix A Activity not conducted between the hours of 6 pm and 5 am Activity not performed by children under age 12 Work does not exceed 14 hours in referenced week.
Permissible/Ordinary work	40 hours in a week that is entirely within school holidays Activity does not occur before 5 am or past 6 pm Activity does not occur in extreme heats (below 6 degrees or above 30 degrees Celsius) Activity does not include lifting or transporting heavy weights Non-HCL activity is performed by child above age 14 Activity is not performed in occupations or industries referred to in Appendix A Activity is not performed in hazardous conditions (referenced above)
Hazardous Unpaid Household Services	Household services are not performed more than 20 hours when child is enrolled in school Household services are not performed more than 40 hours when a child aged 14 or above is not enrolled in school Household services are not performed in hazardous work conditions (referenced above) Household services are not performed at night
Notes:	Items highlighted in this color come from the Malawian legislation in accordance with ILO regulations. Items highlighted in this color provide guidance that is more stringent than ILO regulations but are still acceptable.

Exhibit 7. Visual Representation of Child Labor Definitions



4.3 Impact Evaluation Design

The CLEAR program focuses on communities; therefore, to evaluate the CLEAR II VSLA intervention, we will apply a clustered randomization, which assigns treatment and control at the community level (defined as a village within a district that has at least one school). Randomly allocating communities to treatment and control groups addresses endogenous program placement and ensures that there are no selection biases caused by unobserved community heterogeneities. In another words, randomization allows for simple estimation methods to be used to estimate the treatment effects of having access to VSLA. This allows us to compare outcomes in treatment communities with outcomes in the control communities to measure the “intent-to-treat” (ITT) effect of providing access to VSLA. Therefore, we can compare outcomes for all households in the treatment communities with the outcomes for all the households in the control communities, irrespective of whether the households actually participated in VSLA.⁵²

For the clustered RCT evaluation, CLEAR II will recruit 18 eligible communities, from the universe of communities not served by CLEAR I in Mchinji, Ntchisi, and Rumphi districts. The study communities will be selected purposively and based on the following criteria, which have been applied in the CLEAR I community selection as well. :

- Substantial tobacco crop output
- High prevalence of child labor
- Limited service provision and support by other actors, and
- General poverty levels.

We will randomly select 9 of the 18 Non-CLEAR I communities to serve as the treatment group, the remaining nine will be our control group. The CLEAR II VSLA beneficiary intake process will begin as soon as the clustered randomization is completed in October 2016. The baseline survey will verify that treatment and control communities are balanced in terms of the key demographic, community characteristics, and outcome variables. Because of random assignment, any outcome difference found at the end of CLEAR II VSLA implementation between the treatment and control communities measures the causal impacts of the CLEAR II VSLA intervention.

In summary, each of the 18 Non-CLEAR I communities will be randomly assigned to:

- T: Community was not part of CLEAR I and will receive VSLA intervention
- C: Community was not part of CLEAR I and will not receive VSLA intervention

The treatment and control groups will enable us to answer all the research questions listed earlier. Subsection 4.3.4 describes the impact analysis in detail. In particular, to answer the

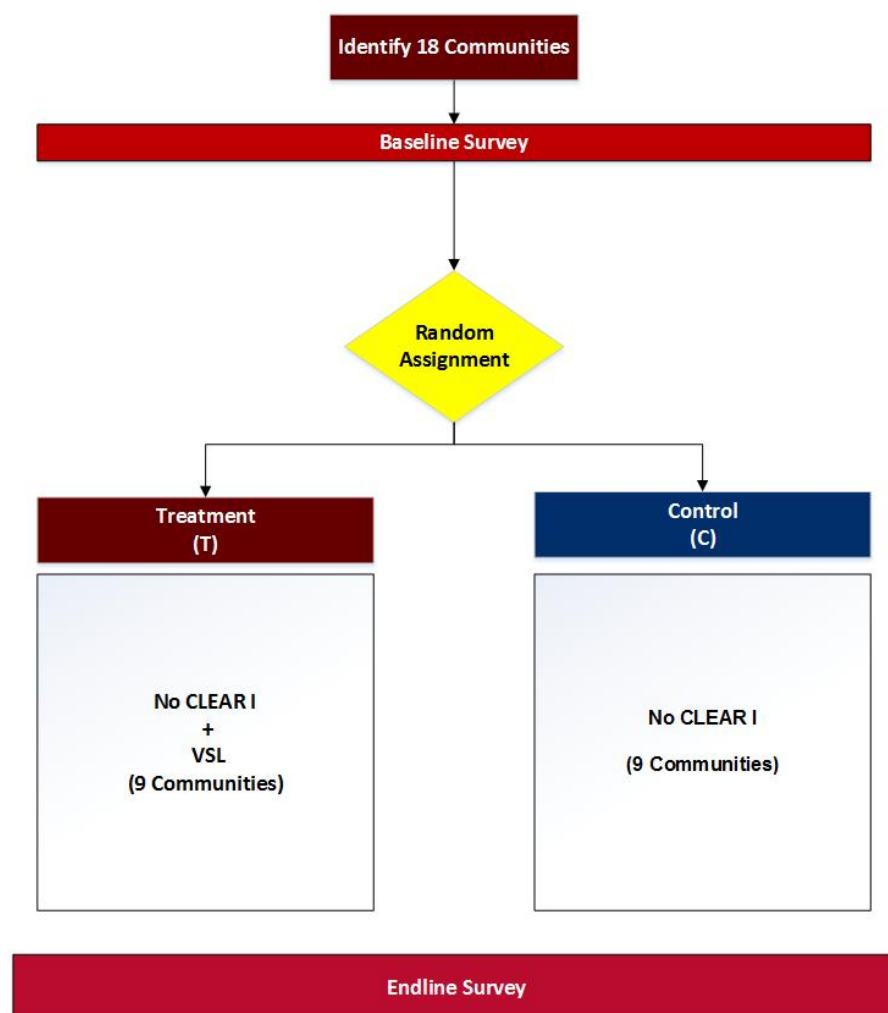
⁵² As some of the treatment and control communities will be contiguous, there might be households from the control communities to participate the VSLA intervention. The estimated impact of the offer to participate in the program—the impact of the “intention to treat”—is unbiased even if noncompliance is considerable.

research question, we will compare the outcomes between treatment and control groups and the regression-adjusted difference between T and C will estimate the causal impact of access to VSLA on intermediate and end outcomes at community level. To implement this clustered RCT design, we will complete the following evaluation steps:

- 1) selection of communities;
- 2) baseline survey;
- 3) random assignment of communities;
- 4) record inception and completion of implementation of VSLA intervention;
- 5) endline survey; and
- 6) impact analysis.

Each of these steps are described below and illustrated in Exhibit 9.

Exhibit 9. Evaluation Flow Chart



Step 1—Selection of Eligible Sites

The first step of our evaluation design is to identify and select 18 communities from all Non-CLEAR I communities in the three districts. ECLT and its implementing partners will identify these communities as part of the planning phase of CLEAR II.

Step 2—Baseline Survey

We will conduct a baseline survey of households with children of age 5 to 17 and their children in the 18 communities across the three CLEAR districts. The information from the baseline will serve as the benchmark for examining baseline equivalence between treatment and control groups, measuring randomization of program sites, monitoring randomization and compliance. In general, the baseline survey will provide information on the prevalence of child labor in both treatment and control communities during tobacco production season. We will collect baseline data in September 2016, the peak tobacco seedbeds season in Malawi. This is necessary to ensure that we get an accurate picture of the prevalence of child labor during the intensive tobacco production season. Finally, the baseline data will include intermediate outcomes such as savings and access to credit and important control variables that will feature in our regression analysis to improve the precision with which our coefficient estimates measure causal effects.

Step 3—Random Assignment of Communities

To alleviate selection bias caused by endogenous program placement and unobservable community heterogeneity, the communities that receive VSLA intervention will be chosen in a random lottery process. We will use statistical software to randomize study communities to treatment and control groups. We will first generate a random number from a uniform distribution. We will rank the clusters by the random numbers generated (or sort them in ascending order) and then take the top 9 as treatment and the bottom 9 as control.

Step 4—Record Program Intervention Inception, Compliance and Completion

After selecting the CLEAR II VSLA treatment sites through random assignment, we will check baseline equivalence between treatment and control communities with regard to basic community level demographic characteristics, child labor prevalence, and intermediate outcomes using baseline survey data. If substantial imbalances are found, to the extent possible, we will re-randomize the communities. After the randomization, ECLT and implementing partners will move to offer the intervention and we will verify the timing for the commencement of interventions across communities. Then, we will work closely with the implementing partners for continuous monitoring of the control sites to ensure that there is compliance with randomization and that spillovers from VSLA treatment sites to the control sites are minimized. At the end, we will verify the timing for the termination of treatment across communities.

Step 5—Endline Survey

In September 2018, during the peak tobacco seedbeds season, we will deploy the endline survey using the same instruments as the baseline survey. The survey instrument will be fielded in both treatment and control communities.

4.3.1 Power Calculations and Minimum Detectable Effects

In this section, we establish a range of values for VSLA program impacts for which we can confidently conclude that such impacts did not happen by chance. To do that, we compute the minimum detectable effects (MDEs), which are the smallest program impacts that could be detected with a certain degree of confidence, based on well-grounded assumptions and plausible parametric imputations. For the CLEAR II VSLA evaluation, since we plan to conduct a clustered RCT and estimate the ITT effect parameter at the community level, our sampling strategy does not depend on the households' participation in the VSLA intervention. We are planning to survey 250 households in each community based on the list of all households with children aged 5 to 17 in the 18 tobacco growing communities of the Mchinji, Ntchisi, and Rumphi districts.

We are adopting an “effect size determination” approach in our power calculations. In our case, based on the planning sample size of 250 households per community and other operating assumptions detailed below, we are determining what effect sizes can be detected with different levels of power. For our current evaluation, the implementing partner will offer VSLA interventions to 9 randomly selected communities in the Non-CLEAR I communities with the other 9 serving as control communities. That is, 4,500 households are planned to be surveyed in the treatment areas and control areas, respectively. For each household, we will survey the household head as well as all the children between age 5 to 17.

To calculate the MDEs, we apply the formula for clustered RCT as described in Bloom (2006),⁵³

$$MDES \sim M_{J-K} \sqrt{\frac{\rho(1 - R_c^2)}{P(1 - P)J} + \frac{(1 - \rho)(1 - R_I^2)}{P(1 - P)nJ}}$$

where,

- ρ : unconditional intra-cluster correlation (without covariates)
- J : total number of clusters (randomized)
- n : number of individuals per cluster
- P : proportion of communities in treatment
- R_c^2 : proportion of the random variance between clusters that is reduced by the covariates
- R_I^2 : proportion of the random variance within clusters that is reduced by the covariates

Assumptions

Our key operating assumptions for the power analysis are as follows:

- 1) Our planning sample size for each community is $n = 250$, $P = 0.5$ and $J = 18$.
- 2) $M_{J-K} = 2.8$ for 80 percent power at 0.05 level of significance for a two-sided test.

⁵³ Typical education interventions have evidenced this type of range for intra-class correlation. (See e.g. Bloom, H., (2006), The Core Analytics of Randomized Experiments for Social Research, MDRC Working Paper).

- 3) ρ will vary from 0.1 to 0.3.⁵⁴ We will conduct sensitivity analysis and calculate MDEs for a range of parametric values in this interval.
- 4) R^2_c and R^2_l will be conservative estimates of 0.1 and 0.3.

Outcomes

The following is the list of key outcomes of interest for this evaluation:

- End Outcomes:
 - Proportion of 5 to 17-year-olds engaged in child labor
 - Proportion of 14 to 17-year-old youths engaged in hazardous work in tobacco
 - Proportion of 5 to 17-year-olds enrolled in school
- Intermediate Outcomes:
 - Proportion of households that accumulated savings
 - Total Savings amount
 - Proportion of households that obtained a loan
 - Proportion of households that owned a business

Minimum Detectable Effect Size

Exhibit 10 shows the possible minimum detectable effect sizes (MDEs) the evaluation can capture for a range of intra-class (or cluster) correlation at a power of 80 percent and the other assumptions mentioned above for a clustered randomized controlled trial with 2-levels (children grouped in households and households grouped in clusters). MDEs are obtained after normalizing the total variance (within cluster and between cluster variance).

The average values for the end outcomes are from the survey data collected for the quasi-experimental design (QED) evaluation of CLEAR I, while the averages values for outcomes related to savings, access to credit, and business ownership are from the VSLA RCT evaluation in Malawi conducted by Karlan, Thuysbaert, Udry, Cupito, Naimpally, Salgado, and Savonitto (2012)⁵⁵.

Our MDE calculations suggest that we can confidently detect VSLA effect size between 11 to 20 percent on intermediate and end outcome variables if we assume the intra-class correlation equal to 0.1. As a reference point, the impact estimate of CLEAR I on child labor from the QED analysis was over 50 percent.

Exhibit 10. Minimum Detectable Effects (MDEs) for CLEAR II VSLA Evaluation

⁵⁴ Given the lack of guidance from the literature on child labor evaluations for intra-class correlations, we calculate MDEs for a range of intra-class correlation,

⁵⁵ Karlan, D., Thuysbaert, B., Udry, C., Cupito, E., Naimpally, R., Salgado, E., & Savonitto, B. (2012). Impact assessment of savings groups. Findings from three randomized evaluations of CARE Village Savings and Loan Associations programmes in Ghana, Malawi and Uganda. Final report. *Innovations for Poverty Action, New Haven, USA*.

Outcome Variable	Mean (Binary) and Standard Deviation of Outcome Variable	Intra Class Correlation		
		0.1	0.2	0.3
Clustered RCT on Non-CLEAR I Communities				
End Outcomes				
Proportion of 5 to 17-year-olds engaged in child labor	48.4%	19.9%	28.0%	34.3%
Proportion of 14 to 17-year-old youths engaged in hazardous work in tobacco	36.4%	18.6%	26.3%	32.2%
Proportion of 5 to 17-year-olds enrolled in school	91.3%	11.2%	15.8%	19.3%
Intermediate Outcomes				
Proportion of households accumulated savings	48.7%	19.9%	28.0%	34.3%
Total Savings	45	17.9	25.2	30.9
Proportion of households obtained a loan	24.5%	17.1%	24.1%	29.5%
Proportion of household owned a business	18.3%	15.4%	21.7%	26.5%

4.3.2 Data Collection

The primary quantitative data source for impact evaluation of the CLEAR II VSLA intervention comes from two rounds repeated cross-sectional household level data collections: baseline and endline (follow-up) surveys. The baseline data collection will provide information for initial random assignment to verify balance in key characteristics and outcome variables.

During our evaluation of CLEAR I, we developed and used data collection instruments to conduct baseline surveys. To ensure continuity, we will build on the original instruments to collect baseline data for CLEAR II VSLA evaluation. The finalized instrument will comprise the following sections: household demographic information, household income and economic activities, information on children (ages 5 to 17), and participation in social programs:

- **Household Demographic Information:** The questionnaire will include questions on the composition of the household and demographic information for all household members living at that home at the time of study. Demographic characteristics will include age, gender, relation to head, and highest education levels.
- **Household Income and Economic Activities:** The household survey will collect data on household assets and income. The proxy-means questions, which will be answered by the head of household, will inquire about the type of the home, building characteristics (e.g., materials used for the roof and floor, number of rooms, and presence of durable goods). Income questions will ask about household earnings, and the sources of income.
- **Information on Children:** We will gather information on children from the heads of households as well as from themselves. The interview will gather information on the current education activities, including current school enrollment status, any interruptions in education and their reasons, grade level, reasons for not attending school for youths

out of school, and items to gauge children's general involvement with schooling. In addition, we will ask questions about children's current labor activities, including both remunerated and non-remunerated activities, the type of work they do for pay, and hours spent at each type of work. The questionnaire will capture these work hours and the type of work. We will also include questions about their work environments to determine the safety of their work environments.

- **Participation in Social Programs:** The questionnaires for the heads of households include questions related to their knowledge and participation in various governmental and non-governmental organization programs, their understanding of eligibility criteria, and access to services such as child labor prevention program.

After the survey instruments have been designed and developed, they will be translated into the local languages of the respective districts (Chichewa and Tumbuka). We will then pretest the instrument with a convenience sample of nine respondents (allowable under OMB protocols prior to IRB approval). The pretest will be based initially on cognitive interviewing techniques. The goal of the cognitive interviews is to test the survey content, ensure that the survey instructions and wording of the questions are clear and understandable, and ensure that the response options are adequate.

The cognitive interviews will be used to assess the validity of the questions: Are respondents interpreting them as intended? Are the questions measuring the constructs of interest? Questions that are misunderstood by respondents or that are difficult to answer can then be improved prior to fielding the main survey, thereby increasing the overall quality and accuracy of the survey data. Additionally, cognitive testing results can provide useful information for data analysts by documenting potential sources of response error, as well as by providing a richer understanding of the collected data.

The pretest will be administered in person, with the interviewer and interviewee each using a hard-copy instrument that will later be programmed for electronic tablet administration. Each interview will consist of two components: (1) the interviewer will administer the survey and record the respondent's answers, and (2) after each question, the interviewer will engage the respondent in a conversation that explores the meaning of the item and the respondent's answer. Senior program managers will monitor the interviews to detect problems experienced by either the respondent or the interviewer, such as questions that are poorly understood, terms that are not well-defined, inadequate response categories, difficult transitions between topics, or unclear interviewer instructions. We will also pilot the survey given that the enumerator training is relatively short. Based on the pretest, we will revise the instrument.

Once the fielding begins, we will continue to carefully monitor the responses, especially within the first three days to assess whether further changes to the instruments are necessary based on preliminary data. Based on our assessment, if changes are necessary, we will put a short, temporary hold on data collection (not to last more than one to two days) to decide on changes and implement these edits immediately, so that the bulk of the data collected will have greater

reliability and validity. Overall, the first three days of data collection will be treated as an in-field pilot test with the actual sampled population, and adjustments will be assessed and implemented within the first few days of data collection.

4.3.3 Data Quality

In addition to the strategies mentioned in subsection 4.3.2, we have the following data quality control strategies to ensure high data quality:⁵⁶

In the Field

Enumerators will collect the data digitally on pre-programmed tablets and report to coordinators in the field periodically throughout the day. The coordinators will be checking these data on various quality metrics, which will be provided by IMPAQ staff. Once the coordinators approve the data, the data will be uploaded to IMPAQ's FISMA-certified secure server on a daily basis directly from the tablets. In areas with limited access to internet, the data upload process may not be daily. All data will be synchronized once internet access is available to the tablets.

We will conduct a 3-day training with all the interviewers and supervisors with 2 days in the classroom and 1 day of mock training sessions. IMPAQ survey researchers and staff from our data collection partner will conduct this training. These researchers will also be involved in cognitive testing, pre-testing, coding, and both the quantitative and the qualitative component of the study to ensure that they have a complete understanding of the study. At the end of each field mock session, group discussions will be held to answer questions and clarify details. These questions will be noted by each group, and discussed with the entire team early morning next day. A hierarchical team structure will be set up with a group of 4-6 surveyors assigned to each supervisor. The supervisors will in turn report to two coordinators. Further, researchers (from the data collector's staff) will conduct rounds of field visits (unannounced) to administer random checks and will accompany the field staff/sat through interviews to ensure the quality of data received. A system of approval chain will be set up i.e. before uploading the surveys onto the server, the supervisor will be required to review a random set of the completed surveys and approve completed surveys.

At IMPAQ

⁵⁶ Quality metrics will involve ensuring that there is consistency across responses to various questions, and using extra probes to get answers to questions in certain cases. Several quality control measures will be programmed into the survey instrument. The instrument will have checks such as constraints on number of digits for phone number, age, inability to have non-numeric responses to questions that need number response such as income, etc., and further probes for daily/monthly wage quality checks. For instance, in the scenario in which daily wages reported is considerably large, the interviewer will probe the respondent to clarify whether it is monthly, weekly or daily. The instrument will also provide enumerators space to record such disconnects.

IMPAQ researchers will download the data on a daily basis and run quality control checks. Findings will be flagged back to the evaluation and data collection teams to make additional decisions and adjustments as needed.

We will review the data collected to ensure that respondents have completed the survey correctly. A detailed survey codebook will guide all data cleaning activities. We will review a set number of cases at the beginning of the data collection process and will conduct additional data checks (a set number such as 50). Items reviewed during this check include the following:

- Data completeness
- Skip pattern logic
- Final dispositioning of records
- Preparation of final data cleaning syntax

Once data collection has ended, we will compile a final data set and perform several data cleaning activities. These activities include 1) identifying outliers, 2) performing logic checks, and 3) making all necessary data corrections to the data. Finally, we will create a data dictionary to facilitate the analysis stage of the study. We will compile the survey responses into a master file for analysis purposes.

We will analyze the quantitative data based on the approved analytic plan. An important first step is cleaning the data and applying accepted techniques to address missing data (e.g., imputation or deletion). Next, we will examine the frequency distributions for each question to ensure that all data are within the valid range for each survey question. Although using a well-developed computer script with embedded skip patterns and logic checks minimizes the chance for error and inconsistent answers, we will carefully review the data checking for coding errors, misapplied ranges, inconsistent answers, or other illogical results. We will account for missing data by using approved ascription and imputation techniques. We will clean the data to remove incorrect coding and any identifying data in the open-ended responses.

All open-ended responses will also be coded and analyzed. A thorough pilot would provide us valuable information on the variability of responses and proper coding. We will group like responses together and create consistent codes for each case. For longer responses, we may use several codes to identify multiple themes and codes within each response. Software such as NVivo may be used to conduct these analyses.

4.3.4 Analysis Plan

The goal of the evaluation is to measure the impact of the CLEAR II VSLA intervention in reducing child labor by comparing the average outcomes of treatment group to the average outcomes of the control group. After collecting the endline data in September 2018, we will produce both baseline equivalence analysis and impact estimates.

Baseline Equivalence

In theory, the process of randomizing communities into treatment and control groups should result in no differences in observed and unobserved characteristics between the two groups. However, it is still possible that some differences might appear. The first step in the data analysis will be to statistically test for balance of observable characteristics and baseline values of outcome variables between treatment and control groups. The statistical tests for baseline equivalence will include empirical quantile–quantile (QQ) plots for all key variables and mean differences between treatment and control and their confidence intervals. QQ plots, in particular, will help us compare two univariate distributions. They plot the quantiles of a variable of the treatment group against that of the control group.

As we examine the impacts of VSLA intervention on quite a few intermediate and end-outcome variables, statistical tests will be conducted to assess intervention effects on multiple outcomes. When multiple hypotheses are tested, the probability of rejecting at least one null hypothesis is higher than the significance level, even when the program has no effect on any of the outcomes (Schochet, 2008).⁵⁷ To deal with this issue, a number of statistical procedures have been developed, such as the commonly used Bonferroni adjustment. Bonferroni's procedure is excessively conservative, resulting in a substantial loss of power. The Bonferroni correction is a method used to address the potential problem of multiple comparisons, also known as the look-elsewhere effect (i.e. an apparently statistically significant observation may have actually arisen by chance because of the size of the parameter space to be searched). When the tests are independent, simple multiplication or division by the number of degrees of freedom in the tests, or the number of effectively independent tests (called the Bonferroni correction), is only a first-order approximation.

The exact Šidák correction is another method to control the familywise error rate that is probabilistically exact when the individual tests are independent from each other, conservative under positive dependence, and liberal under negative dependence. Therefore, we will likely opt for the Šidák correction instead. Anderson (2008)⁵⁸ provides an overview of a range of procedures to correct standard errors for multiple hypothesis testing. We will present the sharpened q-values of Benjamini, Krieger, and Yekutieli (2006)⁵⁹ and Anderson (2008)⁶⁰ in our results.

Impact Analysis

⁵⁷ Schochet, P., (2008). *Technical Methods Report: Guidelines for Multiple Testing in Impact Evaluations* (NCEE 2008-4018). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

⁵⁸ Anderson, M., (2008). Multiple inference and gender differences in the effects of early intervention: a reevaluation of the Abecedarian, Perry Preschool, and Early Training Projects. *Journal of American Statistical Association*, 103 (484), 1481–1495.

⁵⁹ Benjamini, Y., Krieger, A., Yekutieli, D., (2006). Adaptive linear step-up procedures that control the false discovery rate. *Biometrika*, 93 (3), 491–507.

⁶⁰ See footnote 55.

We will estimate the unadjusted effects of the VSLA intervention as a means comparison of intermediate and end outcomes between treatment group households and control group households. For inference, we will use the statistical tests adjusted for clustered RCT to assess whether the treatment–control differences in outcomes are statistically significant. We will produce these comparisons for each available outcome of interest, such as child labor and hazardous labor incidence, school enrollment, school attendance, savings, access to credit, and business ownership. These analyses will provide a preliminary assessment of the effect of the intervention on outcomes.

To estimate VSLA impacts with increased statistical precision, we will pool the data obtained from the communities and use multivariable regression models with village-level random effects. Randomization will support the assumption that the village-level unobservable variables are independent of the treatment assignment.

The regression model can be expressed by the following equation:

$$Y_{ij} = \alpha_0 + \beta_1 D_j + e_j + u_{ij}$$

Where:

- Y_{ij} is the outcome of interest for an individual $\{i = 1, \dots, n\}$ in community $\{j = 1, 2, 3, \dots\}$;
- D_j is the treatment status indicator, which equals 1 if the individual is from a community that was assigned to the treatment and 0 otherwise;
- e_j is an error term that is independently and identically distributed between communities with a mean of 0 and a variance of τ^2
- u_{ij} is an error term that is independently and identically distributed between individuals within groups with a pooled mean of zero and variance of σ^2

The parameter of interest in this model is β_1 , which is the regression-adjusted average ITT effect of the VSLA intervention. α_0 is the overall mean potential outcome when $D = 0$.

We will account for community-level effects via random effects, the intra-class correlation (ICC) for individuals within a community is:

$$\rho = \text{Corr}_{Y,Y'} = \frac{\tau^2}{\sigma^2 + \tau^2}$$

Randomization across communities satisfies several assumption of the random effects model. This enables us to use standard estimators with clustered standard errors at the community level. We will also calculate robust clustered standard errors, to account for variance differences in outcomes within communities.

4.3.5 Human Subjects Protection Plan

IMPAQ is committed to protecting human subjects in research, particularly in the evaluation of child labor intervention programs where some of the survey respondents are expected to be minors. IMPAQ subjects itself to full institutional review board (IRB) approval of both the evaluation design and the survey instruments to ensure the highest protection of human subjects. In addition, IMPAQ's project staff have completed training in IRB, including the CITI IRB training program. It is imperative that IMPAQ works closely with the Chesapeake IRB to ensure that procedures are followed to assure confidentiality and ethical conduct as it pertains to vulnerable groups. IMPAQ will also work in coordination with our implementing partners to determine any additional in-country review or approval process required for the evaluation to occur and will adhere to and meet those requirements as well.

Given the international nature of this study, IMPAQ's IRB approval process will take into consideration the IRB requirements of Malawi. While Malawian IRB is required, we will also seek IRB approval of the research activities from the experienced accreditation organization, Association for the Accreditation of Human Research Protection Programs (AAHRPP), a U.S.-based IRB, to ensure there are no ethical issues with any component of the evaluation. The IRB with which IMPAQ has a track-record is Chesapeake IRB, which has maintained full accreditation with AAHRPP since 2004.

The IRB submission to seek expert advice is particularly important given that most planned survey respondents belong to vulnerable populations. They are economically or educationally disadvantaged people and many of them will be under the age of 18 (hence minors). We will work closely with our implementing partners and our local data collection partner to guarantee that the evaluation design and the structure and wording of the evaluation materials are appropriate for ethical and/or sensitive issues and in accord with the laws of Malawi. Furthermore, the IRB will review the evaluation designs and the structure and wording of all evaluation materials for ethical and/or sensitive issues, holding them to the highest US and international standards.

Finally, IMPAQ will ensure that the evaluation of the CLEAR II program accords with the following stipulations set forth in the ***Management Procedures and Guidelines of the Cooperative Agreement***:

- Adult and child interviews will be non-invasive and all answers will be kept confidential, ensuring that the risks are minimal.
- Survey participants will not be paid for participation in the surveys. Participation in the research will be voluntary and confidential. However, light refreshments could be served to the participants to create a more relaxed and participatory environment.
- Consent and assent forms will be used, and the contents of consent/assent forms will be explained before the start of the interview. A translated copy of the informed written consent, will be made available to all survey respondents and focus group participants.

- No minors will be interviewed without both caregiver and child agreeing to it. Caregivers will sign the consent form. Children will be invited to sign the assent form and assent will be sought verbally from children and recorded by the surveyors.
- The implementing agency/enumerator will explain to the child in accessibly the general purpose of the research, the contents of the interview, and the interviewing process.
- It will be explained to the child that participation is voluntary and confidential and that he/she may interrupt or discontinue the interview at any time with no negative consequences at all. It will be reinforced that their participation in the survey will not impact in any way their household's ability to benefit from CLEAR II services in any way.
- The implementing agency/enumerator will state that the subject is allowed to ask questions concerning the interview, both before agreeing to be involved and during the course of the interview.
- The implementing agency/enumerator may also instruct the child that they are allow to skip questions or entire sections of the interview, with no repercussions.
- The child may choose not to participate in the research even if the child's caregiver agrees to the child being interviewed. It will finally be explained that the child's responses will not be shared with any other person in the community, including the caregiver, at any point of time. Enumerator training will be to never reveal the contents of their interviews.
- IMPAQ will work closely with the implementing agency to draft a plan for dealing with cases of child labor or abuse identified in the survey population. For example, enumerators will be trained in how to cope with cases of abuse, in particular in how to report issues to the appropriate local authorities.
- The research teams will record names and some geographic information including the name and location of the village/settlement, as well as contact information of relatives or neighbors. This will support higher response rates and allow monitoring of the quality of the collected information. All identifying information will be kept confidential and the data will be securely stored.
- Data files will only be shared after removing all personally identifiable information (PII), and if publicly released will be cleared by OCFT following an approved data release procedure.⁶¹ The data will retain anonymized identifiers to individuals, households, and communities.

4.3.6 Missing Data and Attrition

We will attempt to obtain full responses to our survey questionnaire and our tablet-based data collection can be programmed to guarantee that all required questions are answered. Missing data can be a problem if there are patterns such as a question that only a certain group feels comfortable answering. In instances of missing data at the item level, we will conduct a thorough analysis of the nature of the missing data. In addition to understanding the patterns of missing

⁶¹ Please see U.S. Department of Labor, Bureau of International Labor Affairs, Office of Child Labor, Forced Labor, and Human Trafficking. Management Procedures & Guidelines for Cooperative Agreements, pages 87-88. 2014

data,⁶² we will also investigate the nature of the missing data—for example, whether certain groups are more likely to have missing values.

We will test whether the missing data are random (MAR), which means that there is no relationship between the missing data and any values, observed or missing. We will use Little's test and also the dummy variables technique for whether a variable is missing, as well as *t*-test or chi-square tests. If the missing data are random, then the analysis is not affected; if we detect patterns, we will adjust the analysis to account for them.

If the amount of missing data poses concern, we will explore the different options available to handle item-specific missing data on potential covariates. We will try various methods proposed in the missing data literature, such as inverse probability weighting (IPW)⁶³ with complete case analysis, maximum likelihood (ML), and multiple imputation (MI) techniques.⁶⁴

Given that the study will focus on a population likely to drop out of school, we will examine overall attrition rates for the whole sample. We will check whether the attrition rate affected the treatment and comparison groups differently and examine whether attrition is correlated with observable characteristics.

If one group presents higher levels of attrition due to students dropping out of school or because they become impossible to track (e.g., because of migration or deliberate nonresponse), we will treat this as an outcome of the program and analyze it accordingly. If the attrition for either or both groups is correlated with specific observable characteristics after the first round of data collection (e.g., a specific region or socioeconomic status), even though this will not affect the validity of the results, we will take those findings into consideration for the second round of data collection and for interpretation purposes.

4.4 Qualitative Implementation Study

4.4.1 Objectives

The overall purpose of the qualitative implementation study is to complement the quantitative impact analysis by providing an in-depth analysis of the “how” and “why” changes occurred and the mechanisms of those changes. The qualitative implementation study will build on the quantitative results by exploring, in detail, what VSLA intervention was actually implemented and how, why the VLSA intervention changed the outcomes or did not, and if it did, how it might have done so.

⁶² Stata command such as “-misstable-”.

⁶³ Seaman, S.R., White, I.R. (2013). Review of inverse probability weighting for dealing with missing data. *Statistical Methods In Medical Research*, 22(3), 278-295.

⁶⁴ Schafer, J.L., & Graham, J.W. (2002). Missing data: Our view of the state of the art. *Psychological Methods*, 7(2), 147-177.

4.4.2 Implementation Study Research Questions and Methodology

In order to examine the questions of “how” and “why”, our qualitative implementation study is designed and organized to address three thematic areas: (1) program context, (2) fidelity of implementation, and (3) program effectiveness. The qualitative research questions are presented in Exhibit 11 below.

Exhibit 11. Research Questions by Thematic Area

Research Questions	Thematic Area
<ul style="list-style-type: none">▪ How do socio-economic, cultural, and legal practices and norms influence the likelihood of child labor in tobacco production activities? How do these affect school attendance?▪ In what ways does gender affect the likelihood of child labor in tobacco production activities and school attendance?▪ How do families in the areas usually address lack of credit access or household income? Who do they turn to for assistance? What services or schemes are available to them?▪ How do the practices of the tobacco industry influence the likelihood of child labor in tobacco production activities?	Context
<ul style="list-style-type: none">▪ In what ways do beneficiaries, stakeholders, and project staff view the VLSA intervention as being implemented as expected? In what ways does the intervention differ?▪ What challenges do beneficiaries and project staff experience during the VLSA program? How do the implementing partners address these challenges?	Fidelity
<ul style="list-style-type: none">▪ Considering both intended and unintended changes, how does VLSA intervention affect the following in program communities:<ul style="list-style-type: none">○ Child labor?○ School attendance?○ Ability to mitigate the effects of economic shocks?○ Income-generating activities?▪ In what ways, if any, does participation in VLSA influence a family’s decision to send their children to work or school? Specifically, how do families tradeoff the income effect of starting new business as a result of participating in VLSA and the substitution effect of increased children’s opportunity cost in going school when they make child labor decisions.▪ How does participation of the entrepreneurship and marketing training component of VLSA influence a family’s decision to start new business or improve existing business?▪ What are the strengths, weaknesses, and recommendations for improvement of the VLSA programs according to beneficiaries, stakeholders, and project staff?	Effectiveness

To address key questions related to each of these thematic areas, we will carry out a thorough and systematic review of existing literature, documents, data, and reports. We will supplement information through site visits, key-informant interviews, and focus group discussions (FGD), as indicated in Exhibit 12.

IMPAQ will derive a better understanding of the regional, political, and cultural context from program documentation, relevant literature, and site visits. Additionally, we will triangulate these findings with the local expertise we gained during the evaluation of CLEAR I. Review of

documents, reports, and data will be particularly important in developing an evidence-based description of program fidelity.

We will conduct on-site observations, interviews, and focus groups as appropriate and necessary to further verify data and information necessary for all three thematic areas. Semi-structured key informant interviews and focus groups with beneficiaries, implementing partners, and key stakeholders will also be used in combination with site visit observations to collect data on program effectiveness.

Exhibit 12. Thematic Areas Addressed by Each Qualitative Data Source

Data Source	Context	Fidelity	Effectiveness
Documentation review	✓	✓	
Site visits	✓	✓	✓
Key informant interviews	✓	✓	✓
Focus groups	✓	✓	✓

4.4.3 Data Collection

Document Review

Document review began as soon as we started evaluation planning. This included review of the CLEAR I final evaluation report, program implementation materials from the implementing partners, data collection instruments used in previous rounds of data collection, maps of geographic coverage, relevant literature on similar programs in Malawi, and contextual documentation on topics such as child labor in tobacco farming. In addition, we have organized several productive meetings with implementing partners of both CLEAR I and II, during which, we have gathered an understanding of the available documentation. We have also conducted a preliminary visit to Malawi from February 22 – 26, 2016 in order to consult with the funder of CLEAR II (ECLT), the implementing partners (TLC, YONECO, CRECCOM), in addition to other key stakeholders such as representatives from the other CLEAR I implementation partners, ILO, and tobacco companies. The visit allowed us to obtain a better understanding of the CLEAR II VSLA design, the context on the ground, and the information necessary for a well-designed, robust and rigorous RCT evaluation.

The document review will continue throughout the life of the evaluation, as new materials become available, especially regular quarterly or annual documentation on program activities that are necessary for the implementation study.

Site Visits

In collaboration with implementing partners, we will organize and conduct two rounds of site visits. The first site visit will take place in November 2016, one month after randomization and the start of VSLA implementation. The purpose of the first round is to gain familiarity about the context and intended plans for implementation. More specifically, we plan to:

- Familiarize with the current context of political, cultural, and regional factors on the ground in Malawi and the implementation strategy for CLEAR II;
- To conduct interviews with key stakeholders and implementing partners on the ways in which they plan to accomplish their objectives and their overall goals for the program; and
- To hold initial focus groups with beneficiaries in target areas to learn how they perceive the program-related issues.

The endline site visit will take place in September 2018 to collect data, largely focused on program fidelity and effectiveness of the VSLA implementation. Program fidelity will explore the extent to which the intervention was delivered as intended. Toward the end of the program implementation, the endline implementation study timing is optimal for learning about the intended and unintended changes to the VSLA implementation and underlying mechanisms through which VSLA intervention affect financial and child labor related outcomes, the challenges encountered while executing the program activities as planned and how those challenges were overcome.

As part of these site visits, IMPAQ will observe how activities, such as VSLA meetings or trainings, are being implemented by field staff. Meanwhile, these site visits will also allow us to verify if any of the CLEAR II complementary activities are being implemented in the evaluation study communities. Observations of field activities will provide the team with valuable information to fill in any gaps in the process evaluation stemming from the document review. In addition to collecting implementation data, the team also will conduct key informant interviews and focus groups with beneficiaries and other stakeholders to learn about their perceptions of implementation activities and to inform the endline survey.

The selection criteria for site visits will be finalized after the community sample is determined. To ensure site representation, we may consider stratification by population size or other regional differences. The site visits will occur at the same time or may be staggered to reflect any potential delay pattern in implementation.

Key Informant Interviews

During the site visits, we will conduct key informant interviews. In collaboration the implementing partners, we will determine the list of essential key informants among program staff, government officials, local service providers, child labor-focused local committees, tobacco companies, and other relevant stakeholders to gather insights on context, progress of program activities, and perceptions of program effectiveness.

The interviews will be an opportunity for informants to describe their progress toward meeting their activity goals and objectives, as well as describe any challenges that they have encountered, steps that they have taken to mitigate them, and, if such challenges no longer exist, how they were mitigated.

Focus Groups

Finally, we will conduct focus groups at the village level with three types of groups:

- 1) Beneficiaries of CLEAR II VSLA only;
- 2) Non-beneficiaries who live in control communities (Men, women, and children groups); and
- 3) Members of district child labor committees and community child labor committees.

Depending on the children's age, we may conduct focus groups with beneficiaries/children directly in a relatively safer setting (like a school) rather than with their heads of households. It is essential to keep children and head of households in separate focus groups to allow them to express themselves freely, particularly on sensitive topics such as child labor.⁶⁵ We will rely on the implementing partners to assist with recruiting participants, organizing beneficiary focus groups and identifying qualified translators.

Although the exact distribution of interviews and focus groups by target participants and locations will be determined in conjunction with the implementing partners, within each community, we plan to have focus groups of around 8-10 participants for 3 groups based on proportion of VSLA sizes: (1) small, (2) medium, and (3) large. The communities will be selected after proportions for these sizes are calculated in treatment communities as VSLAs range in size from 4 to 50 members. We will work with the implementing partners to select appropriate communities to target in each site visit based on evaluation needs. However, we will collect focus group data from a diverse set of communities in varying geographic locations to capture a comprehensive understanding of context, fidelity, and effectiveness.

Exhibit 13 provides an example of the types of key informants and beneficiary areas that we will target in each site visit. In each round, we will target the same key informants, if possible, to capture evolving perspectives and changes across time by role and position. However, each site visit will target different communities for beneficiary focus groups to capture a diverse set of experiences. In addition, because each round of beneficiary focus groups will have a different objective, we will work with the implementing partners to target the most appropriate communities and localities to align with the site visit's purpose.

Exhibit 13. Examples of Key Informants and Beneficiary Target Areas

⁶⁵ Regional Working Group on Child Labor. (2002). *Handbook for action-oriented research on the worst forms of child labour including trafficking in children*. Bangkok, Thailand.

Key Informants	Beneficiary Target Areas
<ul style="list-style-type: none"> ▪ Staff at YONECO, CRECCOM, and TLC ▪ Government officials ▪ Members of district child labor committees, area government committees on child labor, and village-level committees ▪ Other stakeholders (such as tobacco companies and trade unions) 	<ul style="list-style-type: none"> ▪ Group communities (participated in CLEAR II VLSA only) ▪ Group communities (participated in both CLEAR I and CLEAR II VLSA) ▪ Group communities (did not participate in CLEAR program)

Key Informant Interview and Focus Group Discussion Protocols

We will develop interview protocols and focus group guides based on the information gathered from the desk review of documents, our initial visit to Malawi, and meetings with program implementing partners. We will design interview and focus group data collection instruments in a flexible way so they can capture additional ideas that may arise during the evaluation process and that are consistent with the proposed themes.

The interviews and focus groups will be semi-structured; they will consist of open-ended questions to encourage a degree of deep probing and discussion that is usually not possible in structured settings in which interviewers cannot develop sufficient rapport with the respondents.

IMPAQ will submit the protocols for approval by the IRB in October 2016. We will develop the protocols for the second round of interviews and focus groups after the analysis of results from the first round and themes are assessed. This will allow us to identify gaps in knowledge, incorporate preliminary findings, and have a better understanding of the research context. IMPAQ will submit these materials to ILAB for comments and approval prior to IRB submission.

4.4.4 Field Work Procedures

We will adhere to the following data collection protocol throughout the project:

- Stakeholder perspectives will be consolidated for greater coverage of recommendations.
- Interviews will incorporate a degree of flexibility—we will allow additional questions from stakeholders while ensuring that the interviews still meet the information requirements of the evaluation.
- We will follow a consistent approach during each visit and with each participant type while allowing unique settings for different actors and activities according to the cultural practices in each locality.
- We will keep confidential all information and opinions expressed during individual interviews and focus groups.
- We will take gender into account throughout the process of data collection and analysis in at least the following three ways:

- 1) We will collect and analyze data with both male and female perspectives and experiences in mind and make adjustments as appropriate;
- 2) We will ensure that the data collected have optimal gender balance in cases in which their analysis will draw general conclusions; and
- 3) Data will be collected in such a way as to minimize the possibility that the gender of the researcher/interviewer could introduce bias in the responses of respondents.

An IMPAQ team consisting of two field researchers will conduct the qualitative research over two weeks in November 2016, and September 2018. During the key-informant interviews and focus group discussions, one interviewer will lead the discussions while the other will take detailed notes. This will ensure that while one team member is actively engaged in conducting the interviews, the other is capturing the contents of the meeting. Additionally, we will ask all interviewees for their consent to record the sessions—reiterating the points that the discussion is voluntary and that only the research team will have access to the data.

4.4.5 Data Quality and Analysis Plan

For the qualitative data gathered in site visits, we will review and analyze field notes, supplemented by interview and focus group recordings, to identify recurring patterns pertaining to the three thematic areas. As needed, the qualitative data will be coded using NVivo software. Our analytical approach will ensure that we systematically capture any important similarities and key differences by using what Glaser and Strauss have aptly characterized as “the constant comparative method” of qualitative data analysis.⁶⁶

The analysis will rely heavily on the structured summaries of the interviews and focus group discussions. These summaries will be a synthesis of the main points and emerging themes from each interview and focus group discussion, and will include pertinent quotes that can be incorporated into the final report. We will begin the analysis of discerning recurrent common themes and patterns once several summaries are completed. Qualitative analysis is an iterative, loop-like process that can begin in the early stages of data collection and deepen as additional data are added. This approach will enable us to begin the analysis not long after data collection starts.

⁶⁶ Glaser, B.G. & Strauss, A.L. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Chicago: Aldine Publishing Company.

5. EVALUATION ACTIVITIES

5.1 Evaluation Gantt Chart

RCT Impact Evaluation in Malawi																
TASK / ACTIVITY	Year 2				Year 3				Year 4				Year 5			
	2016				2017				2018				2019			
Team Leader: Ye Zhang	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Task 1: Project Start-Up and Management																
Federal financial report (FFR) standard form (SF) 425	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Technical progress report (TPR), with all required elements		▲		▲		▲		▲		▲		▲		▲		▲
Task 2: Evaluation Design																
Evaluation design plan		△	▲													
Task 3: Data Collection																
Baseline survey tools and training materials, IRB approval			▲													
Baseline survey administration			▲													
Random assignment				▲												
Baseline survey report package				△	▲											
Baseline survey dataset					▲											
Follow-up survey tools submitted										▲						
Follow-up survey administration											▲					
Follow-up survey report package											△	▲				
Follow-up survey dataset												▲				
Task 4: Qualitative Study																
Develop site visit materials			△	▲						△	▲					
Conduct site visits				▲							▲					
Conduct qualitative study analysis												▲	▲			
Qualitative study report													△	▲		
Task 5: Final Reporting																
Public-use datasets, log of analyses, data crosswalks, data tables														▲		
Final analysis report													△	▲		
Results summary report															△	▲
Task 6: Final Grantee Activities																
Government property inventory disposition request															▲	
Closeout documents																▲
Key: Draft △ Final ▲																

5.2 Detailed Deliverable Timeline

Deliverable	Proposed Completion Date
Federal financial report	Quarterly
Technical progress report, including updated work plan	Semiannually
Draft baseline survey tools and training materials,	Q2 – 2016 (8/1/2016)
IRB approval, Final baseline survey tools and training materials	Q2 – 2016 (8/12/2016)
Final evaluation design plan	Q3 – 2016 (9/2/2016)
Draft baseline survey report package	Q4 – 2016 (12/16/2016)
Final baseline survey report package	Q1 – 2016 2017 (1/20/2017)
Baseline survey dataset	Q1 – 2016 2017 (1/20/2017)
Follow-up survey tools submitted	Q2 – 2018
Draft follow-up survey report package	Q3 – 2018
Final follow-up survey report package	Q4 – 2018
Follow-up survey dataset	Q4 – 2018
Draft qualitative study report	Q1 – 2019
Final qualitative study report	Q2 – 2019
Public-use datasets, log of analyses, data crosswalks, data tables	Q2 – 2019
Draft final analysis report	Q1 – 2019
Final analysis report	Q2 – 2019
Draft results summary report	Q3 – 2019
Final results summary report	Q4 – 2019
Government property inventory disposition request	Q3 – 2019
Closeout documents	Q4 – 2019

ANNEX A. HAZARDOUS INDUSTRIES AND WORK FOR CHILDREN

ILO's Designated Hazardous Industries:⁶⁷

- MINING
- QUARRYING
- CONSTRUCTION

ILO's Designated Hazardous Occupations:⁶⁸

ISCO -68	ISCO -88	ISCO -08	Occupation category	ISCO -68	ISCO -88	ISCO -08	Occupation category
	816		Power production, related plant operators		313		Optical and electrical equipment operators
	821		Metal and mineral machine operators		322		Health associated professionals
	822		Chemical machine operators		323		Nursing midwife
	823		Rubber machine operators		516		Protective services
	825		Wood products machine operators		614		Forestry and related workers
	826		Textile, fur, leather machine oper.		615		Fishery, hunters and trappers
	827		Food machine operators		711		Miners, shot fires, stone cutters and carvers
	828		Assemblers		712		Building frame and related workers
	829		Other machine operators		713		Building finishers
	832		Motor vehicle drivers		721		Metal moulders, welders and related workers
	833		Agriculture, other mobile plant oper.		722		Blacksmith, tool makers and related workers
	834		Ships' deck crew, related workers		723		Machinery mechanics and fitters
	911		Street vendors and related workers		724		Electrical, electronic equip. mech. & fitters
	912		Shoe cleaning, other street services		731		Precision workers in metal
	915		Messengers, porters, doorkeepers. ..		732		Potters, glass makers and related workers
	916	9611-3/22-4	Garbage collectors, related workers		811		Mining, mineral processing plant operators
	921	9211-6	Agriculture fishery, related workers		812		Metal processing plant operators
	931	9311-3	Mining and construction labourers		813		Glass, ceramics and related plant operators
	933	9331-4	Transport and freight handlers		814		Wood processing & papermaking plant operators
					815		Chemical processing plant operators

⁶⁷ See the ISIC's hazardous industries: <http://unstats.un.org/unsd/statcom/doc02/isic.pdf>

⁶⁸ See the ISCO's hazardous occupations: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_172572.pdf

Malawi's List of Prohibited Work⁶⁹

SCHEDULE LIST OF PROHIBITED WORK

(Para 6)

1. AGRICULTURE SECTOR-

(a) *General and Commercial Farming:*

- (i) handling or applying agricultural chemicals, veterinary drugs, pesticides or insecticides in any agricultural undertaking;
- (ii) handling plants or soil immediately after the application of agricultural chemicals or during any other period specified on chemicals labels;
- (iii) curing or processing agricultural products where there is exposure to temperatures or working at heights hazardous to safety, health and well-being of persons;
- (iv) any activity involving dangerous machinery, dangerous equipment or dangerous tools;
- (v) bee-keeping or any other work involving exposure to bees.

(b) *Meat, Poultry and Fish Sector*

- (i) slaughtering of animals or work in an abattoir or a tannery;
- (ii) meat, poultry or fish processing in a commercial undertaking;
- (iii) offshore fishing in deep waters.

(c) *Tobacco Sector*

- (i) topping and suckering activities or handling tobacco leaves in the harvesting process;
- (ii) handling or grading tobacco leaves in damp conditions or conditions of poor lighting or ventilation;
- (iii) any other work involving tobacco in commercial tobacco estates and farms.

2. INDUSTRY

(a) *Tobacco Sector:*

Handling, processing, manufacturing or packing of tobacco products.

(b) *Logging/Timber:*

Logging, harvesting or processing of timber including cutting timber and saw milling.

(c) *Hazardous Waste:*

Disposal, processing or any work in connection with hazardous waste or garbage;

⁶⁹ Government of Malawi. *Employment (Prohibition of Hazardous Work for Children) Order*, 2012.

(d) Alcohol Manufacturing Sector:

Brewing, manufacturing or selling any liquid which in its final form would contain more than 1 percent (1%) of alcohol.

(e) Radiology Sector:

Any work involving exposure to ionizing radiation such as x-rays.

(f) Electrical Sector:

Any work involving electrical work involving voltage cables or other power sources in excess of 120 volts.

(g) Machinery Operation

(i) any work involving operating or involving vibrating and heavy duty equipment including:-

- (a) tractors;
- (b) winches;
- (c) forklifts;
- (d) front loaders;
- (e) earth moving equipment;
- (f) asphalt mixers;
- (g) heavy graders;
- (h) rock drills and riveters; or
- (i) similar heavy duty equipment;

(ii) any work involving welding or soldering using electric or gas welding machines; or

(iii) operating, cleaning or repairing any machinery in motion.

(h) Transport Industry:

- (i) driving a motor vehicle;
- (ii) any repairing or conducting maintenance of motor vehicles or its parts unless under supervision;
- (iii) any work in vehicles transporting heavy goods

(i) Construction Sector:

- (i) any manufacturing, mixing or application of tar or asphalt;
- (ii) Work involving brick molding;
- (iii) building, demolition or any process associated with engineering or construction, with or without the use of lifts and scaffolding.

(j) Chemical Sector:

Any work involving:-

- (i) manufacturing, processing, handling, storing, transporting or use of any chemical substances, that are toxic, explosive, combustible,

- flammable, oxidizing, corrosive, irritating, carcinogenic, mutagenic or teratogenic;
- (ii) exposure to hazardous dust including but not limited to cement, tobacco dust, cotton dust, bagasse and silica;
- (iii) any work involving exposure to asbestos or products containing Asbestos;
- (iv) exposure to any hazardous substance which by virtue of its physical or toxicological properties constitutes a risk to the safety, health or welfare of the child.

(k) Metal Industry:

Any work involving:-

- (i) the use of or in proximity of industrial ovens, kilns, furnaces or boiler;
- (ii) grinding or glazing of metal with or without the use of any power tool or grinding equipment;
- (iii) operator of a smelter or furnace or rolling mills that forms and cut metals.

3. ENTERTAINMENT SECTOR:-

- a) any work in a bar, tavern, pub, shebeen or other establishment of entertainment whose business is to sell alcohol beverages to the general public for consumption on the premises;
- b) any work as a personal companion or providing escort services in bars, cocktail lounges, motels, hotels, massage houses and other places of recreation or entertainment;
- c) any work in a casino or other gambling establishment;
- d) any work that involves loitering the streets or around any bar, tavern, pub, shebeen or other establishment of entertainment whose business is to sell alcoholic beverages to the general public for consumption on the premises;
- e) any work posing as a model in an advertisement for alcoholic beverages, tobacco products or condoms or that is connected with the advertisement of any of these products;
- f) any work involving exposure to material of a pornographic or adult content or involving the child in any pornographic or adult act, exhibition or production.

4. TOURISM SECTOR

- (a) any work as a tour guide;
- (b) any work that constitutes a risk to the safety, health and well-being of persons.

5. HEALTH SECTOR

- a. Any work in a healthcare or related facility where there will likely be exposure to biological agents or other agents including: